The Scraps of Imagination : A Catalog of Spatio Angular Aberations and Anomalies

0-9

$$\text{Solve}\Bigg[\Bigg(\Bigg(\Bigg(\sqrt{\Big(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2\Big)}\Bigg)\Bigg/\Bigg(\sqrt{\Big(-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2\Big)}\Bigg)\Bigg)\Bigg)\hat{}x + \left(\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2 - 2\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta}{2\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta - \left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}\right)\hat{}y == \left(\frac{2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]}{\theta}\right)\hat{}z,\ x\Bigg]$$

```
{{}}
```

$$\text{Solve}\left[\left(\left(\left(\sqrt{\left(-\text{1.1294090667581471`*^18}\,\theta+\text{8.987551787368176`*^16}\,\theta^2+\text{3.5481432270250993`*^18}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\right)}\right)\Big/\left(\sqrt{\left(-\text{12.566370614359172`}\,\theta+\theta^2+\text{39.47841760435743`}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\right)}\right)\right)\right)\text{^}x+\left(\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-2\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta}{2\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}\right)\text{^}y==\left(\frac{2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]}{\theta}\right)\text{^}z,\ z\right]$$

$$\left\{\left\{z\to-\left(1.\,\text{Log}\left[2.^{-1.\,y}\left(\frac{-\frac{78.9568}{12.5664-1.\,\theta}+\frac{496.1}{(12.5664-1.\,\theta)\,\theta}}{\sqrt{\frac{496.1}{12.5664-1.\,\theta}-\frac{39.4784\,\theta}{12.5664-1.\,\theta}}}\right)^y+\left(\left(\sqrt{\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,(12.5664-1.\,\theta)\,\theta+8.98755\times10^{16}\,\theta^2\right)}\right)\Big/\left(\sqrt{-12.5664\,\theta+1.\,(12.5664-1.\,\theta)\,\theta+\theta^2}\right)\right)^x\right]\right)\Big/\left(-1.83788-1.\,\text{Log}\left[\frac{1}{\theta}\right]\right)\right\}\right\}$$

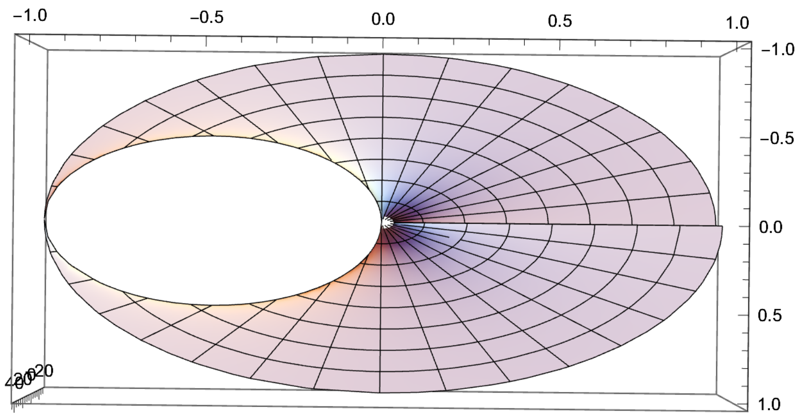
$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ r\right]$$

$$\left\{\left\{r\to-\frac{4\pi^2\,\text{Sin}[\beta]}{(4\pi-\theta)\,\theta}\right\},\ \left\{r\to\frac{4\pi^2\,\text{Sin}[\beta]}{(4\pi-\theta)\,\theta}\right\}\right\}$$

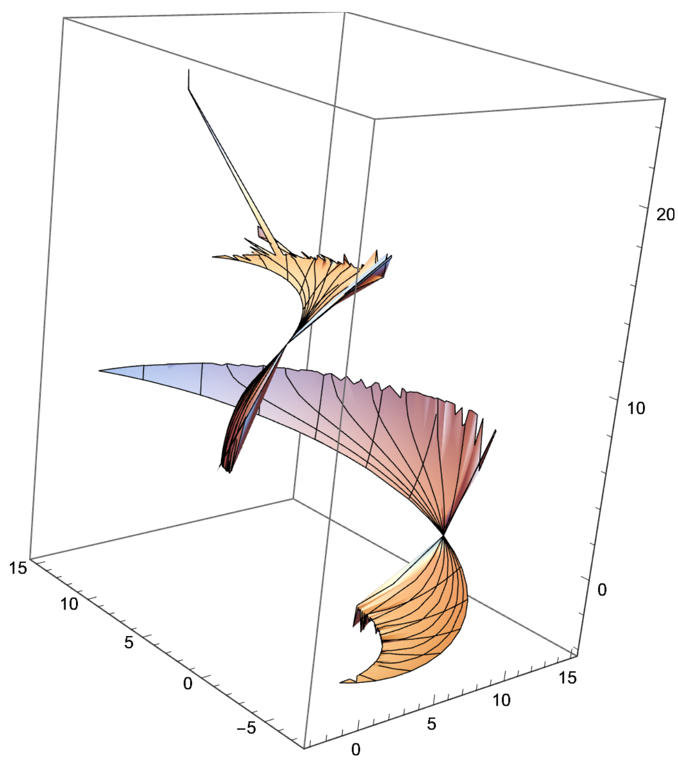
$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\left(\pi r-\sqrt{\pi^2r^2-\pi^2r\,\text{Sin}[\beta]}\right)}{r}\right\},\ \left\{\theta\to\frac{2\left(\pi r+\sqrt{\pi^2r^2-\pi^2r\,\text{Sin}[\beta]}\right)}{r}\right\},\ \left\{\theta\to\frac{2\left(\pi r-\sqrt{\pi^2r^2+\pi^2r\,\text{Sin}[\beta]}\right)}{r}\right\},\ \left\{\theta\to\frac{2\left(\pi r+\sqrt{\pi^2r^2+\pi^2r\,\text{Sin}[\beta]}\right)}{r}\right\}\right\}$$

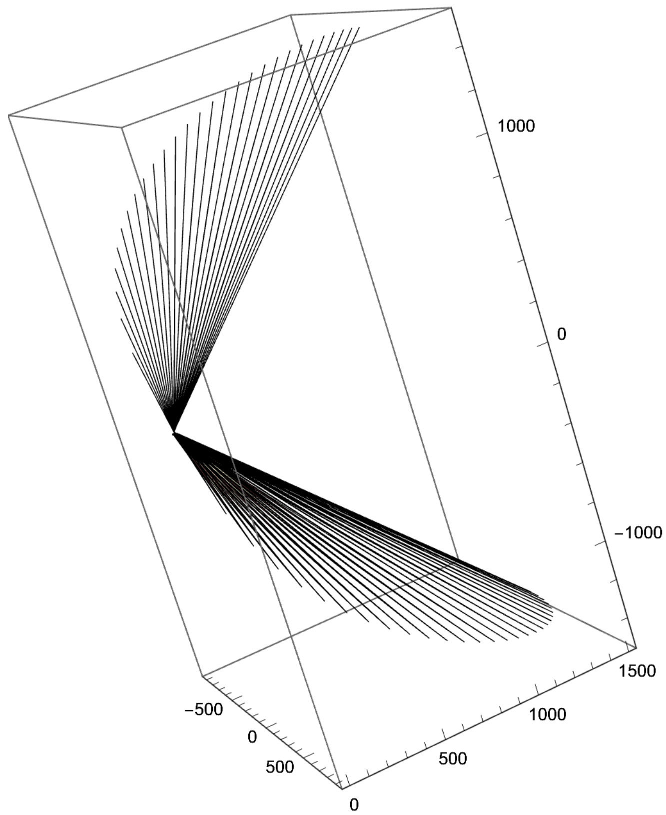
$$\texttt{RevolutionPlot3D}\left[\frac{2\left(\pi\, r + \sqrt{\pi^2\, r^2 + \pi^2\, r\, \mathrm{Sin}[\beta]}\right)}{r},\ \{r,\ -1,\ 1\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



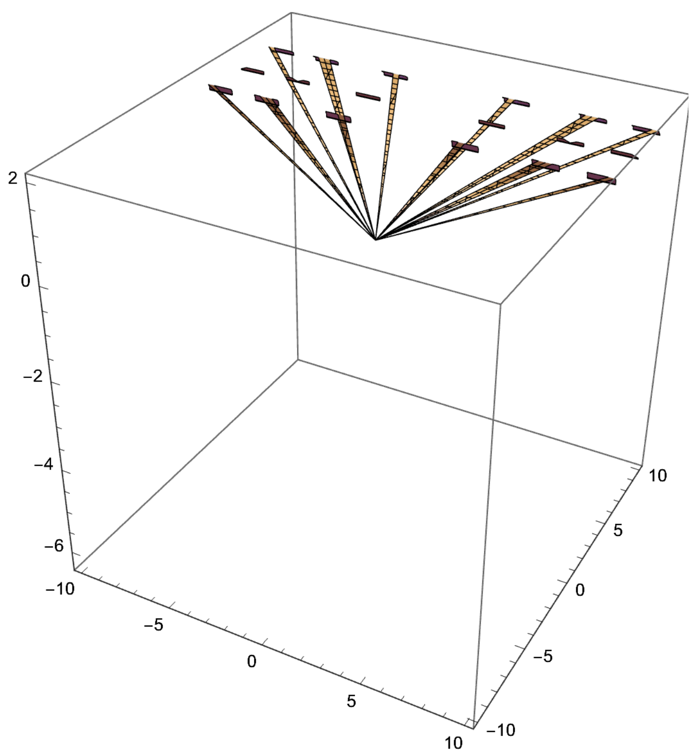
$$\texttt{RevolutionPlot3D}\left[\left\{\frac{2\left(\pi\, r - \sqrt{\pi^2\, r^2 - \pi^2\, r\, \mathrm{Sin}[\beta]}\right)}{r},\ \frac{2\left(\pi\, r + \sqrt{\pi^2\, r^2 + \pi^2\, r\, \mathrm{Sin}[\beta]}\right)}{r}\right\},\ \{r,\ -1,\ 1\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{2\left(\pi\, r + \sqrt{\pi^2\, r^2 + \pi^2\, r\, \text{Sin}[\beta]}\right)}{r}, \frac{2\left(\pi\, r - \sqrt{\pi^2\, r^2 + \pi^2\, r\, \text{Sin}[\beta]}\right)}{r}\right\}, \{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}\right]$$



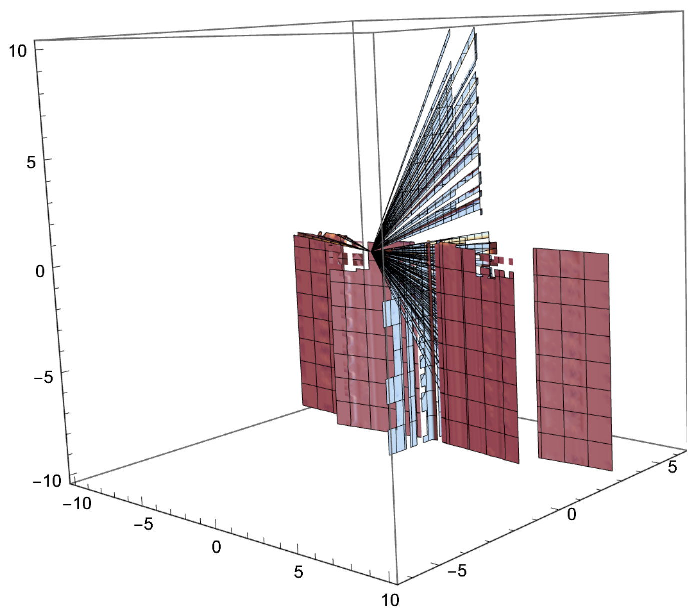
```
ContourPlot3D[-(1.` Log[2.`^(-1.` y) ((-78.95683520871486`/(12.566370614359172` - 1.` θ) + 496.1004268847971`/((12.566370614359172` - 1.` θ) θ))/Sqrt[496.1004268847971`/(12.566370614359172` - 1.` θ) - (39.47841760435743` θ)/(12.566370614359172` - 1.` θ)])^y +
      ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16
            (12.566370614359172` - 1.` θ) θ + 8.987551787368176`*^16 θ^2)) /
        (√(-12.566370614359172` θ + 1.` (12.566370614359172` - 1.` θ) θ + θ^2)))^x]) /
   (-1.8378770664093456` - 1.` Log[1/θ]), {y,
  -10,
  10},
 {x,
  -10,
  10}, {θ,
  -2
   π, 2}]
```



$$\text{Solve}\Big[\Big(\Big(\Big(\sqrt{\Big(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2\Big)}\Big)\Big/\Big(\sqrt{\Big(-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2\Big)}\Big)\Big)\Big)\hat{}\,x + \left(\frac{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 - 2\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta}{2\,\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta - \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}\right)\hat{}\,y == \left(\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]}{\theta}\right)\hat{}\,z,\ y\Big]$$

$$\Big\{\Big\{y \to -\Big(1.\,\text{Log}\Big[6.28319^z\left(\frac{1}{\theta}\right)^z - 1.\left(\left(\sqrt{\left(-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,(12.5664-1.\,\theta)\,\theta + 8.98755\times10^{16}\,\theta^2\right)}\right)\Big/\left(\sqrt{-12.5664\,\theta + 1.\,(12.5664-1.\,\theta)\,\theta + \theta^2}\right)\right)^x\Big]\Big)\Big/\left(0.693147 - 1.\,\text{Log}\left[\frac{-\frac{78.9568}{12.5664-1.\,\theta} + \frac{496.1}{(12.5664-1.\,\theta)\,\theta}}{\sqrt{\frac{496.1}{12.5664-1.\,\theta} - \frac{39.4784\,\theta}{12.5664-1.\,\theta}}}\right]\right)\Big\}\Big\}$$

```
ContourPlot3D[
 -(1.` Log[6.283185307179586`^z (1/θ)^z - 1.` ((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 (12.566370614359172` - 1.` θ) θ +
        8.987551787368176`*^16 θ^2)) / (√(-12.566370614359172` θ +
        1.` (12.566370614359172` - 1.` θ) θ + θ^2)))^x]) /
  (0.6931471805599453` - 1.` Log[(-78.95683520871486`/(12.566370614359172` - 1.` θ) + 496.1004268847971`/((12.566370614359172` - 1.` θ) θ)) / Sqrt[496.1004268847971`/(12.566370614359172` - 1.` θ) - 39.47841760435743` θ/(12.566370614359172` - 1.` θ)]]),
 {z,
  -10,
  10},
 {θ,
  -2
   π, 2
   π}, {x, -10, 10}]
```




```
v^3 = ((√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
```

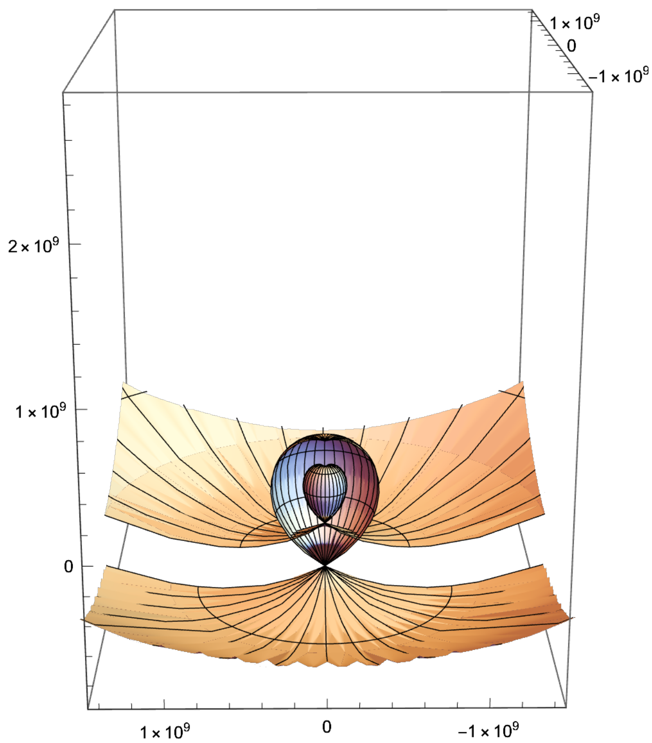
$$\left(\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)\frac{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}{\theta}$$

$$\left(\left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\mathrm{Sin}[\beta]^2}\right)\right)$$

$$\left(\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)\frac{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}{\theta}$$

$$\left(\left(-\frac{8\,\pi^2}{4\,\pi-\theta} + \frac{16\,\pi^3}{(4\,\pi-\theta)\,\theta}\right)\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)\Big/\left(2\,\theta\,\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}\right)$$

```
SphericalPlot3D[
 ((-8 π^2/(4 π - θ) + 16 π^3/((4 π - θ) θ)) √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2))/
  (2 θ √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {θ, -2 π, 2 π}, {β, -π/2, π/2}]
```



$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} \Big/ \left(\theta / (2\,\pi)\right)$$

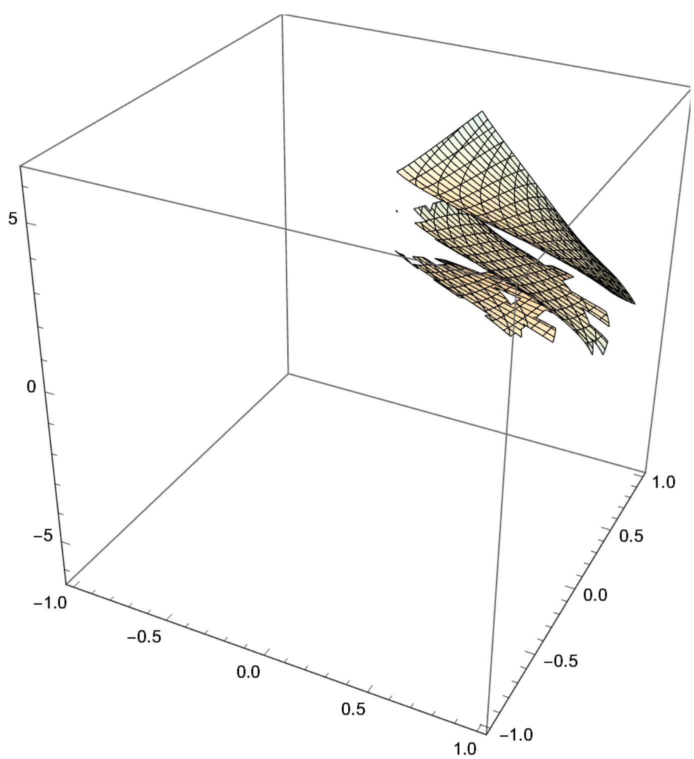
$$\frac{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}{\theta}$$

a^x + b^y = c^z

$$\text{Solve}\left[a^\wedge \frac{2\pi r - r\theta}{2\pi} + b^\wedge \frac{2\pi\,\frac{2\pi r - r\theta}{2\pi} - \frac{2\pi r - r\theta}{2\pi}\,\theta}{2\pi} == c^\wedge \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ c\right]$$

$$\left\{\left\{c \to a^{-\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}}\ b^{-\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}-\frac{\theta\left(-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{4\pi^2\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)}{4\pi^2}} \left(a^{\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}}\ b^{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}} + a^{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}}\ b^{\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{\theta\left(-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{4\pi^2\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)}{4\pi^2}}\right)\right\}\right\}$$

$$\text{ContourPlot3D}\left[a^{-\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}}\ b^{-\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}-\frac{\theta\left(-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{4\pi^2\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)}{4\pi^2}} \left(a^{\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}}\ b^{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}} + a^{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}}\ b^{\frac{\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{\theta\left(-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{4\pi-\theta}+\frac{4\pi^2\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)}{4\pi^2}}\right),\ \{a, -1, 1\}, \{b, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$

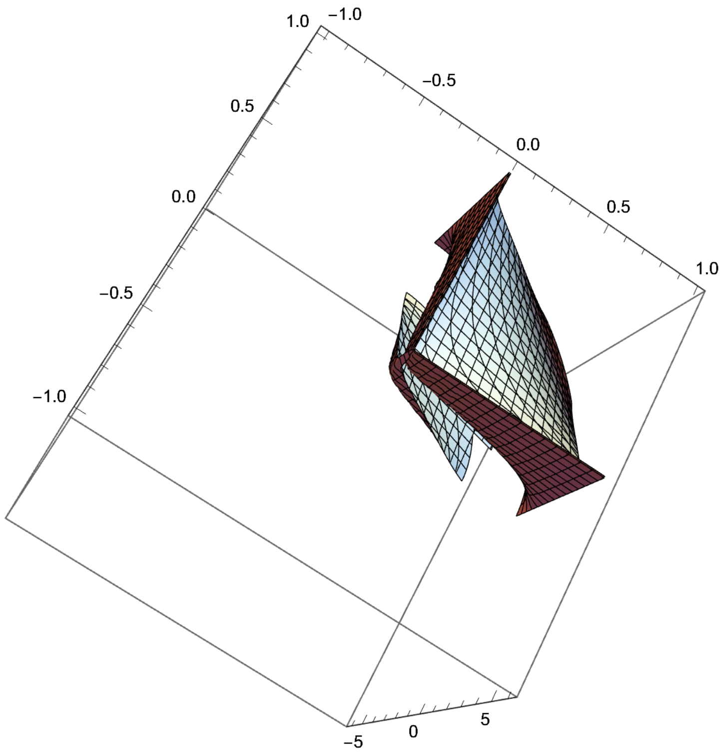


$$\text{Solve}\left[a^\wedge \frac{2\pi r - r\theta}{2\pi} + b^\wedge \frac{2\pi\,\frac{2\pi r - r\theta}{2\pi} - \frac{2\pi r - r\theta}{2\pi}\,\theta}{2\pi} == c^\wedge \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ c\right]$$

$$\left\{\left\{c \to \left(a^{r-\frac{r\theta}{2\pi}} + b^{r-\frac{r\theta}{2\pi}}\right)^{\frac{2\pi}{\sqrt{r^2(4\pi-\theta)\theta}}}\right\}\right\}$$

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\text{ContourPlot3D}\left[\left(a^{r-\frac{r\theta}{2\pi}} + b^{r-\frac{r\theta}{2\pi}}\right)^{\frac{2\pi}{\sqrt{r^2\,(4\pi-\theta)\,\theta}}}, \{a, -1, 1\}, \{b, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



The Base Ten Numbers - 0,1,2,3,4,5,6,7,8,9

The Number 0

$$\theta\, r - 2\pi\, r - 2\pi\, r_1 = 0$$

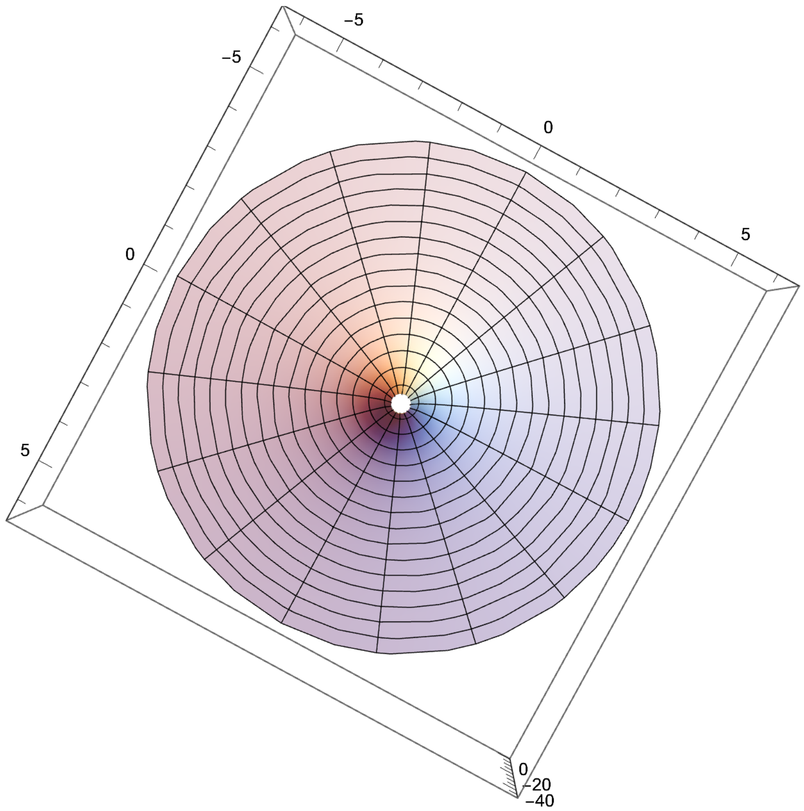
$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

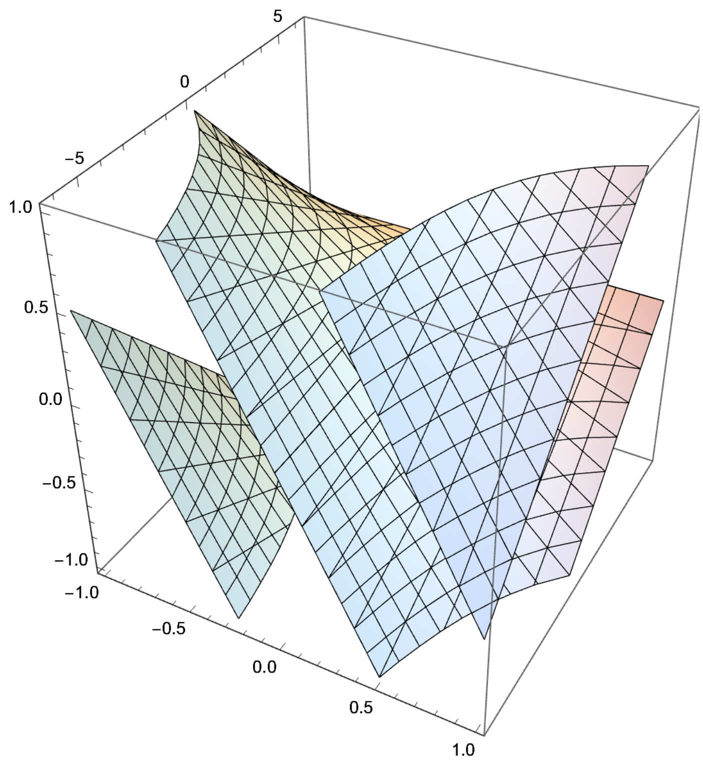
$$\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\left(\theta\, r - 2\pi\, r - 2\pi\,\frac{2\pi\, r - r\,\theta}{2\pi}\right)$$

$$\frac{\sqrt{(4\pi-\theta)\,\theta}\left(\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta} - \frac{8\pi^2\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)}{\sqrt{4\pi\,\theta-\theta^2}}$$

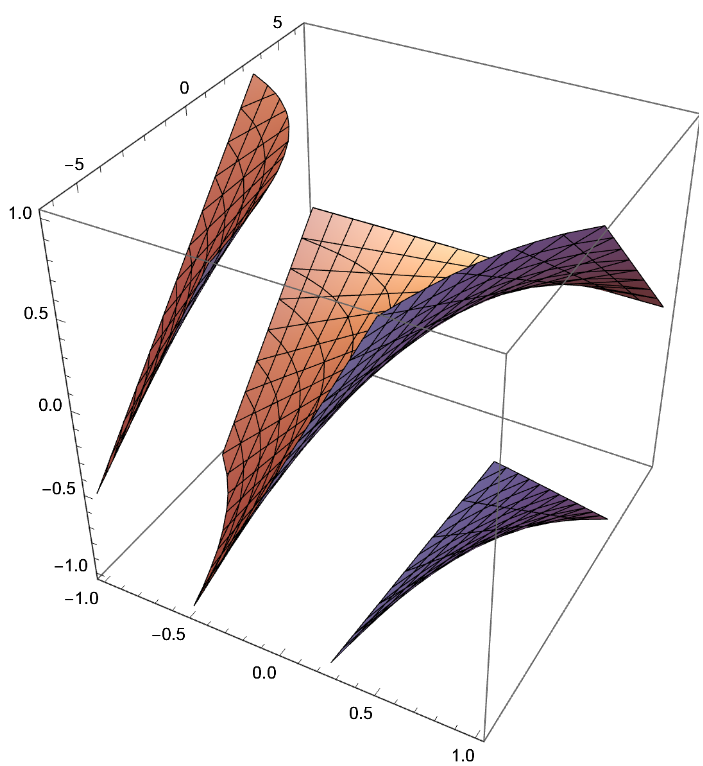
$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\left(\theta\,r-2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right),\{\theta,-2\,\pi,2\,\pi\}\right]$$



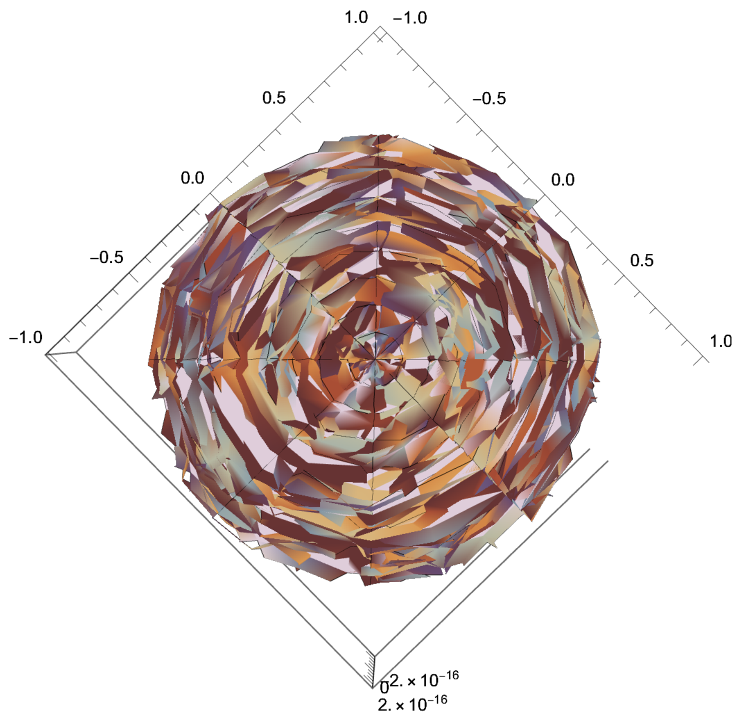
```
ContourPlot3D[θ r - 2 π r - 2 π r₁, {r, -1, 1}, {θ, -2 π, 2 π}, {r₁, -1, 1}]
```




```
ContourPlot3D[2 π r - 2 π r₁ - θ r , {r, -1, 1}, {θ, -2 π, 2 π}, {r₁, -1, 1}]
```



$$\text{RevolutionPlot3D}\left[2\pi r - 2\pi\frac{2\pi r - r\theta}{2\pi} - \theta r, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



The Number 1

Lemma 5 *The height of the cone can be calculated in terms of only r and θ*, thus θ is a function of β alone.

Proof. Since we have shown that $\theta r = 2\pi r - 2\pi r_1$ and $x = r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial radius of the circle, into the expression for θr in terms of the change in circumference of the initial circle to the circle that is the base of the cone into which the circle was transformed.

$\theta r = 2\pi r - 2\pi\sqrt{(r\hat{}2 - \eta\hat{}2)}$, thus, $\eta = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$ = (r Sin[β]). From $\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}$ = r, we note that: r = $\frac{2\pi r \,\text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}}$. So we solve the equation,

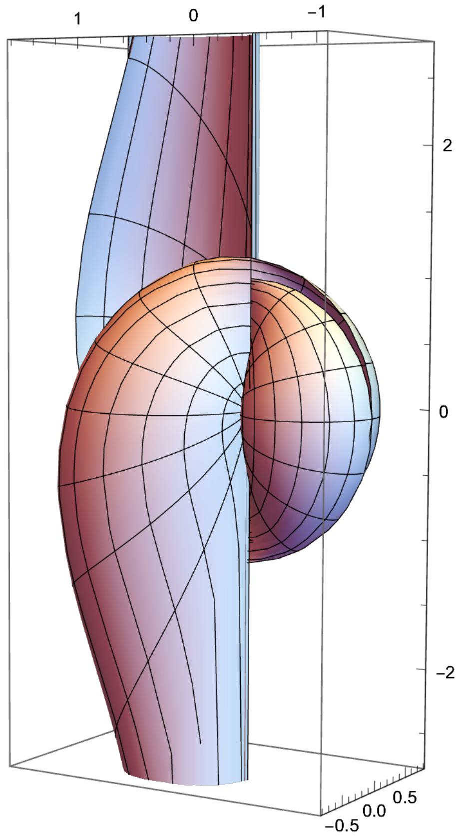
$$\text{Solve}\left[r == \frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}}, \theta\right]$$

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

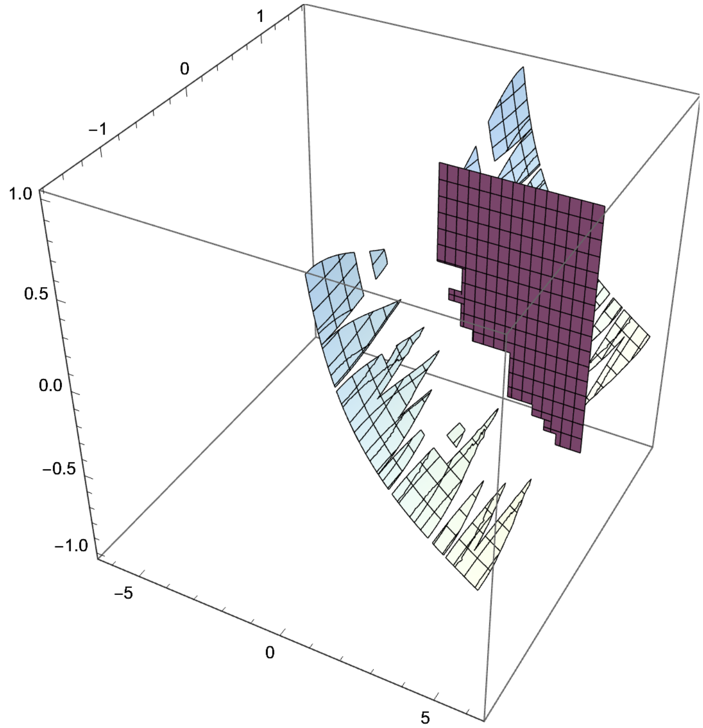
$$1 = \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}}$$

```
SphericalPlot3D[2 π Sin[β] / Sqrt[4 π θ - θ^2], {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^{2}}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$\text{ContourPlot3D}\left[\frac{\frac{r\,\theta}{\pi\,(r-x)}\,\pi\,\text{Sin}[\beta]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\pi\,\theta-\theta^2}},\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\},\ \{x,-1,1\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

The Number 2

Theorem 1 *When a sector of angle θ is removed from a circle of radius r and the resulting shape is folded into a cone, then the base of the cone has radius* r_1 *given by* $r_1 = r - \frac{(r\,\theta)}{2\,\pi}$ *; and height η, given by* $\eta = \sqrt{r^2 - r_1^2}$ = r Sin[β]

Proof. The circumference of the initial circle is 2 π r and the wedge removed has an arc length r θ. Therefore, the remaining circumference is of length r (2 π - θ), and after the fold, this is the circumference of the base of the cone.

Establishing the circumference of the base of the cone, from the equation, $\theta\,r = 2\,\pi\,r - 2\,\pi\,r_1$, we calculate that its radius r_1 is $\frac{2\,\pi\,r - r\,\theta}{2\,\pi}$, which simplifies to $r - \frac{r\,\theta}{2\,\pi}$. Thus, we have proved the first part of the theorem.

To find the height of the cone, η, we apply the Pythagorean theorem to a right triangle formed between the apex of the cone, the center of the base, and a point on the circumference of the base. This gives $\eta = \sqrt{r^2 - r_1^2}$ = r Sin[β], where β is the angle formed by the slant of the cone and the base of the cone. The initial radius is always equal to the slant of the cone, and the height of the cone is always orthogonal to the center of the base of the cone.

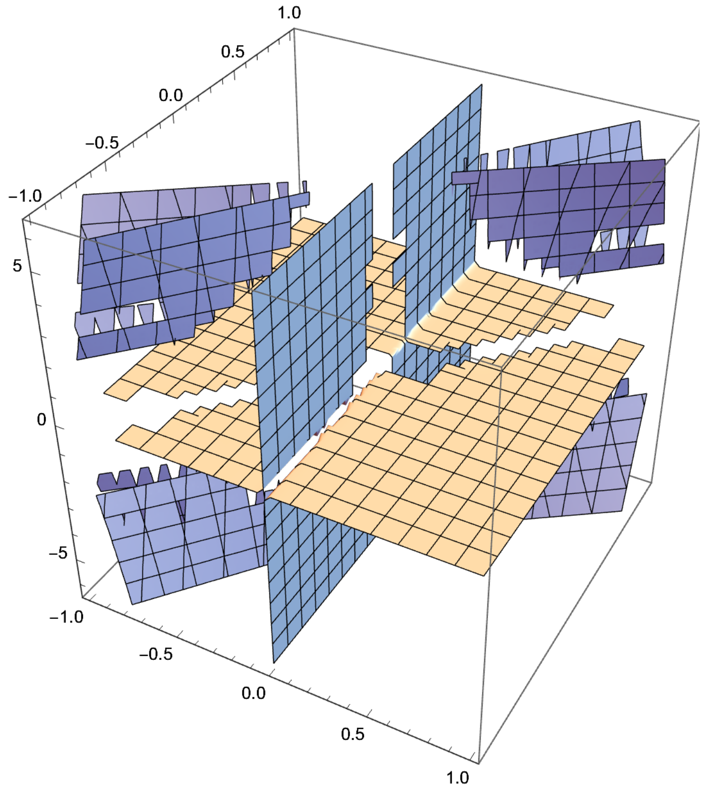
$$\theta\,r = 2\,\pi\,r - 2\,\pi\,r_1$$

```
Solve[θ r == two π r - two π r₁, two]
```

$$\left\{\left\{\text{two} \to \frac{r\,\theta}{\pi\,(r - r_1)}\right\}\right\}$$

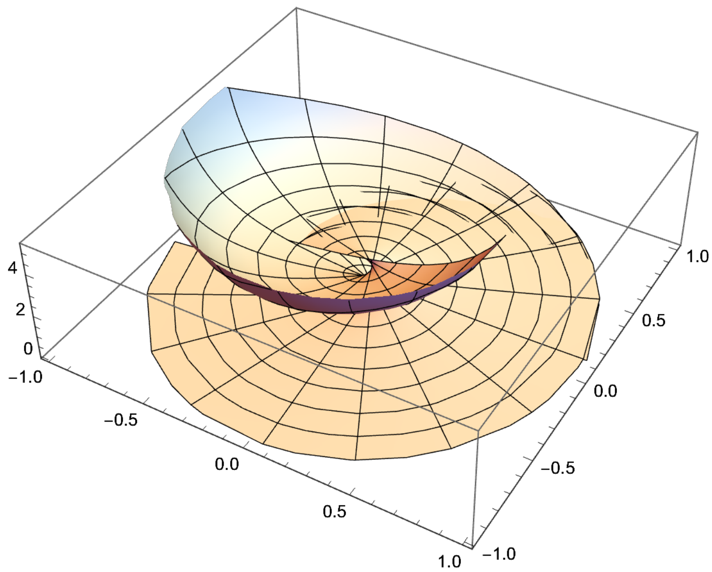
$$\frac{r\,\theta}{\pi\,(r - r_1)} = \frac{r\,\theta}{\pi\,(r - x)}$$

$$\text{ContourPlot3D}\left[\frac{r\,\theta}{\pi\,(r - r_1)}, \{r, -1, 1\}, \{r_1, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$\text{RevolutionPlot3D}\left[\frac{r\,\theta}{\pi\,(r-x)},\ \{x,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$

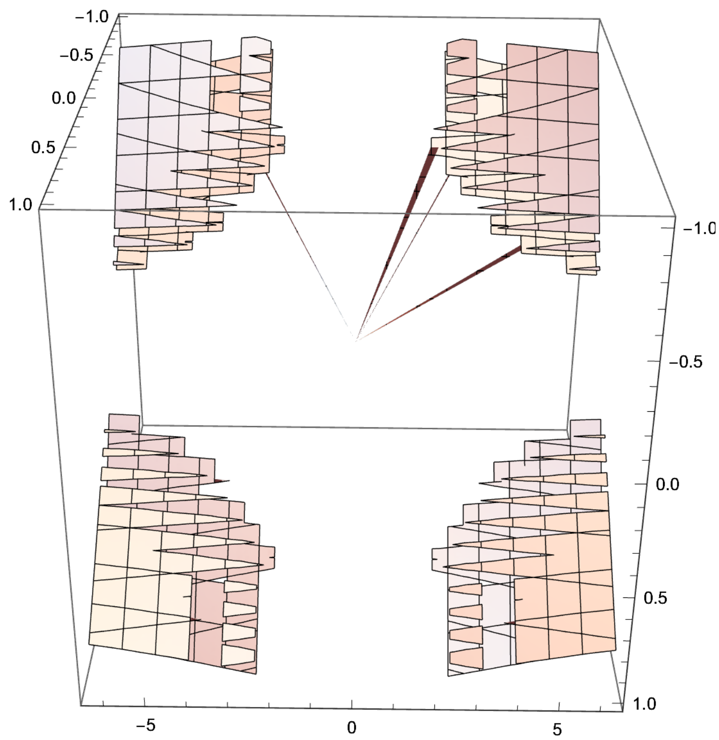


The Number 3

$$3 = \frac{r\,\theta}{\pi\,(r-x)} + \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} = \frac{r\,\theta}{\pi\,(r-x)} + \frac{\frac{r\,\theta}{\pi\,(r-x)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\pi\,\theta-\theta^2}}$$

$$\text{ContourPlot3D}\left[\frac{r\,\theta}{\pi\,(r-x)}+\frac{\frac{r\,\theta}{\pi\,(r-x)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\left(\frac{r\,\theta}{\pi\,(r-x)}\right)\pi\,\theta-\theta^2}},\right.$$

$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{x,-1,1\}\right]$$



The Number 4

$$r=\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

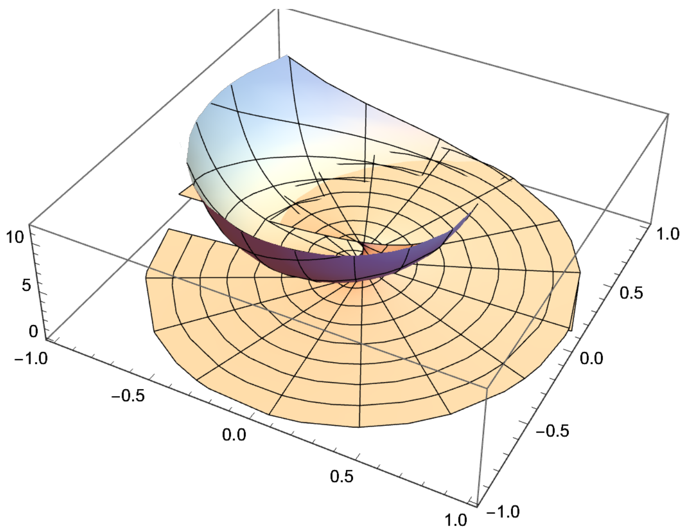
$$r==\frac{\frac{r\,\theta}{\pi\,(r-x)}\,\pi\,\sqrt{(\text{four}\,\pi-\theta)\,\theta}}{(\text{four}\,\pi-\theta)\,\theta}$$

$$\text{Solve}\left[r==\frac{\frac{r\,\theta}{\pi\,(r-x)}\,\pi\,\sqrt{(\text{four}\,\pi-\theta)\,\theta}}{(\text{four}\,\pi-\theta)\,\theta},\ \text{four}\right]$$

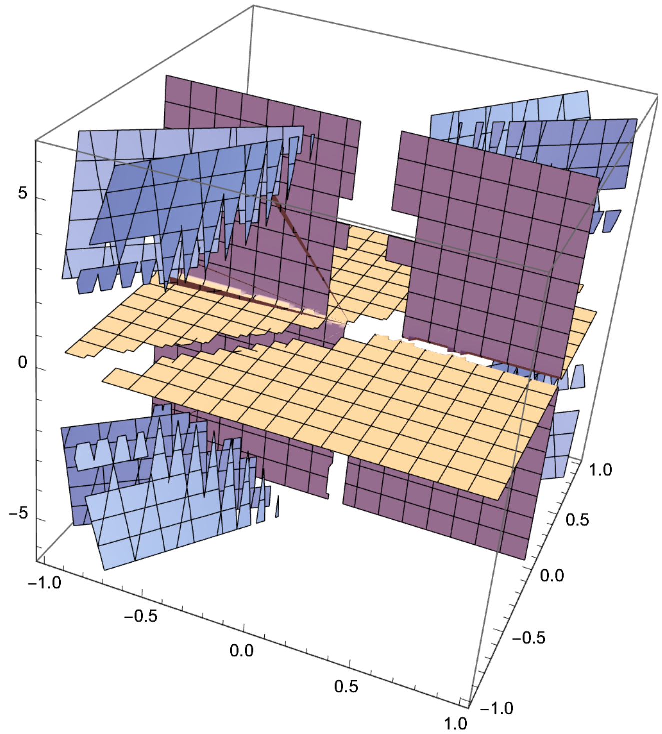
$$\left\{\left\{\text{four}\to\frac{1}{\pi}\left(\theta+\frac{16\,\pi^2\,\theta^3}{\left(4\,\pi\,x\,\theta-x\,\theta^2-2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)^2}-\right.\right.\right.$$

$$\left.\left.\left.\frac{8\,\pi\,\theta^4}{\left(4\,\pi\,x\,\theta-x\,\theta^2-2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)^2}+\frac{\theta^5}{\left(4\,\pi\,x\,\theta-x\,\theta^2-2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)^2}\right)\right\}\right\}$$

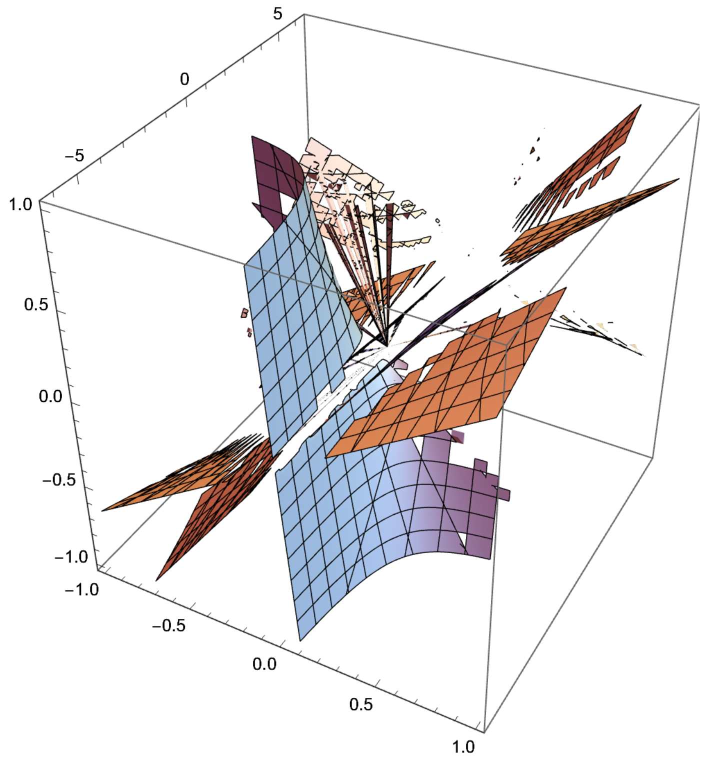
```
RevolutionPlot3D[1/π (θ + (16 π^2 θ^3)/(4 π x θ - x θ^2 - 2 π Sqrt[(4 π - θ) θ])^2 - (8 π θ^4)/(4 π x θ - x θ^2 - 2 π Sqrt[(4 π - θ) θ])^2 + θ^5/(4 π x θ - x θ^2 - 2 π Sqrt[(4 π - θ) θ])^2), {x, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{ContourPlot3D}\left[\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{r\,\theta}{\pi\,(r-r_1)},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\},\ \{r_1,-1,1\}\right]$$



$$\text{ContourPlot3D}\left[\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\},\ \{r_1,-1,1\}\right]$$



The Number 5

$$0=\theta\,r-2\,\pi\,r-2\,\pi\,r_1,\ 1=\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ 2=\frac{r\,\theta}{\pi\,(r-r_1)},\ \text{therefore}\ 1=\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=$$

$$\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}$$

$$\text{Solve}\Big[\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi}\Big]\Big]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi}\Big]\Big]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}==2,\ r\Big]$$

$$\{\{r\to 0\}\}$$

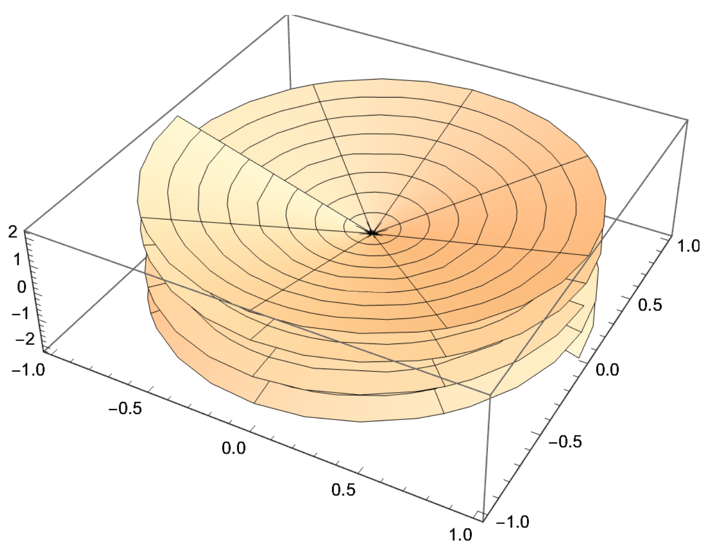
$$\text{Solve}\Big[\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi}\Big]\Big]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\frac{r\,\theta}{\pi\,(r-r_1)}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{\left(\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi-\theta\right)\theta}}{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi}\Big]\Big]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}==2,\Big]$$

$$\{\{\}\}$$

$$\text{Solve}[\theta\,r-2\,\pi\,r-2\,\pi\,r_1==r,\ r_1]$$

$$\left\{\left\{r_1\to\frac{-r-2\,\pi\,r+r\,\theta}{2\,\pi}\right\}\right\}$$

$$\text{RevolutionPlot3D}\Big[\frac{-r-2\,\pi\,r+r\,\theta}{2\,\pi},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\Big]$$



$$\text{ContourPlot3D}\left[\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\right.$$

$$\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}}+\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\left(\frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta-\theta^2}},$$

$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{r_1,-1,1\}\right]$$

Inside V-Curvature

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==\right.$$

$$\left.\sqrt{\left(\frac{\sqrt{r\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-\theta\,r\right)}\,\sqrt{\frac{\theta}{\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-\theta\,r\right)}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}\,r\,\text{Sin}[\beta]\right)},\ v\right]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==\right.$$

$$\left.\frac{\sqrt{r\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-\theta\,r\right)}\,\sqrt{\frac{\theta}{\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-\theta\,r\right)}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi},\ v\right]$$

{{}}

```
c := 2.99792458 (10^8)
```

$$r:=\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$r:=\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}$$

$$\frac{\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}}{\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-\theta\,r\right)}==$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-1}}\sqrt{\frac{\theta}{\sqrt{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-1}}}\sqrt{4\pi r-r\theta}}{2\pi}==r\,\text{Sin}[\beta],\theta\right]$$

$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-1}}\sqrt{\frac{\theta}{\sqrt{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-1}}}\sqrt{4\pi r-r\theta}}{2\pi}==\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi},v\right]$$

{}

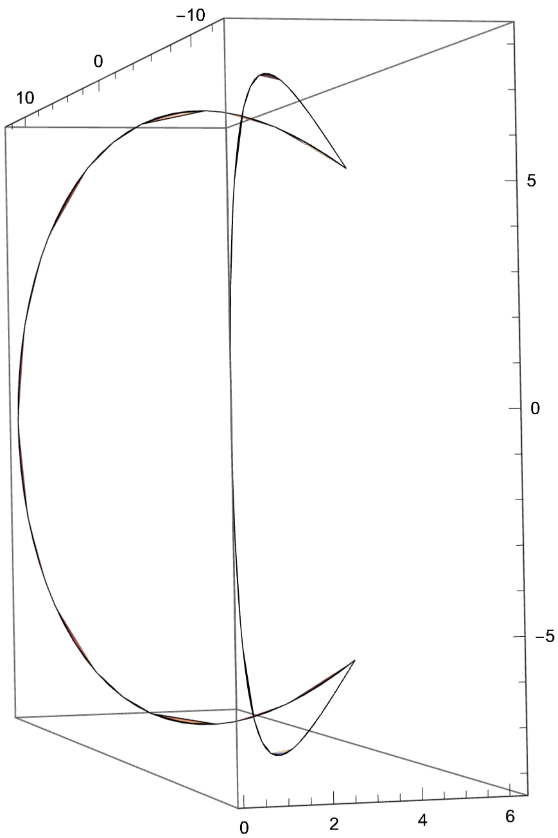
$$\text{Solve}\Big[\frac{1}{2\pi}\sqrt{\Big(r\sqrt{\Big(1-\frac{1}{c^2}\,((\surd(-1.1294090667581471\text{`*}\verb|^|18\,\theta+8.987551787368176\text{`*}\verb|^|16\,\theta^2+3.5481432270250993\text{`*}\verb|^|18\,\text{Sin}[\beta]^2))\,/\,(\surd(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2)))^2\Big)}\Big)}$$
$$\sqrt{\Big(\theta\Big/\Big(\sqrt{\Big(1-\frac{1}{c^2}\,((\surd(-1.1294090667581471\text{`*}\verb|^|18\,\theta+8.987551787368176\text{`*}\verb|^|16\,\theta^2+3.5481432270250993\text{`*}\verb|^|18\,\text{Sin}[\beta]^2))\,/\,(\surd(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2)))^2\Big)}\Big)\Big)}\sqrt{4\pi r-r\theta}==r\,\text{Sin}[\beta],r\Big]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r\,\text{Sin}[\beta],\theta\right]$$

$$\Big\{\Big\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\,0.5\,\Big(-1.12941\times10^{18}+12.5664\,v^2-1.\sqrt{\Big((1.12941\times10^{18}-12.5664\,v^2)^2-4.\,(-8.98755\times10^{16}+v^2)\,(-3.54814\times10^{18}+39.4784\,v^2)\,\text{Sin}[\beta]^2\Big)}\Big)\Big\},$$
$$\Big\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\,0.5\,\Big(-1.12941\times10^{18}+12.5664\,v^2+\sqrt{\Big((1.12941\times10^{18}-12.5664\,v^2)^2-4.\,(-8.98755\times10^{16}+v^2)\,(-3.54814\times10^{18}+39.4784\,v^2)\,\text{Sin}[\beta]^2\Big)}\Big)\Big\}\Big\}$$

```
RevolutionPlot3D[
 {1/(-8.987551787368176`*^16 + v^2) 0.5` (-1.1294090667581471`*^18 + 12.566370614359172`
      v^2 - 1.` Sqrt[((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
         4.` (-8.987551787368176`*^16 + v^2)
          (-3.5481432270250993`*^18 + 39.47841760435743` v^2) Sin[β]^2)]),
  1/(-8.987551787368176`*^16 + v^2) 0.5` (-1.1294090667581471`*^18 +
     12.566370614359172` v^2 + Sqrt[((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
        4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
           39.47841760435743` v^2) Sin[β]^2)])}, {v, -.5 c, .5 c}, {β, -π, π}]
```



$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(c)^2}{v^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(c)^2}{v^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{v \to \frac{\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\}\right\}$$

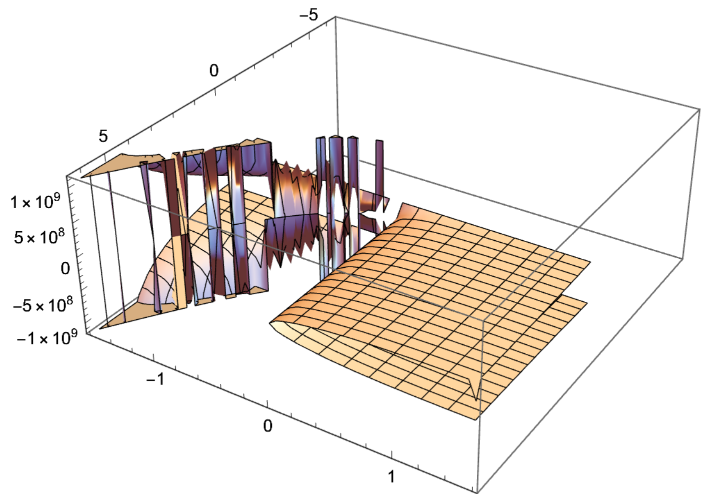
```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), β]
```

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} - \frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\left(\sqrt{2}\ \sqrt{\left(-4c^2\pi^2\theta\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + c^2\pi\theta^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 8c^2\pi^4\,\text{Sin}[\beta]^4\right)}\right) \Big/ \left(\sqrt{-16\pi^2\theta^2 + 8\pi\theta^3 - \theta^4 + 16\pi^4\,\text{Sin}[\beta]^4}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{2}\ \sqrt{\left(-4c^2\pi^2\theta\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + c^2\pi\theta^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 8c^2\pi^4\,\text{Sin}[\beta]^4\right)}\right) \Big/ \left(\sqrt{-16\pi^2\theta^2 + 8\pi\theta^3 - \theta^4 + 16\pi^4\,\text{Sin}[\beta]^4}\right)\right\}\right\}$$

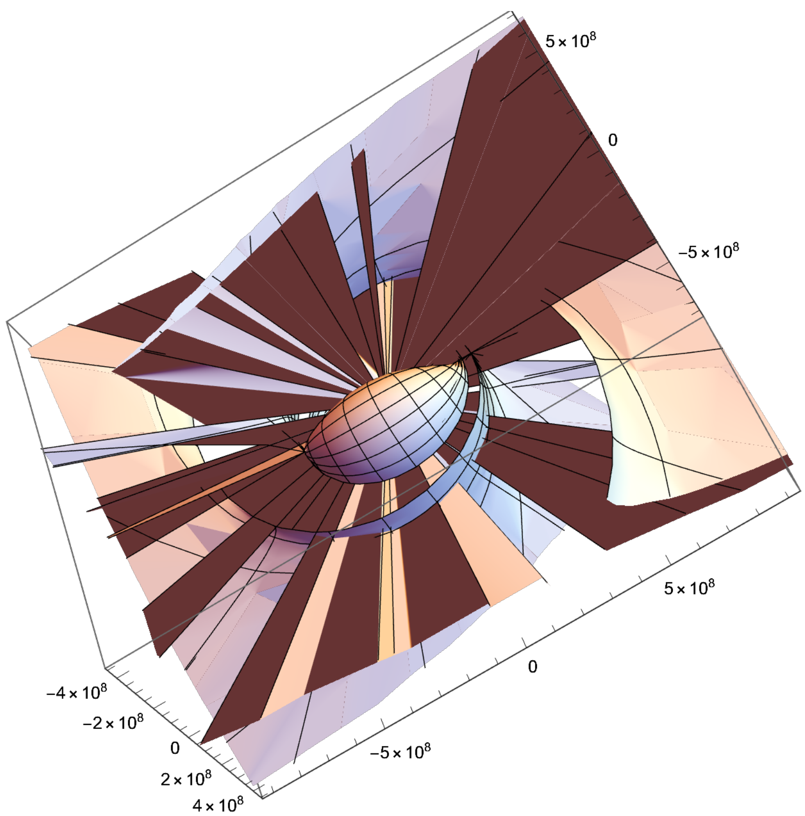
```
Plot3D[
 {-(√2 √(-4 c² π² θ √((4 π - θ) θ) Sin[β] + c² π θ² √((4 π - θ) θ) Sin[β] + 8 c² π⁴ Sin[β]⁴)) /
   (√(-16 π² θ² + 8 π θ³ - θ⁴ + 16 π⁴ Sin[β]⁴)),
  (√2 √(-4 c² π² θ √((4 π - θ) θ) Sin[β] + c² π θ² √((4 π - θ) θ) Sin[β] + 8 c² π⁴ Sin[β]⁴)) /
   (√(-16 π² θ² + 8 π θ³ - θ⁴ + 16 π⁴ Sin[β]⁴))}, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



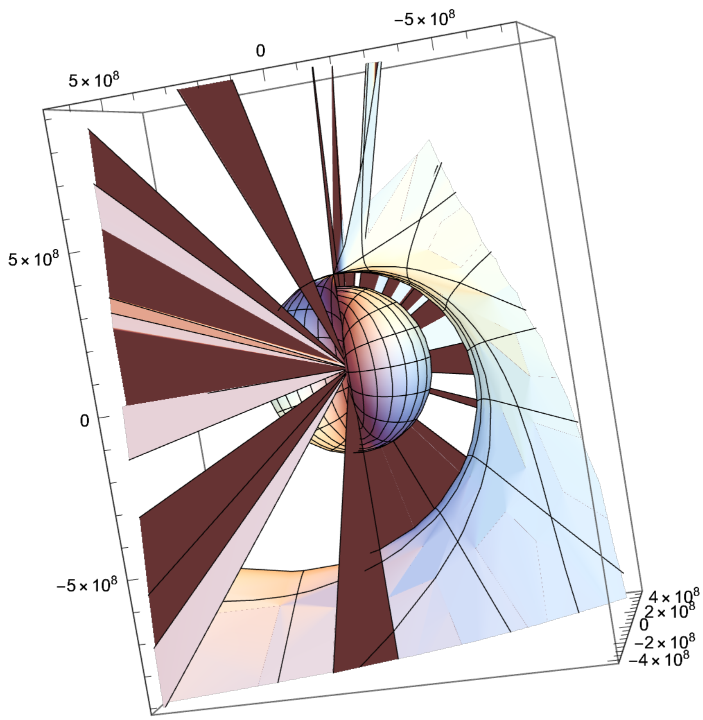
SphericalPlot3D$\Big[$

$$\left\{-\left(\sqrt{2}\,\sqrt{\left(-4\,c^2\,\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+c^2\,\pi\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+8\,c^2\,\pi^4\,\mathrm{Sin}[\beta]^4\right)}\right)\Big/\left(\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\mathrm{Sin}[\beta]^4}\right),\right.$$

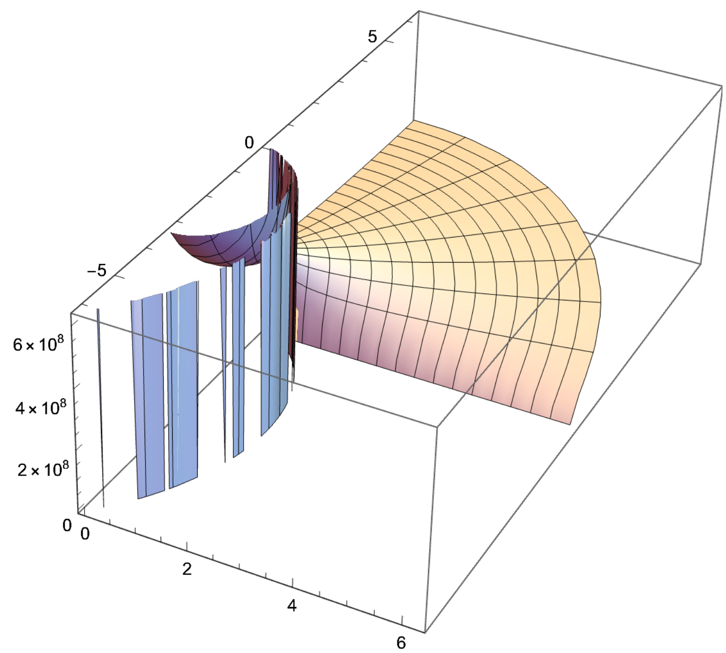
$$\left.\left(\sqrt{2}\,\sqrt{\left(-4\,c^2\,\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+c^2\,\pi\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+8\,c^2\,\pi^4\,\mathrm{Sin}[\beta]^4\right)}\right)\Big/\left(\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\mathrm{Sin}[\beta]^4}\right)\right\},\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\}\Big]$$



```
SphericalPlot3D[
 (√2 √(-4 c² π² θ √((4 π - θ) θ) Sin[β] + c² π θ² √((4 π - θ) θ) Sin[β] + 8 c² π⁴ Sin[β]⁴)) /
  (√(-16 π² θ² + 8 π θ³ - θ⁴ + 16 π⁴ Sin[β]⁴)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\text{RevolutionPlot3D}\Big[\left(\sqrt{2}\,\sqrt{\left(-4\,c^2\,\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+c^2\,\pi\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+8\,c^2\,\pi^4\,\text{Sin}[\beta]^4\right)}\right)\Big/\left(\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}\right),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\Big]$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}-\frac{(v)^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}=\!=r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v\to-\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}}\right\},\right.$$

$$\left.\left\{v\to\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}}\right\}\right\}$$

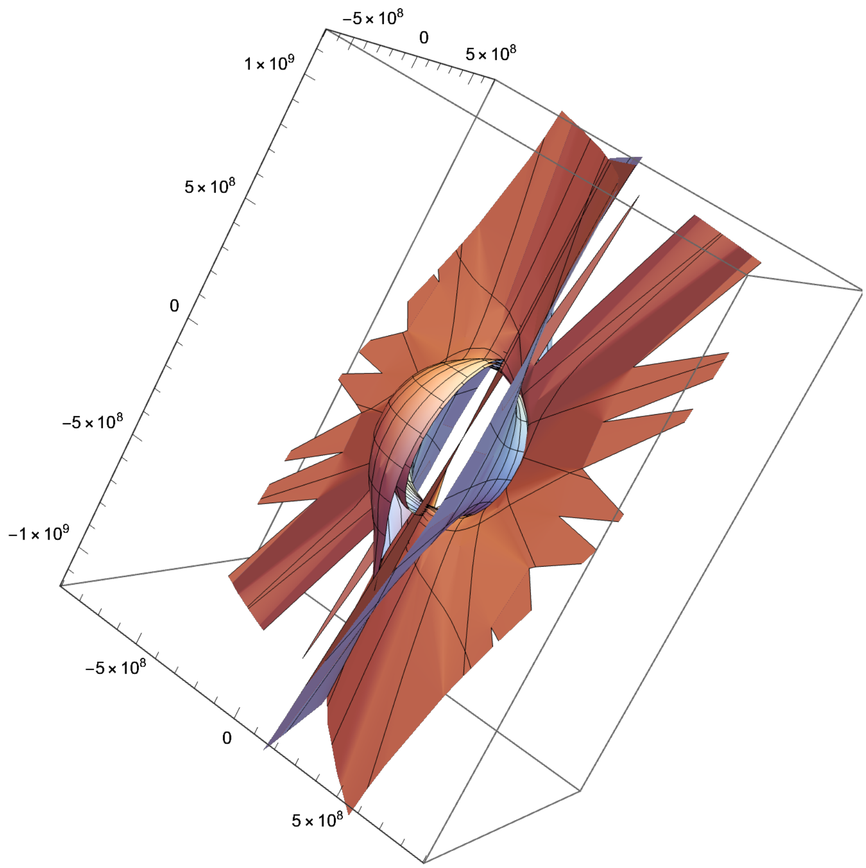
```
c := 2.99792458 (10^8)
```

$$\text{SphericalPlot3D}\left[-\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}},\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\right]$$

$$\text{SphericalPlot3D}\left[\left\{\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}},\right.\right.$$

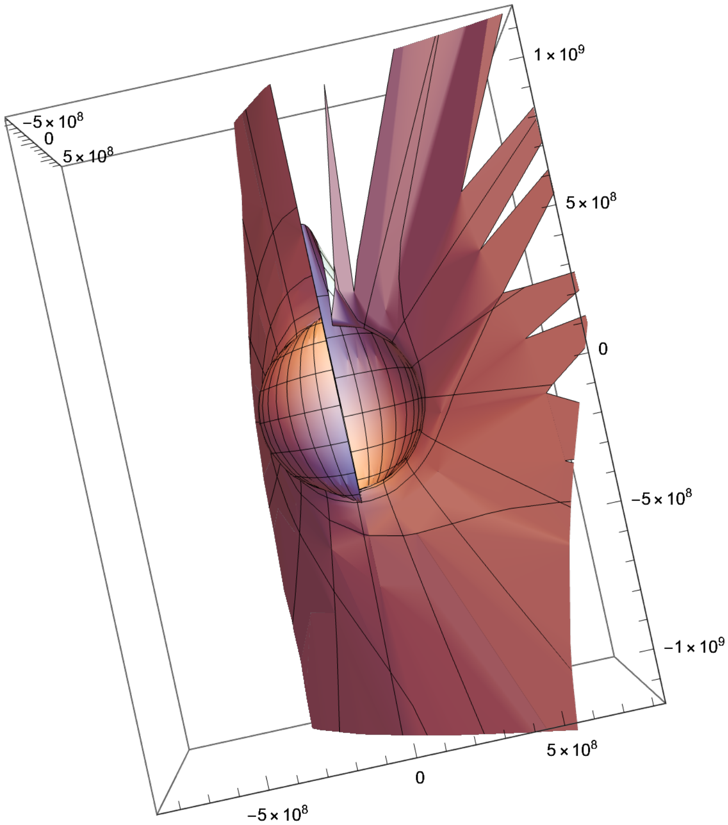
$$\left.-\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}}\right\},$$

$$\left.\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\sqrt{-16\,c^2\,\pi^2\,\theta^2+8\,c^2\,\pi\,\theta^3-c^2\,\theta^4+\frac{32\,c^2\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{(4\,\pi-\theta)\,\theta}}}{\sqrt{-16\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4+16\,\pi^4\,\text{Sin}[\beta]^4}},\right.$$

$$\left.\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\mathtt{SphericalPlot3D}\Big[$$

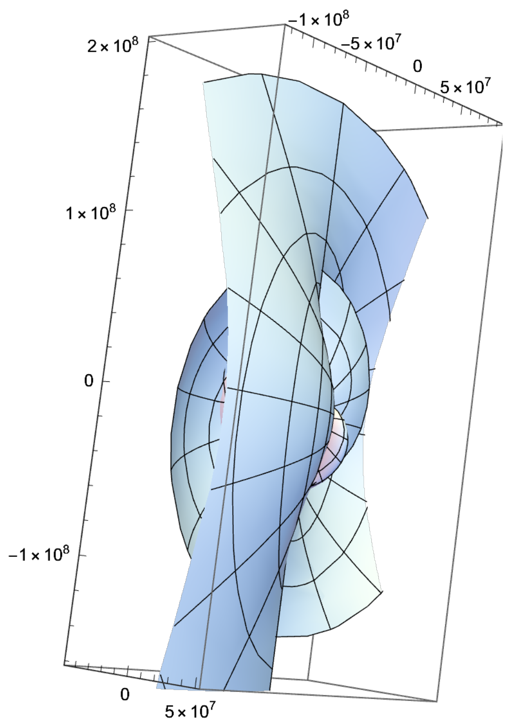
$$\Big\{-\left(\sqrt{2}\sqrt{\left(-4\,c^2\pi^2\theta\sqrt{(4\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]+c^2\pi\theta^2\sqrt{(4\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]+8\,c^2\pi^4\,\mathtt{Sin}[\beta]^4\right)}\right)\Big/$$

$$\left(\sqrt{-16\,\pi^2\theta^2+8\,\pi\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\right)\right)^3-\theta^4+16\,\pi^4\,\mathtt{Sin}[\beta]^4}\right),$$

$$\left(\sqrt{2}\sqrt{\left(-4\,c^2\pi^2\theta\sqrt{(4\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]+c^2\pi\theta^2\sqrt{(4\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]+8\,c^2\pi^4\,\mathtt{Sin}[\beta]^4\right)}\right)\Big/$$

$$\left(\sqrt{-16\,\pi^2\theta^2+8\,\pi\,\theta^3-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\right)\right)^4+16\,\pi^4\,\mathtt{Sin}[\beta]^4}\right)\Big\},$$

$$\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



3 D plots of f(r1)=f(r)=θ

$$\mathtt{Plot}\Big[\Big\{\Big\{\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-$$

$$\frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+\right.\right.\right.}$$

$$\left.\left.4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/\left(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right.$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}$$
$$r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}$$
$$r_1^6 + \sqrt{\Big(}1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) +$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{\Big(}1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/ \Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big)\Bigg) -$$
$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{16\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} -}$$
$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big) \Big/$$
$$\Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\,\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\Big(}1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) -$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{\Big(}1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/$$
$$\Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big) - \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^3}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^3} -$$
$$\frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2}\Bigg) \Big/$$
$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} +}$$
$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big) \Big/$$

$$\Big(3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\ (128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456$$
$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$
$$33\,554\,432\,\pi^{18}\,r_1^6 + \surd\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ \left(3 \times 2^{1/3}\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\right)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{\pi\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} - \frac{1}{2}\sqrt{\;}\Bigg(\frac{4\,\pi^2\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\ (13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$
$$(2^{1/3}\ (16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4))\Big/$$
$$\Big(3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\ (128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\surd\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ \left(3 \times 2^{1/3}\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\right)\Bigg) +$$

$$\frac{1}{2}\sqrt{\;}\Bigg(\frac{8\,\pi^2\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\ (13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} -$$
$$(2^{1/3}\ (16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4))\Big/$$
$$\Big(3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\ (128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$

$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) -$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/$$
$$\Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big) - \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^3}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^3} -$$
$$\frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2}\Bigg) \Big/$$
$$\Bigg(4\,\sqrt{}\Bigg(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} +$$
$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big) \Big/$$
$$\Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\big)^{1/3}\Big) +$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456$$
$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$
$$33\,554\,432\,\pi^{18}\,r_1^6 + \surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/ \Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big)\Bigg)\Bigg)\Bigg)\Bigg\},$$
$$\Bigg\{\frac{\pi\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\,\sqrt{}\Bigg(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} +$$
$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big) \Big/$$

$$(3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}$$
$$r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}$$
$$r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ (3 \times 2^{1/3}\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2))\Bigg) -$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\ (13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} -$$
$$(2^{1/3}\ (16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4))\Big/$$
$$(3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}$$
$$r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}$$
$$r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}) -$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/$$
$$(3 \times 2^{1/3}\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)) + \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^3}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^3} -$$
$$\frac{64\,\pi^3\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)\ (13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2}\Bigg)\Big/$$
$$\Bigg(4\sqrt{}\Bigg(\frac{4\,\pi^2\ (3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\ (13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\ (1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+$$

$$24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-$$

$$25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\;}\Big(1\,811\,939\,328\pi^{20} r_1^2-$$

$$86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488$$

$$\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456$$

$$\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+$$

$$33\,554\,432\pi^{18} r_1^6+\sqrt{\;}\Big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+$$

$$1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976$$

$$\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+$$

$$22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+$$

$$474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Big\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}+\frac{1}{2}\sqrt{\;}\Bigg(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14}$$

$$r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18}$$

$$r_1^6+\sqrt{\;}\Big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+$$

$$6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+$$

$$\sqrt{\;}\Big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

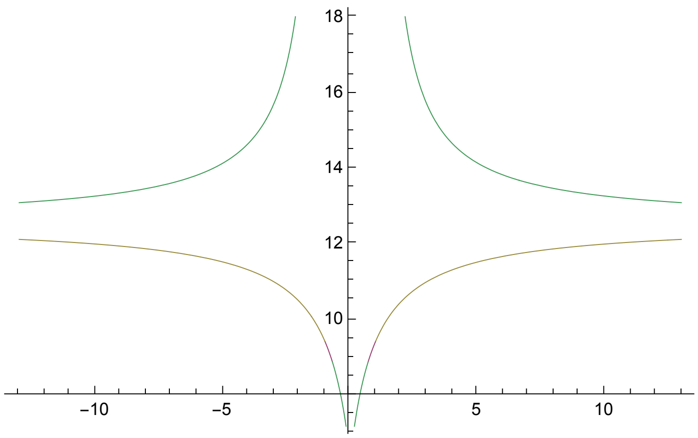
$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)+$$

$$\frac{1}{2}\sqrt{\;}\Bigg(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$
\begin{aligned}
&\Big(3\ (1-16\,\pi^4+16\,\pi^4\,r_1^2)\\
&\quad(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\\
&\qquad r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\\
&\qquad r_1^6+\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-\\
&\qquad\quad 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&\qquad\quad 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&\qquad\quad 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big)-\\
&(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+\\
&\quad 6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\\
&\quad \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-\\
&\qquad 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&\qquad 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&\qquad 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big/\\
&(3\times 2^{1/3}\ (1-16\,\pi^4+16\,\pi^4\,r_1^2))+\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\ (3-16\,\pi^4+32\,\pi^4\,r_1^2)^3}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^3}-\\
&\quad\frac{64\,\pi^3\ (3-16\,\pi^4+32\,\pi^4\,r_1^2)\ (13-16\,\pi^4+64\,\pi^4\,r_1^2)}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}\Bigg)\Big/\\
&\Bigg(4\,\sqrt{\Bigg(\frac{4\,\pi^2\ (3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-\frac{8\,\pi^2\ (13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\ (1-16\,\pi^4+16\,\pi^4\,r_1^2)}+}\\
&\qquad(2^{1/3}\ (16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4))\Big/\\
&\qquad\Big(3\ (1-16\,\pi^4+16\,\pi^4\,r_1^2)\ (128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+\\
&\qquad\qquad 24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-\\
&\qquad\qquad 25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2-\\
&\qquad\qquad\quad 86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\\
&\qquad\qquad\quad \pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&\qquad\qquad\quad 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&\qquad\qquad\quad 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big)+\\
&\qquad(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+\\
&\qquad\quad 6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\\
&\qquad\quad \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-\\
&\qquad\qquad 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\\
&\qquad\qquad \pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&\qquad\qquad 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big/\\
&\qquad(3\times 2^{1/3}\ (1-16\,\pi^4+16\,\pi^4\,r_1^2))\Bigg)\Bigg)\Bigg)\}\},\ \{r_1,\ -13,\ 13\}]
\end{aligned}
$$



$$\texttt{Plot}\Bigg[\Bigg\{\Bigg\{\pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} - \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right)\Bigg/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} +$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\Bigg(4\,\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\pi+\frac{1}{2}\,\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)-$$

$$\frac{1}{2}\,\sqrt{\Bigg(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\Bigg(4\,\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\pi+\frac{1}{2}\,\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)+$$

$$\frac{1}{2}\,\sqrt{\Bigg(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-}$$

$$\frac{\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}{12\,\pi^{2}\,r^{2}}+\left(64\,\pi^{3}+\frac{4}{\pi\,r^{2}}\right)\Big/$$

$$\left(4\,\sqrt{\left(4\,\pi^{2}-\frac{1}{6\,\pi^{2}\,r^{2}}+\frac{1}{12\,\pi^{2}\,r^{2}\,\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}{12\,\pi^{2}\,r^{2}}\right)}\right)\Big)\Big)\}\},\ \{r,\ -6,\ 6\}]$$

```
Plot3D[
```

$$\{\{\frac{\pi\,\left(3-16\,\pi^{4}+32\,\pi^{4}\,r_1^{2}\right)}{1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}}-\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^{2}\,\left(3-16\,\pi^{4}+32\,\pi^{4}\,r_1^{2}\right)^{2}}{\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)^{2}}-\frac{8\,\pi^{2}\,\left(13-16\,\pi^{4}+64\,\pi^{4}\,r_1^{2}\right)}{3\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)}+}$$

$$\left(2^{1/3}\,\left(16\,\pi^{4}-512\,\pi^{8}+4096\,\pi^{12}+2048\,\pi^{8}\,r_1^{2}-32\,768\,\pi^{12}\,r_1^{2}+65\,536\,\pi^{12}\,r_1^{4}\right)\right)\Big/$$

$$\Big(3\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)\,\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456\,\pi^{14}\,r_1^{2}+6\,291\,456\,\pi^{18}\,r_1^{2}+1\,572\,864\,\pi^{14}\,r_1^{4}-25\,165\,824\,\pi^{18}\,r_1^{4}+33\,554\,432\,\pi^{18}\,r_1^{6}+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^{2}-86\,973\,087\,744\,\pi^{24}\,r_1^{2}+1\,391\,569\,403\,904\,\pi^{28}\,r_1^{2}-7\,421\,703\,487\,488\,\pi^{32}\,r_1^{2}+347\,892\,350\,976\,\pi^{24}\,r_1^{4}+38\,963\,943\,309\,312\,\pi^{28}\,r_1^{4}+89\,060\,441\,849\,856\,\pi^{32}\,r_1^{4}+22\,265\,110\,462\,464\,\pi^{28}\,r_1^{6}-356\,241\,767\,399\,424\,\pi^{32}\,r_1^{6}+474\,989\,023\,199\,232\,\pi^{32}\,r_1^{8}\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456\,\pi^{14}\,r_1^{2}+6\,291\,456\,\pi^{18}\,r_1^{2}+1\,572\,864\,\pi^{14}\,r_1^{4}-25\,165\,824\,\pi^{18}\,r_1^{4}+33\,554\,432\,\pi^{18}\,r_1^{6}+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^{2}-86\,973\,087\,744\,\pi^{24}\,r_1^{2}+1\,391\,569\,403\,904\,\pi^{28}\,r_1^{2}-7\,421\,703\,487\,488\,\pi^{32}\,r_1^{2}+347\,892\,350\,976\,\pi^{24}\,r_1^{4}+38\,963\,943\,309\,312\,\pi^{28}\,r_1^{4}+89\,060\,441\,849\,856\,\pi^{32}\,r_1^{4}+22\,265\,110\,462\,464\,\pi^{28}\,r_1^{6}-356\,241\,767\,399\,424\,\pi^{32}\,r_1^{6}+474\,989\,023\,199\,232\,\pi^{32}\,r_1^{8}\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)\right)\Bigg)}-$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^{2}\,\left(3-16\,\pi^{4}+32\,\pi^{4}\,r_1^{2}\right)^{2}}{\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)^{2}}-\frac{16\,\pi^{2}\,\left(13-16\,\pi^{4}+64\,\pi^{4}\,r_1^{2}\right)}{3\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)}-}$$

$$\left(2^{1/3}\,\left(16\,\pi^{4}-512\,\pi^{8}+4096\,\pi^{12}+2048\,\pi^{8}\,r_1^{2}-32\,768\,\pi^{12}\,r_1^{2}+65\,536\,\pi^{12}\,r_1^{4}\right)\right)\Big/$$

$$\Big(3\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)\,\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456\,\pi^{14}\,r_1^{2}+6\,291\,456\,\pi^{18}\,r_1^{2}+1\,572\,864\,\pi^{14}\,r_1^{4}-25\,165\,824\,\pi^{18}\,r_1^{4}+33\,554\,432\,\pi^{18}\,r_1^{6}+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^{2}-86\,973\,087\,744\,\pi^{24}\,r_1^{2}+1\,391\,569\,403\,904\,\pi^{28}\,r_1^{2}-7\,421\,703\,487\,488\,\pi^{32}\,r_1^{2}+347\,892\,350\,976\,\pi^{24}\,r_1^{4}+38\,963\,943\,309\,312\,\pi^{28}\,r_1^{4}+89\,060\,441\,849\,856\,\pi^{32}\,r_1^{4}+22\,265\,110\,462\,464\,\pi^{28}\,r_1^{6}-356\,241\,767\,399\,424\,\pi^{32}\,r_1^{6}+474\,989\,023\,199\,232\,\pi^{32}\,r_1^{8}\Big)\Big)^{1/3}\Big)-$$

$$\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456\,\pi^{14}\,r_1^{2}+$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/$$

$$\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right) - \left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3} - \frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)} +}$$
$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big) +$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)}\Bigg)\Bigg\},$$

$$\Bigg\{\pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}} -\right.}$$

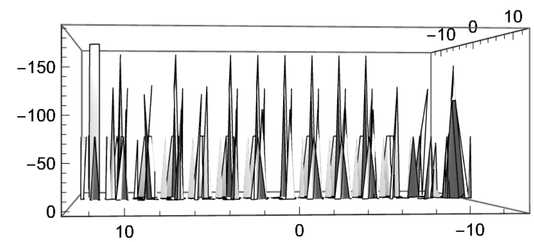
$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-$$

$$\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\,\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\Bigg)\Bigg)\}\},$$

{r₁, -13, 13}, {r, -13, 13}]



Plot3D[

$$\left\{\left\{\frac{\pi\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-\frac{1}{2}\,\sqrt{\left(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.}\right.\right.$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\left(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\,\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\right.\right.$$

$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+\right.$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$

$$\left.\left.\left.\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3}\right)+$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+\right.$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-\right.$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\left.\left.\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3}\Big/\left(3\times 2^{1/3}\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)-$$

$$\frac{1}{2}\sqrt{\;}\Bigg(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10}$$

$$r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18}$$

$$r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\;}\big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+$$

$$1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+$$

$$38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464$$

$$\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\big)\big)^{1/3}\Big)-$$

$$\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+$$

$$6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+$$

$$\sqrt{\;}\big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\big)\big)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)-\Bigg(\frac{768\pi^3}{1-16\pi^4+16\pi^4 r_1^2}+\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)^3}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^3}-$$

$$\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)\left(13-16\pi^4+64\pi^4 r_1^2\right)}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}\Bigg)\Big/$$

$$\Bigg(4\sqrt{\;}\Bigg(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+$$

$$24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-$$

$$25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\;}\big(1\,811\,939\,328\pi^{20} r_1^2-$$

$$86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488$$

$$\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\big)\big)^{1/3}\Big)+$$

$$\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456$$

$$\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+$$

$$33\,554\,432\pi^{18} r_1^6+\sqrt{\;}\big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+$$

$$1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976$$

$$\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+$$

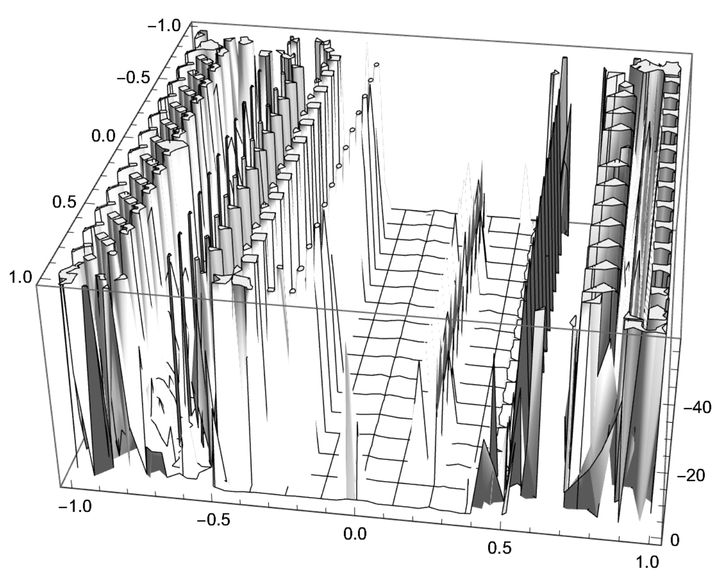
$$22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+$$

$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ \left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\}\Bigg\},$$

$\{r_1, -1, 1\}, \{r, -1, 1\}]$



Plot3D[

$$\Bigg\{\Bigg\{\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{\ldots}-\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\ldots}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\ldots}+}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32768\pi^{12}r_1^2+65536\pi^{12}r_1^4\right)\right)\Big/$$
$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98304\pi^{14}-524288\pi^{18}+24576\pi^{10}\right.\right.$$
$$r_1^2+6291456\pi^{14}r_1^2+6291456\pi^{18}r_1^2+1572864\pi^{14}r_1^4-25165824\pi^{18}$$
$$r_1^4+33554432\pi^{18}r_1^6+\sqrt{}\left(1811939328\pi^{20}r_1^2-86973087744\pi^{24}r_1^2+\right.$$
$$1391569403904\pi^{28}r_1^2-7421703487488\pi^{32}r_1^2+347892350976\pi^{24}r_1^4+$$
$$38963943309312\pi^{28}r_1^4+89060441849856\pi^{32}r_1^4+22265110462464$$
$$\left.\left.\left.\pi^{28}r_1^6-356241767399424\pi^{32}r_1^6+474989023199232\pi^{32}r_1^8\right)\right)^{1/3}\right)+$$
$$\left(128\pi^6-6144\pi^{10}+98304\pi^{14}-524288\pi^{18}+24576\pi^{10}r_1^2+6291456\pi^{14}r_1^2+\right.$$
$$6291456\pi^{18}r_1^2+1572864\pi^{14}r_1^4-25165824\pi^{18}r_1^4+33554432\pi^{18}r_1^6+$$
$$\sqrt{}\left(1811939328\pi^{20}r_1^2-86973087744\pi^{24}r_1^2+1391569403904\pi^{28}r_1^2-\right.$$
$$7421703487488\pi^{32}r_1^2+347892350976\pi^{24}r_1^4+38963943309312\pi^{28}r_1^4+$$
$$89060441849856\pi^{32}r_1^4+22265110462464\pi^{28}r_1^6-356241767399424$$
$$\left.\left.\pi^{32}r_1^6+474989023199232\pi^{32}r_1^8\right)\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)-$$

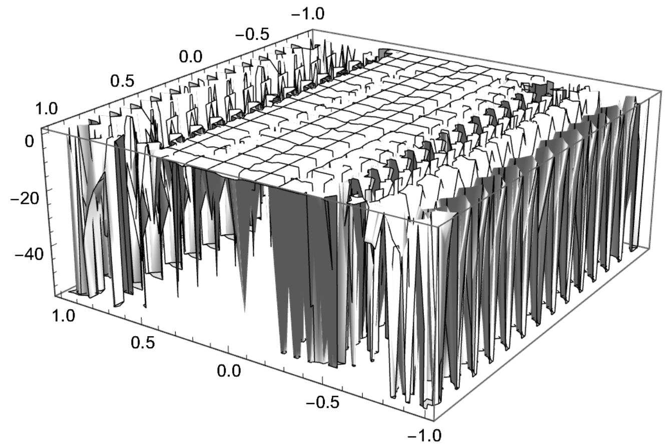
$$\frac{1}{2}\sqrt{}\left(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-\right.$$
$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32768\pi^{12}r_1^2+65536\pi^{12}r_1^4\right)\right)\Big/$$
$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98304\pi^{14}-524288\pi^{18}+24576\pi^{10}\right.\right.$$
$$r_1^2+6291456\pi^{14}r_1^2+6291456\pi^{18}r_1^2+1572864\pi^{14}r_1^4-25165824\pi^{18}$$
$$r_1^4+33554432\pi^{18}r_1^6+\sqrt{}\left(1811939328\pi^{20}r_1^2-86973087744\pi^{24}r_1^2+\right.$$
$$1391569403904\pi^{28}r_1^2-7421703487488\pi^{32}r_1^2+347892350976\pi^{24}r_1^4+$$
$$38963943309312\pi^{28}r_1^4+89060441849856\pi^{32}r_1^4+22265110462464$$
$$\left.\left.\left.\pi^{28}r_1^6-356241767399424\pi^{32}r_1^6+474989023199232\pi^{32}r_1^8\right)\right)^{1/3}\right)-$$
$$\left(128\pi^6-6144\pi^{10}+98304\pi^{14}-524288\pi^{18}+24576\pi^{10}r_1^2+6291456\pi^{14}r_1^2+\right.$$
$$6291456\pi^{18}r_1^2+1572864\pi^{14}r_1^4-25165824\pi^{18}r_1^4+33554432\pi^{18}r_1^6+$$
$$\sqrt{}\left(1811939328\pi^{20}r_1^2-86973087744\pi^{24}r_1^2+1391569403904\pi^{28}r_1^2-\right.$$
$$7421703487488\pi^{32}r_1^2+347892350976\pi^{24}r_1^4+38963943309312\pi^{28}r_1^4+$$
$$89060441849856\pi^{32}r_1^4+22265110462464\pi^{28}r_1^6-$$
$$\left.\left.356241767399424\pi^{32}r_1^6+474989023199232\pi^{32}r_1^8\right)\right)^{1/3}\Big/$$
$$\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)-\left(\frac{768\pi^3}{1-16\pi^4+16\pi^4 r_1^2}+\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)^3}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^3}-\right.$$
$$\left.\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)\left(13-16\pi^4+64\pi^4 r_1^2\right)}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}\right)\Bigg/$$
$$\left(4\sqrt{}\left(\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.\right.\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$
$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+ 24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4- 25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{}\big(1\,811\,939\,328\pi^{20} r_1^2- 86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488 \pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+ 89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6- 356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\big)\Big)^{1/3}\Big)+$$
$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456 \pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+ 33\,554\,432\pi^{18} r_1^6+\sqrt{}\big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+ 1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976 \pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+ 22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+ 474\,989\,023\,199\,232\pi^{32} r_1^8\big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Big\{\pi+\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\Bigg(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}+\left(64\pi^3+\frac{4}{\pi r^2}\right)\Bigg/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\Bigg)}\Big\}\Big\},$$

{r₁, -1, 1}, {r, -1, 1}]



Plot3D[

$$
\Bigg\{\Bigg\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}-\frac{1}{2}\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}
$$

$$
\begin{aligned}
&\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/\\
&\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10}\right.\\
&\quad r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18}\\
&\quad r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{}\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+\right.\\
&\qquad 1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+\\
&\qquad 38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\\
&\qquad \left.\left.\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Big)+\\
&\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+\right.\\
&\quad 6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\\
&\quad \sqrt{}\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-\right.\\
&\qquad 7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+\\
&\qquad 89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\\
&\qquad \left.\left.\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)-
\end{aligned}
$$

$$
\frac{1}{2}\sqrt{\left(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-\right.}
$$

$$
\begin{aligned}
&\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/\\
&\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10}\right.\\
&\quad r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18}\\
&\quad r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{}\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+\right.\\
&\qquad 1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+\\
&\qquad 38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\\
&\qquad \left.\left.\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Big)-
\end{aligned}
$$

$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) - \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} - \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$

$$\left(4\sqrt{\left(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} + \left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/ \left(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\right) + \left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\right)}\right)\Bigg\},$$

$$\Bigg\{\pi + \frac{1}{2}\sqrt{\left(\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right) + \right.}$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

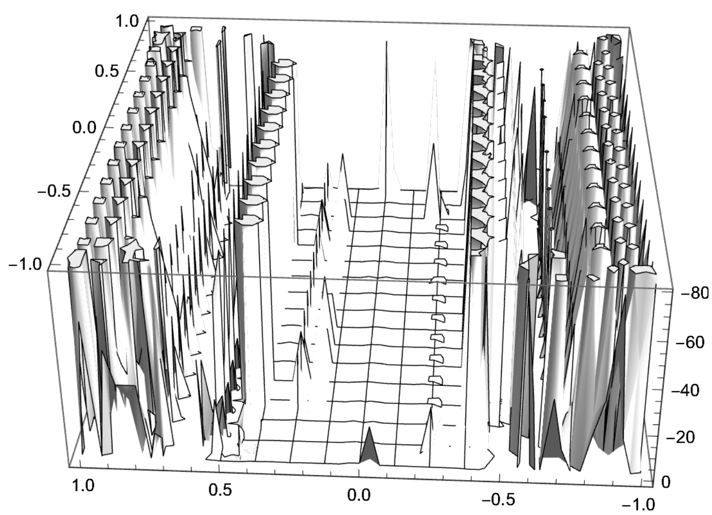
$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+$$

$$\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\}\},$$

$\{r_1, -1, 1\}, \{r, -1, 1\}]$



r1 theta 2 s

Plot3D[

$$\Big\{\Big\{\frac{\pi\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-\frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.}$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\left(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\,\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\right.\right.$$

$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+\right.}$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\,) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3} \Big/ \left(3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\right)\,) +$$

$$\frac{1}{2}\,\sqrt{}\,\Bigg(\frac{8\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} -$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)\,) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\,) -$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3} \Big/$$
$$(3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,) - \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^3}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^3} -$$
$$\frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2}\Bigg) \Big/$$
$$\Bigg(4\,\sqrt{}\,\Bigg(\frac{4\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)\,) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\Big(}1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Big\},$$

$$\Big\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\right.}$$

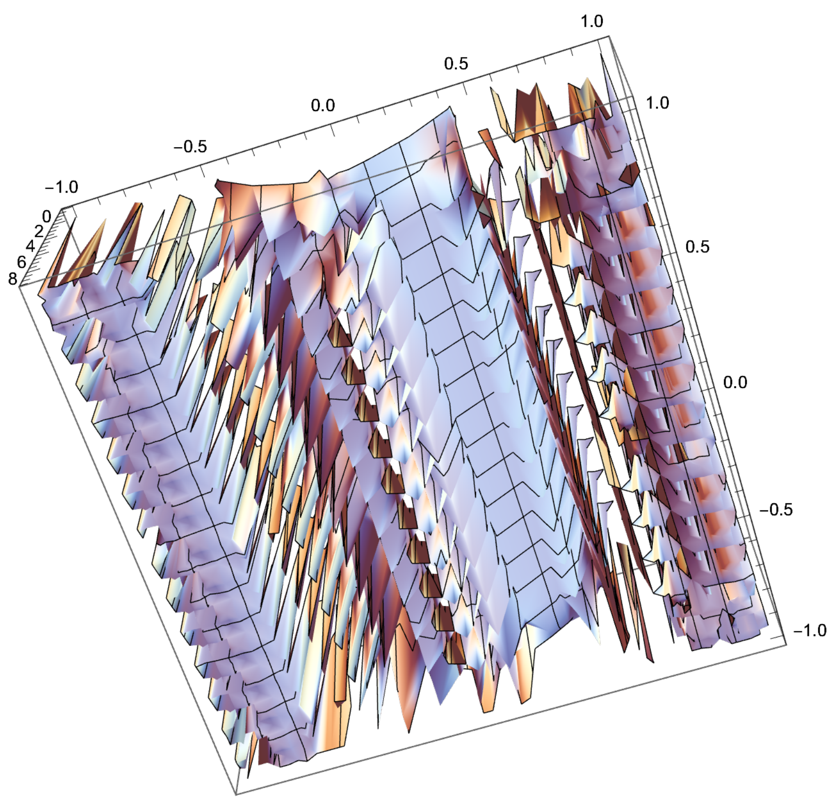
$$\frac{\left(1+13824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-$$

$$\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\}\},$$

`{r₁, -1, 1}, {r, -1, 1}]`



Plot3D[

$$\left\{\left\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}-\frac{1}{2}\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}\right.\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$
$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\right)+$$
$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)+$$

$$\frac{1}{2}\sqrt{\left(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-\right.}$$
$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$
$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\right)-$$
$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\Big/$$
$$\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)-\left(\frac{768\pi^3}{1-16\pi^4+16\pi^4 r_1^2}+\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)^3}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^3}-\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)\left(13-16\pi^4+64\pi^4 r_1^2\right)}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}\right)\Bigg/$$
$$\left(4\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/ \left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\right)+\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\Bigg\},$$

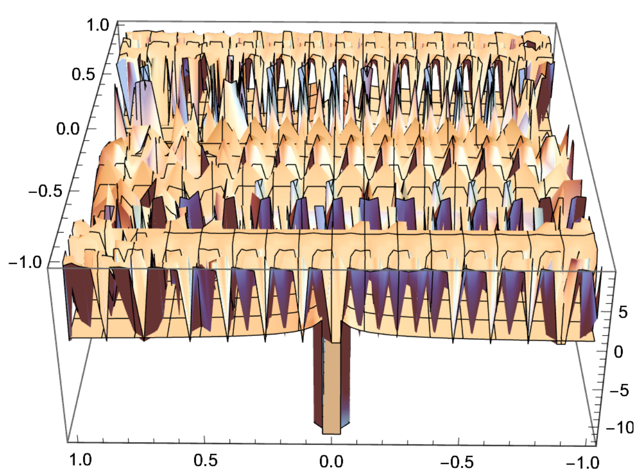
$$\Bigg\{\pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} + \right.}$$

$$\left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right) \Bigg/$$

$$\left.\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\}\Bigg\},$$

```
{r1, -1, 1}, {r, -1, 1}]
```



Plot3D[

$$\Bigg\{\Bigg\{\frac{\pi\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} - \frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} + \right.}$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\big)^{1/3}\Big)+$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)+$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\big)^{1/3}\Big)-$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\Big)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)-\Bigg(\frac{768\pi^3}{1-16\pi^4+16\pi^4 r_1^2}+\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)^3}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^3}-$$

$$\frac{64\pi^3\left(3-16\pi^4+32\pi^4 r_1^2\right)\left(13-16\pi^4+64\pi^4 r_1^2\right)}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}\Bigg)\Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)\,\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$
$$24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456\,\pi^{14}\,r_1^{2}+6\,291\,456\,\pi^{18}\,r_1^{2}+1\,572\,864\,\pi^{14}\,r_1^{4}-$$
$$25\,165\,824\,\pi^{18}\,r_1^{4}+33\,554\,432\,\pi^{18}\,r_1^{6}+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^{2}-$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^{2}+1\,391\,569\,403\,904\,\pi^{28}\,r_1^{2}-7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^{2}+347\,892\,350\,976\,\pi^{24}\,r_1^{4}+38\,963\,943\,309\,312\,\pi^{28}\,r_1^{4}+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^{4}+22\,265\,110\,462\,464\,\pi^{28}\,r_1^{6}-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^{6}+474\,989\,023\,199\,232\,\pi^{32}\,r_1^{8}\Big)\Big)^{1/3}\Big)+$$
$$\Big(128\,\pi^{6}-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^{2}+6\,291\,456$$
$$\pi^{14}\,r_1^{2}+6\,291\,456\,\pi^{18}\,r_1^{2}+1\,572\,864\,\pi^{14}\,r_1^{4}-25\,165\,824\,\pi^{18}\,r_1^{4}+$$
$$33\,554\,432\,\pi^{18}\,r_1^{6}+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^{2}-86\,973\,087\,744\,\pi^{24}\,r_1^{2}+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^{2}-7\,421\,703\,487\,488\,\pi^{32}\,r_1^{2}+347\,892\,350\,976$$
$$\pi^{24}\,r_1^{4}+38\,963\,943\,309\,312\,\pi^{28}\,r_1^{4}+89\,060\,441\,849\,856\,\pi^{32}\,r_1^{4}+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^{6}-356\,241\,767\,399\,424\,\pi^{32}\,r_1^{6}+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^{8}\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\,\left(1-16\,\pi^{4}+16\,\pi^{4}\,r_1^{2}\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Big\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^{2}-\frac{1}{6\,\pi^{2}\,r^{2}}+\frac{1}{12\,\pi^{2}\,r^{2}\,\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}{12\,\pi^{2}\,r^{2}}\right)}-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^{2}-\frac{1}{3\,\pi^{2}\,r^{2}}-\frac{1}{12\,\pi^{2}\,r^{2}\,\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}{12\,\pi^{2}\,r^{2}}-\left(64\,\pi^{3}+\frac{4}{\pi\,r^{2}}\right)\Big/\left(4\sqrt{\left(4\,\pi^{2}-\frac{1}{6\,\pi^{2}\,r^{2}}+\frac{1}{12\,\pi^{2}\,r^{2}\,\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}{12\,\pi^{2}\,r^{2}}\right)}\right)\right)}\Big\},$$

$$\Big\{\pi+\frac{1}{2}\sqrt{\Big(4\,\pi^{2}-\frac{1}{6\,\pi^{2}\,r^{2}}+\frac{1}{12\,\pi^{2}\,r^{2}\,\left(1+13\,824\,\pi^{8}\,r^{4}+96\,\sqrt{3}\,\pi^{4}\,\sqrt{r^{4}+6912\,\pi^{8}\,r^{8}}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\,\pi^2 r^2}\Bigg) -$$

$$\frac{1}{2}\sqrt{\Bigg(8\,\pi^2-\frac{1}{3\,\pi^2 r^2}-\frac{1}{12\,\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-}$$

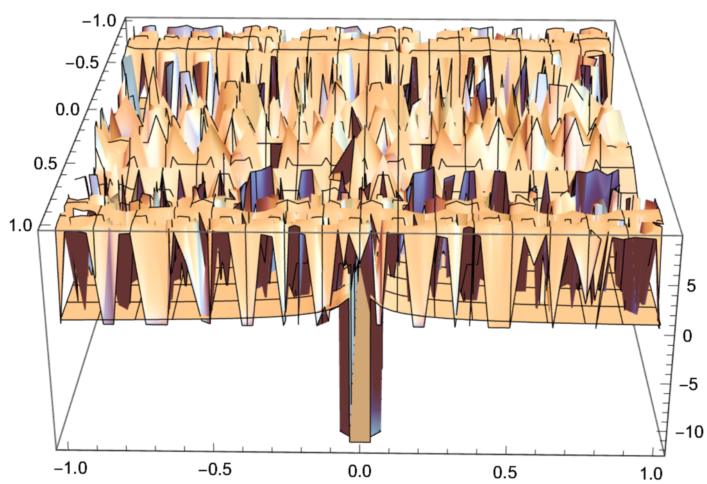
$$\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\,\pi^2 r^2}+$$

$$\left(64\,\pi^3+\frac{4}{\pi\, r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2 r^2}+\frac{1}{12\,\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\,\pi^2 r^2}\right)\right)\Bigg)\Bigg\}\Big\},$$

$\{r_1, -1, 1\}, \{r, -1, 1\}]$



Plot3D[

$$\Big\{\Big\{\frac{\pi\left(3-16\,\pi^4+32\,\pi^4 r_1^2\right)}{1-16\,\pi^4+16\,\pi^4 r_1^2}-\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4 r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4 r_1^2\right)^2}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4 r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4 r_1^2\right)}+}$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8 r_1^2-32\,768\,\pi^{12} r_1^2+65\,536\,\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\,\pi^4+16\,\pi^4 r_1^2\right)\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$

$$r_1^2+6\,291\,456\,\pi^{14} r_1^2+6\,291\,456\,\pi^{18} r_1^2+1\,572\,864\,\pi^{14} r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18} r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20} r_1^2-86\,973\,087\,744\,\pi^{24} r_1^2+$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ \left(3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\right)) +$$

$$\frac{1}{2}\sqrt{}\,\Bigg(\frac{8\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} -$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}) -$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/$$

$$\left(3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\right) - \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^3}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^3} -$$
$$\frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2}\Bigg) \Big/$$

$$\Bigg(4\sqrt{}\,\Bigg(\frac{4\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\,(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$

$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big)+$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$
$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$
$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$
$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Big\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\Bigg(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-}$$
$$\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$
$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\Bigg)\Big\},$$

$$\Big\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\right.}$$

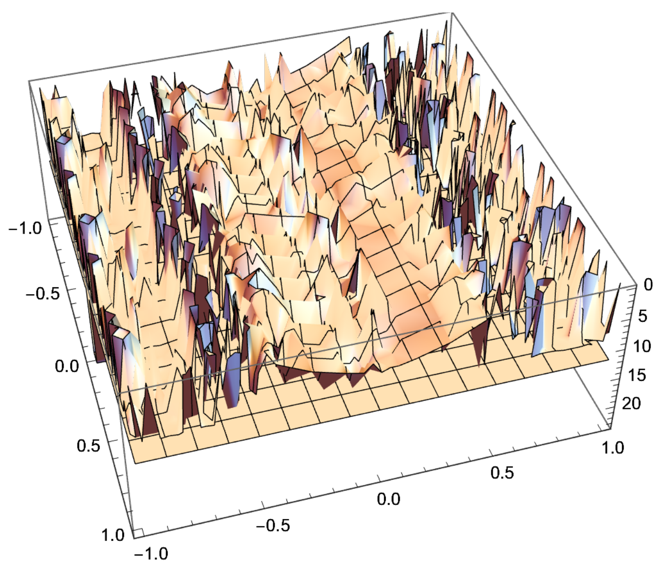
$$\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}+$$

$$\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\}\},$$

```
{r1, -1, 1}, {r, -1, 1}]
```




```
Plot3D[
```

$$\left\{\left\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}+\frac{1}{2}\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}\right.\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\,\pi^{12} r_1^2+65\,536\,\pi^{12} r_1^4\right)\right)\Big/$$

$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\right.\right.$$

$$r_1^2+6\,291\,456\,\pi^{14} r_1^2+6\,291\,456\,\pi^{18} r_1^2+1\,572\,864\,\pi^{14} r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18} r_1^6+\sqrt{}\left(1\,811\,939\,328\,\pi^{20} r_1^2-86\,973\,087\,744\,\pi^{24} r_1^2+\right.$$

$$1\,391\,569\,403\,904\,\pi^{28} r_1^2-7\,421\,703\,487\,488\,\pi^{32} r_1^2+347\,892\,350\,976\,\pi^{24} r_1^4+$$

$$38\,963\,943\,309\,312\,\pi^{28} r_1^4+89\,060\,441\,849\,856\,\pi^{32} r_1^4+22\,265\,110\,462\,464$$

$$\pi^{28}\ r_1^6 - 356241767399424\ \pi^{32}\ r_1^6 + 474989023199232\ \pi^{32}\ r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\Big(128\ \pi^6 - 6144\ \pi^{10} + 98304\ \pi^{14} - 524288\ \pi^{18} + 24576\ \pi^{10}\ r_1^2 + 6291456\ \pi^{14}\ r_1^2 +$$

$$6291456\ \pi^{18}\ r_1^2 + 1572864\ \pi^{14}\ r_1^4 - 25165824\ \pi^{18}\ r_1^4 + 33554432\ \pi^{18}\ r_1^6 +$$

$$\surd\Big(1811939328\ \pi^{20}\ r_1^2 - 86973087744\ \pi^{24}\ r_1^2 + 1391569403904\ \pi^{28}\ r_1^2 -$$

$$7421703487488\ \pi^{32}\ r_1^2 + 347892350976\ \pi^{24}\ r_1^4 + 38963943309312\ \pi^{28}\ r_1^4 +$$

$$89060441849856\ \pi^{32}\ r_1^4 + 22265110462464\ \pi^{28}\ r_1^6 - 356241767399424$$

$$\pi^{32}\ r_1^6 + 474989023199232\ \pi^{32}\ r_1^8\Big)\Big)^{1/3} \Big/ \Big(3 \times 2^{1/3}\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)\Big)\Bigg) -$$

$$\frac{1}{2}\surd\Bigg(\frac{8\ \pi^2\ \big(3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2\big)^2}{\big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)^2} - \frac{16\ \pi^2\ \big(13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2\big)}{3\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)} -$$

$$\Big(2^{1/3}\ \big(16\ \pi^4 - 512\ \pi^8 + 4096\ \pi^{12} + 2048\ \pi^8\ r_1^2 - 32768\ \pi^{12}\ r_1^2 + 65536\ \pi^{12}\ r_1^4\big)\Big) \Big/$$

$$\Big(3\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)\ \Big(128\ \pi^6 - 6144\ \pi^{10} + 98304\ \pi^{14} - 524288\ \pi^{18} + 24576\ \pi^{10}$$

$$r_1^2 + 6291456\ \pi^{14}\ r_1^2 + 6291456\ \pi^{18}\ r_1^2 + 1572864\ \pi^{14}\ r_1^4 - 25165824\ \pi^{18}$$

$$r_1^4 + 33554432\ \pi^{18}\ r_1^6 + \surd\Big(1811939328\ \pi^{20}\ r_1^2 - 86973087744\ \pi^{24}\ r_1^2 +$$

$$1391569403904\ \pi^{28}\ r_1^2 - 7421703487488\ \pi^{32}\ r_1^2 + 347892350976\ \pi^{24}\ r_1^4 +$$

$$38963943309312\ \pi^{28}\ r_1^4 + 89060441849856\ \pi^{32}\ r_1^4 + 22265110462464$$

$$\pi^{28}\ r_1^6 - 356241767399424\ \pi^{32}\ r_1^6 + 474989023199232\ \pi^{32}\ r_1^8\Big)\Big)^{1/3}\Big) -$$

$$\Big(128\ \pi^6 - 6144\ \pi^{10} + 98304\ \pi^{14} - 524288\ \pi^{18} + 24576\ \pi^{10}\ r_1^2 + 6291456\ \pi^{14}\ r_1^2 +$$

$$6291456\ \pi^{18}\ r_1^2 + 1572864\ \pi^{14}\ r_1^4 - 25165824\ \pi^{18}\ r_1^4 + 33554432\ \pi^{18}\ r_1^6 +$$

$$\surd\Big(1811939328\ \pi^{20}\ r_1^2 - 86973087744\ \pi^{24}\ r_1^2 + 1391569403904\ \pi^{28}\ r_1^2 -$$

$$7421703487488\ \pi^{32}\ r_1^2 + 347892350976\ \pi^{24}\ r_1^4 + 38963943309312\ \pi^{28}\ r_1^4 +$$

$$89060441849856\ \pi^{32}\ r_1^4 + 22265110462464\ \pi^{28}\ r_1^6 -$$

$$356241767399424\ \pi^{32}\ r_1^6 + 474989023199232\ \pi^{32}\ r_1^8\Big)\Big)^{1/3} \Big/$$

$$\Big(3 \times 2^{1/3}\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)\Big) + \Bigg(\frac{768\ \pi^3}{1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2} + \frac{64\ \pi^3\ \big(3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2\big)^3}{\big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)^3} -$$

$$\frac{64\ \pi^3\ \big(3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2\big)\ \big(13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2\big)}{\big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)^2}\Bigg) \Bigg/$$

$$\Bigg(4\ \surd\Bigg(\frac{4\ \pi^2\ \big(3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2\big)^2}{\big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)^2} - \frac{8\ \pi^2\ \big(13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2\big)}{3\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)} +$$

$$\Big(2^{1/3}\ \big(16\ \pi^4 - 512\ \pi^8 + 4096\ \pi^{12} + 2048\ \pi^8\ r_1^2 - 32768\ \pi^{12}\ r_1^2 + 65536\ \pi^{12}\ r_1^4\big)\Big) \Big/$$

$$\Big(3\ \big(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2\big)\ \Big(128\ \pi^6 - 6144\ \pi^{10} + 98304\ \pi^{14} - 524288\ \pi^{18} +$$

$$24576\ \pi^{10}\ r_1^2 + 6291456\ \pi^{14}\ r_1^2 + 6291456\ \pi^{18}\ r_1^2 + 1572864\ \pi^{14}\ r_1^4 -$$

$$25165824\ \pi^{18}\ r_1^4 + 33554432\ \pi^{18}\ r_1^6 + \surd\Big(1811939328\ \pi^{20}\ r_1^2 -$$

$$86973087744\ \pi^{24}\ r_1^2 + 1391569403904\ \pi^{28}\ r_1^2 - 7421703487488$$

$$\pi^{32}\ r_1^2 + 347892350976\ \pi^{24}\ r_1^4 + 38963943309312\ \pi^{28}\ r_1^4 +$$

$$89060441849856\ \pi^{32}\ r_1^4 + 22265110462464\ \pi^{28}\ r_1^6 -$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\Big)^{1/3} \Big/ \Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Bigg\{\pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} - \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right) \Bigg/ \left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\right.}$$

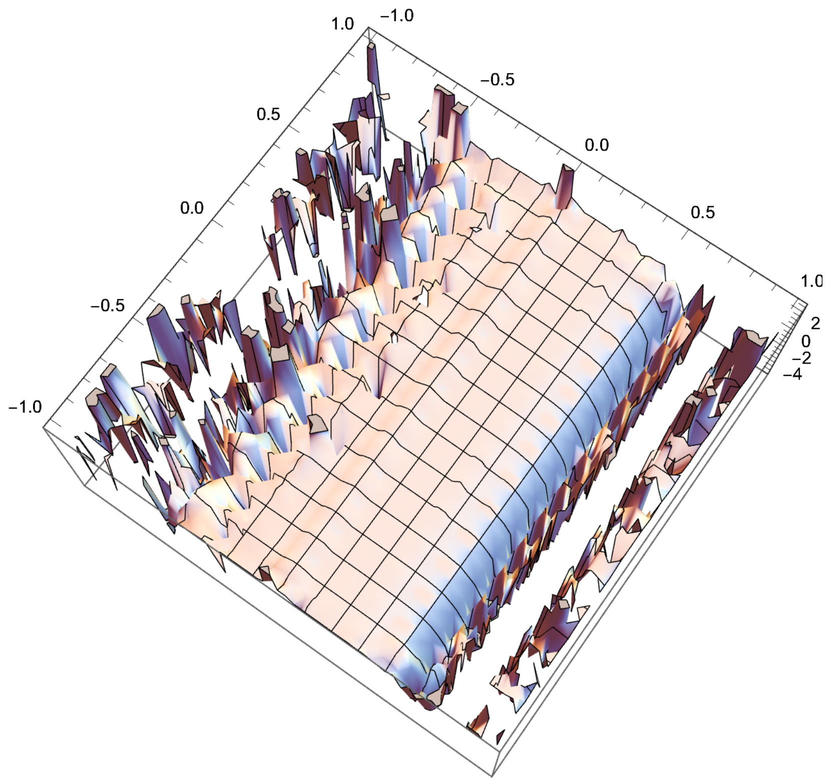
$$\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-$$

$$\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\left.\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\right)\}\},$$

$\{r_1, -1, 1\}, \{r, -1, 1\}]$



Plot3D[

$$\left\{\left\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}+\frac{1}{2}\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}\right.\right.$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$

$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$

$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$

$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$

$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/ \left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg) -$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{16\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} -$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$

$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$

$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$

$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/$$

$$\left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) + \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} -$$

$$\frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\Bigg) \Bigg/$$

$$\Bigg(4\sqrt{}\Bigg(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +$$

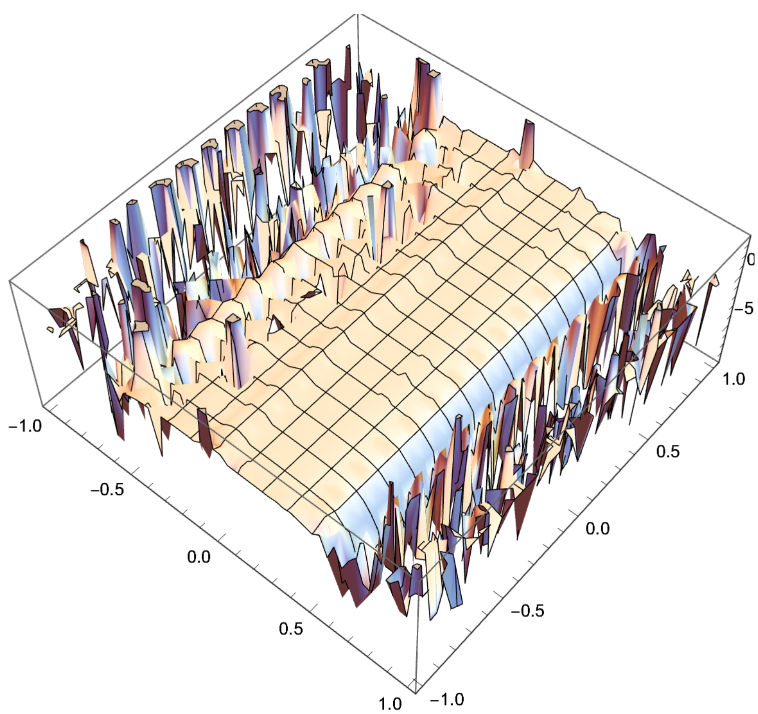
$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$
$$\Big(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+$$
$$24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-$$
$$25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{}\Big(1\,811\,939\,328\pi^{20} r_1^2-$$
$$86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488$$
$$\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$
$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$
$$356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big)+$$
$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456$$
$$\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+$$
$$33\,554\,432\pi^{18} r_1^6+\sqrt{}\Big(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+$$
$$1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976$$
$$\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+$$
$$22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+$$
$$474\,989\,023\,199\,232\pi^{32} r_1^8\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}-$$
$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\Bigg\},$$

$$\left\{\pi - \frac{1}{2}\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)} + \right.$$

$$\frac{1}{2}\sqrt{\left(8\pi^2 - \frac{1}{3\pi^2 r^2} - \frac{1}{12\pi^2 r^2\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2} - \left(64\pi^3 + \frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\pi^8 r^4 + 96\sqrt{3}\pi^4\sqrt{r^4 + 6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\}\},$$

```
{r1, -1, 1}, {r, -1, 1}]
```




```
Plot3D[
```

$$\left\{\left\{\frac{\pi\left(3 - 16\pi^4 + 32\pi^4 r_1^2\right)}{\ldots}\quad \frac{1}{\ldots}\sqrt{\frac{4\pi^2\left(3 - 16\pi^4 + 32\pi^4 r_1^2\right)^2}{\ldots} \quad \frac{8\pi^2\left(13 - 16\pi^4 + 64\pi^4 r_1^2\right)}{\ldots}}\right.\right.$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\Big)^{1/3}\Big/\Big(3\times2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Bigg)-$$

$$\frac{1}{2}\,\surd\Bigg(\frac{8\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{16\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}-$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)-$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\Big)^{1/3}\Big/$$

$$\Big(3\times2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)+\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^3}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^3}-$$

$$\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}\Bigg)\Bigg/$$

$$\Bigg(4\,\surd\Bigg(\frac{4\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{8\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}+$$

$$(2^{1/3}\ (16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\, r_1^2 - 32\,768\,\pi^{12}\, r_1^2 + 65\,536\,\pi^{12}\, r_1^4))\ \Big/$$

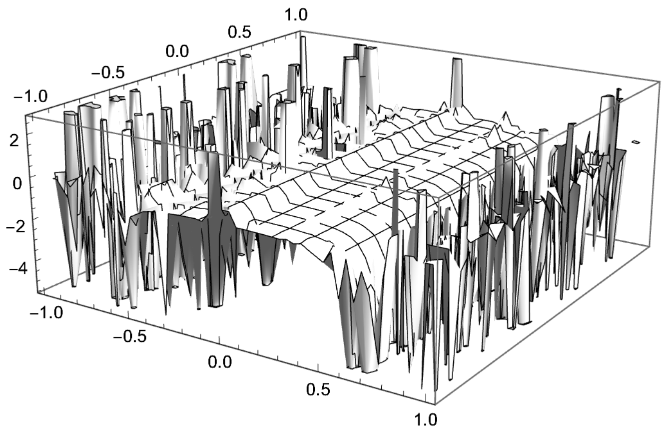
$$(3\ (1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2)\ (128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\, r_1^2 + 6\,291\,456\,\pi^{14}\, r_1^2 + 6\,291\,456\,\pi^{18}\, r_1^2 + 1\,572\,864\,\pi^{14}\, r_1^4 -$$
$$25\,165\,824\,\pi^{18}\, r_1^4 + 33\,554\,432\,\pi^{18}\, r_1^6 + \surd\,(1\,811\,939\,328\,\pi^{20}\, r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\, r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\, r_1^2 + 347\,892\,350\,976\,\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\, r_1^8))^{1/3}) +$$

$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\, r_1^2 + 6\,291\,456$$
$$\pi^{14}\, r_1^2 + 6\,291\,456\,\pi^{18}\, r_1^2 + 1\,572\,864\,\pi^{14}\, r_1^4 - 25\,165\,824\,\pi^{18}\, r_1^4 +$$
$$33\,554\,432\,\pi^{18}\, r_1^6 + \surd\,(1\,811\,939\,328\,\pi^{20}\, r_1^2 - 86\,973\,087\,744\,\pi^{24}\, r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\, r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\, r_1^6 +$$
$$474\,989\,023\,199\,232\,\pi^{32}\, r_1^8))^{1/3}\Big/\ (3\times 2^{1/3}\ (1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2)))))\},$$

$$\Bigg\{\pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\, r^2} + \frac{1}{12\,\pi^2\, r^2\,\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}}{12\,\pi^2\, r^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\, r^2} - \frac{1}{12\,\pi^2\, r^2\,\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}}{12\,\pi^2\, r^2} + \left(64\,\pi^3 + \frac{4}{\pi\, r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\, r^2} + \frac{1}{12\,\pi^2\, r^2\,\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\, r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\, r^8}\right)^{1/3}}{12\,\pi^2\, r^2}\right)}\right)\right)}\Bigg\}\Bigg\},$$

$$\{r_1, -1, 1\}, \{r, -1, 1\}]$$



Plot3D[

$$\Bigg\{\Bigg\{\frac{\pi\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-\frac{1}{2}\sqrt{}\Bigg(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-\frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)}+$$

$$\Big(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\Big)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$

$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$

$$\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$

$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/\big(3\times 2^{1/3}\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\big)\Bigg)-$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-\frac{16\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)}-$$

$$\Big(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\Big)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$

$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$

$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$

$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$

$$\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)-$$

$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\surd(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/$$
$$(3\times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)) - \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^3}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^3} -\right.$$
$$\left.\frac{64\,\pi^3\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2}\right) \Big/$$
$$(4\,\surd(\frac{4\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}) +$$
$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456$$
$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$
$$33\,554\,432\,\pi^{18}\,r_1^6 + \surd(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ (3\times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2))))))\},$$
$$\{\frac{\pi\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} - \frac{1}{2}\,\surd(\frac{4\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$
$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$
$$(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)\,(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \surd(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$

$$\pi^{28}\ r_1^6 - 356\,241\,767\,399\,424\ \pi^{32}\ r_1^6 + 474\,989\,023\,199\,232\ \pi^{32}\ r_1^8))^{1/3}) +$$

$$(128\ \pi^6 - 6144\ \pi^{10} + 98\,304\ \pi^{14} - 524\,288\ \pi^{18} + 24\,576\ \pi^{10}\ r_1^2 + 6\,291\,456\ \pi^{14}\ r_1^2 +$$

$$6\,291\,456\ \pi^{18}\ r_1^2 + 1\,572\,864\ \pi^{14}\ r_1^4 - 25\,165\,824\ \pi^{18}\ r_1^4 + 33\,554\,432\ \pi^{18}\ r_1^6 +$$

$$\sqrt{}(1\,811\,939\,328\ \pi^{20}\ r_1^2 - 86\,973\,087\,744\ \pi^{24}\ r_1^2 + 1\,391\,569\,403\,904\ \pi^{28}\ r_1^2 -$$

$$7\,421\,703\,487\,488\ \pi^{32}\ r_1^2 + 347\,892\,350\,976\ \pi^{24}\ r_1^4 + 38\,963\,943\,309\,312\ \pi^{28}\ r_1^4 +$$

$$89\,060\,441\,849\,856\ \pi^{32}\ r_1^4 + 22\,265\,110\,462\,464\ \pi^{28}\ r_1^6 - 356\,241\,767\,399\,424$$

$$\pi^{32}\ r_1^6 + 474\,989\,023\,199\,232\ \pi^{32}\ r_1^8))^{1/3} \Big/ (3 \times 2^{1/3}\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2))) +$$

$$\frac{1}{2}\sqrt{}\left(\frac{8\ \pi^2\ (3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2)^2}{(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)^2} - \frac{16\ \pi^2\ (13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2)}{3\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)} -\right.$$

$$(2^{1/3}\ (16\ \pi^4 - 512\ \pi^8 + 4096\ \pi^{12} + 2048\ \pi^8\ r_1^2 - 32\,768\ \pi^{12}\ r_1^2 + 65\,536\ \pi^{12}\ r_1^4)) \Big/$$

$$(3\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)\ (128\ \pi^6 - 6144\ \pi^{10} + 98\,304\ \pi^{14} - 524\,288\ \pi^{18} + 24\,576\ \pi^{10}$$

$$r_1^2 + 6\,291\,456\ \pi^{14}\ r_1^2 + 6\,291\,456\ \pi^{18}\ r_1^2 + 1\,572\,864\ \pi^{14}\ r_1^4 - 25\,165\,824\ \pi^{18}$$

$$r_1^4 + 33\,554\,432\ \pi^{18}\ r_1^6 + \sqrt{}(1\,811\,939\,328\ \pi^{20}\ r_1^2 - 86\,973\,087\,744\ \pi^{24}\ r_1^2 +$$

$$1\,391\,569\,403\,904\ \pi^{28}\ r_1^2 - 7\,421\,703\,487\,488\ \pi^{32}\ r_1^2 + 347\,892\,350\,976\ \pi^{24}\ r_1^4 +$$

$$38\,963\,943\,309\,312\ \pi^{28}\ r_1^4 + 89\,060\,441\,849\,856\ \pi^{32}\ r_1^4 + 22\,265\,110\,462\,464$$

$$\pi^{28}\ r_1^6 - 356\,241\,767\,399\,424\ \pi^{32}\ r_1^6 + 474\,989\,023\,199\,232\ \pi^{32}\ r_1^8))^{1/3}) -$$

$$(128\ \pi^6 - 6144\ \pi^{10} + 98\,304\ \pi^{14} - 524\,288\ \pi^{18} + 24\,576\ \pi^{10}\ r_1^2 + 6\,291\,456\ \pi^{14}\ r_1^2 +$$

$$6\,291\,456\ \pi^{18}\ r_1^2 + 1\,572\,864\ \pi^{14}\ r_1^4 - 25\,165\,824\ \pi^{18}\ r_1^4 + 33\,554\,432\ \pi^{18}\ r_1^6 +$$

$$\sqrt{}(1\,811\,939\,328\ \pi^{20}\ r_1^2 - 86\,973\,087\,744\ \pi^{24}\ r_1^2 + 1\,391\,569\,403\,904\ \pi^{28}\ r_1^2 -$$

$$7\,421\,703\,487\,488\ \pi^{32}\ r_1^2 + 347\,892\,350\,976\ \pi^{24}\ r_1^4 + 38\,963\,943\,309\,312\ \pi^{28}\ r_1^4 +$$

$$89\,060\,441\,849\,856\ \pi^{32}\ r_1^4 + 22\,265\,110\,462\,464\ \pi^{28}\ r_1^6 -$$

$$356\,241\,767\,399\,424\ \pi^{32}\ r_1^6 + 474\,989\,023\,199\,232\ \pi^{32}\ r_1^8))^{1/3} \Big/$$

$$(3 \times 2^{1/3}\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)) - \left(\frac{768\ \pi^3}{1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2} + \frac{64\ \pi^3\ (3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2)^3}{(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)^3} -\right.$$

$$\left.\frac{64\ \pi^3\ (3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2)\ (13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2)}{(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)^2}\right) \Big/$$

$$\left(4\sqrt{}\left(\frac{4\ \pi^2\ (3 - 16\ \pi^4 + 32\ \pi^4\ r_1^2)^2}{(1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)^2} - \frac{8\ \pi^2\ (13 - 16\ \pi^4 + 64\ \pi^4\ r_1^2)}{3\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)} +\right.\right.$$

$$(2^{1/3}\ (16\ \pi^4 - 512\ \pi^8 + 4096\ \pi^{12} + 2048\ \pi^8\ r_1^2 - 32\,768\ \pi^{12}\ r_1^2 + 65\,536\ \pi^{12}\ r_1^4)) \Big/$$

$$(3\ (1 - 16\ \pi^4 + 16\ \pi^4\ r_1^2)\ (128\ \pi^6 - 6144\ \pi^{10} + 98\,304\ \pi^{14} - 524\,288\ \pi^{18} +$$

$$24\,576\ \pi^{10}\ r_1^2 + 6\,291\,456\ \pi^{14}\ r_1^2 + 6\,291\,456\ \pi^{18}\ r_1^2 + 1\,572\,864\ \pi^{14}\ r_1^4 -$$

$$25\,165\,824\ \pi^{18}\ r_1^4 + 33\,554\,432\ \pi^{18}\ r_1^6 + \sqrt{}(1\,811\,939\,328\ \pi^{20}\ r_1^2 -$$

$$86\,973\,087\,744\ \pi^{24}\ r_1^2 + 1\,391\,569\,403\,904\ \pi^{28}\ r_1^2 - 7\,421\,703\,487\,488$$

$$\pi^{32}\ r_1^2 + 347\,892\,350\,976\ \pi^{24}\ r_1^4 + 38\,963\,943\,309\,312\ \pi^{28}\ r_1^4 +$$

$$89\,060\,441\,849\,856\ \pi^{32}\ r_1^4 + 22\,265\,110\,462\,464\ \pi^{28}\ r_1^6 -$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\Big)\;+$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$
$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$
$$33\,554\,432\,\pi^{18}\,r_1^6+\surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$
$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\Big/\left(3\times 2^{1/3}\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\frac{\pi\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\,\surd\Bigg(\Bigg(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}\;+$$
$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$
$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$
$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$
$$r_1^6+\surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\Big)\;+$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\Big/\left(3\times 2^{1/3}\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)\;-$$

$$\frac{1}{2}\,\surd\Bigg(\Bigg(\frac{8\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}\;-$$
$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$
$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\,\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$
$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$
$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\,)^{1/3}\Big)\;-$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -\right.$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$\left.356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\Big)^{1/3} \Big/$$
$$\left(3 \times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) + \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} -\right.$$
$$\left.\frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$
$$\left(4\,\sqrt{\left(\frac{4\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +\right.}\right.$$
$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\left(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\,\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +\right.\right.$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 -\right.$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$\left.\left.356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3}\Big) +$$
$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\right.$$
$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$
$$33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +\right.$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$
$$\left.\left.474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3} \Big/ \left(3 \times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg)\Big\},$$
$$\Big\{\frac{\pi\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\,\sqrt{\left(\frac{4\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +\right.}$$
$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\left(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right.$$
$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\right.$$
$$r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}$$
$$r_1^6 + \sqrt{}\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -\right.$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$

$$356241767399424\,\pi^{32}\,r_1^6 + 474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big) +$$

$$\big(128\,\pi^6 - 6144\,\pi^{10} + 98304\,\pi^{14} - 524288\,\pi^{18} + 24576\,\pi^{10}\,r_1^2 + 6291456\,\pi^{14}\,r_1^2 +$$

$$6291456\,\pi^{18}\,r_1^2 + 1572864\,\pi^{14}\,r_1^4 - 25165824\,\pi^{18}\,r_1^4 + 33554432\,\pi^{18}\,r_1^6 +$$

$$\surd\big(1811939328\,\pi^{20}\,r_1^2 - 86973087744\,\pi^{24}\,r_1^2 + 1391569403904\,\pi^{28}\,r_1^2 -$$

$$7421703487488\,\pi^{32}\,r_1^2 + 347892350976\,\pi^{24}\,r_1^4 + 38963943309312\,\pi^{28}\,r_1^4 +$$

$$89060441849856\,\pi^{32}\,r_1^4 + 22265110462464\,\pi^{28}\,r_1^6 - 356241767399424$$

$$\pi^{32}\,r_1^6 + 474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3} \Big/ \left(3 \times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg) +$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{16\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} -}$$

$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32768\,\pi^{12}\,r_1^2 + 65536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)$$

$$\big(128\,\pi^6 - 6144\,\pi^{10} + 98304\,\pi^{14} - 524288\,\pi^{18} + 24576\,\pi^{10}\,r_1^2 + 6291456\,\pi^{14}$$

$$r_1^2 + 6291456\,\pi^{18}\,r_1^2 + 1572864\,\pi^{14}\,r_1^4 - 25165824\,\pi^{18}\,r_1^4 + 33554432\,\pi^{18}$$

$$r_1^6 + \surd\big(1811939328\,\pi^{20}\,r_1^2 - 86973087744\,\pi^{24}\,r_1^2 + 1391569403904\,\pi^{28}\,r_1^2 -$$

$$7421703487488\,\pi^{32}\,r_1^2 + 347892350976\,\pi^{24}\,r_1^4 + 38963943309312\,\pi^{28}\,r_1^4 +$$

$$89060441849856\,\pi^{32}\,r_1^4 + 22265110462464\,\pi^{28}\,r_1^6 -$$

$$356241767399424\,\pi^{32}\,r_1^6 + 474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big) -$$

$$\big(128\,\pi^6 - 6144\,\pi^{10} + 98304\,\pi^{14} - 524288\,\pi^{18} + 24576\,\pi^{10}\,r_1^2 + 6291456\,\pi^{14}\,r_1^2 +$$

$$6291456\,\pi^{18}\,r_1^2 + 1572864\,\pi^{14}\,r_1^4 - 25165824\,\pi^{18}\,r_1^4 + 33554432\,\pi^{18}\,r_1^6 +$$

$$\surd\big(1811939328\,\pi^{20}\,r_1^2 - 86973087744\,\pi^{24}\,r_1^2 + 1391569403904\,\pi^{28}\,r_1^2 -$$

$$7421703487488\,\pi^{32}\,r_1^2 + 347892350976\,\pi^{24}\,r_1^4 + 38963943309312\,\pi^{28}\,r_1^4 +$$

$$89060441849856\,\pi^{32}\,r_1^4 + 22265110462464\,\pi^{28}\,r_1^6 -$$

$$356241767399424\,\pi^{32}\,r_1^6 + 474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3} \Big/$$

$$\left(3 \times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) + \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} -$$

$$\frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\Bigg) \Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +}$$

$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32768\,\pi^{12}\,r_1^2 + 65536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\,\big(128\,\pi^6 - 6144\,\pi^{10} + 98304\,\pi^{14} - 524288\,\pi^{18} +$$

$$24576\,\pi^{10}\,r_1^2 + 6291456\,\pi^{14}\,r_1^2 + 6291456\,\pi^{18}\,r_1^2 + 1572864\,\pi^{14}\,r_1^4 -$$

$$25165824\,\pi^{18}\,r_1^4 + 33554432\,\pi^{18}\,r_1^6 + \surd\big(1811939328\,\pi^{20}\,r_1^2 -$$

$$86973087744\,\pi^{24}\,r_1^2 + 1391569403904\,\pi^{28}\,r_1^2 - 7421703487488$$

$$\pi^{32}\, r_1^2 + 347\,892\,350\,976\, \pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 +$$
$$89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\, \pi^{28}\, r_1^6 -$$
$$356\,241\,767\,399\,424\, \pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8 \big) \big)^{1/3} \Big) +$$
$$\Big(128\, \pi^6 - 6144\, \pi^{10} + 98\,304\, \pi^{14} - 524\,288\, \pi^{18} + 24\,576\, \pi^{10}\, r_1^2 + 6\,291\,456$$
$$\pi^{14}\, r_1^2 + 6\,291\,456\, \pi^{18}\, r_1^2 + 1\,572\,864\, \pi^{14}\, r_1^4 - 25\,165\,824\, \pi^{18}\, r_1^4 +$$
$$33\,554\,432\, \pi^{18}\, r_1^6 + \sqrt{\Big(} 1\,811\,939\,328\, \pi^{20}\, r_1^2 - 86\,973\,087\,744\, \pi^{24}\, r_1^2 +$$
$$1\,391\,569\,403\,904\, \pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\, \pi^{32}\, r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 +$$
$$22\,265\,110\,462\,464\, \pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\, \pi^{32}\, r_1^6 +$$
$$474\,989\,023\,199\,232\, \pi^{32}\, r_1^8 \big) \big)^{1/3} \Big/ \left(3 \times 2^{1/3} \left(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\right)\right) \Big) \Big) \Big) \Big\},$$

$$\Bigg\{\pi - \frac{1}{2} \sqrt{\Bigg(} 4\, \pi^2 - \frac{1}{6\, \pi^2\, r^2} + \frac{1}{12\, \pi^2\, r^2 \left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}} +$$
$$\frac{\left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}}{12\, \pi^2\, r^2} \Bigg) -$$

$$\frac{1}{2} \sqrt{\Bigg(} 8\, \pi^2 - \frac{1}{3\, \pi^2\, r^2} - \frac{1}{12\, \pi^2\, r^2 \left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}} -$$
$$\frac{\left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}}{12\, \pi^2\, r^2} -$$
$$\left(64\, \pi^3 + \frac{4}{\pi\, r^2}\right) \Big/$$
$$\Bigg(4 \sqrt{\Bigg(} 4\, \pi^2 - \frac{1}{6\, \pi^2\, r^2} + \frac{1}{12\, \pi^2\, r^2 \left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}} +$$
$$\frac{\left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}}{12\, \pi^2\, r^2} \Bigg) \Bigg) \Bigg) \Bigg\},$$

$$\Bigg\{\pi - \frac{1}{2} \sqrt{\Bigg(} 4\, \pi^2 - \frac{1}{6\, \pi^2\, r^2} + \frac{1}{12\, \pi^2\, r^2 \left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}} +$$
$$\frac{\left(1 + 13\,824\, \pi^8\, r^4 + 96\, \sqrt{3}\, \pi^4\, \sqrt{r^4 + 6912\, \pi^8\, r^8}\right)^{1/3}}{12\, \pi^2\, r^2} \Bigg) +$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}-\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\pi+\frac{1}{2}\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+}$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

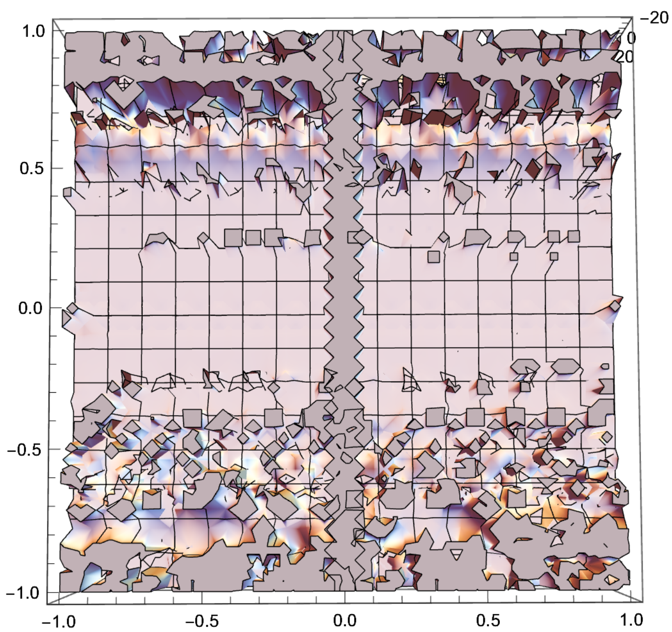
$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+$$

$$\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\bigg/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

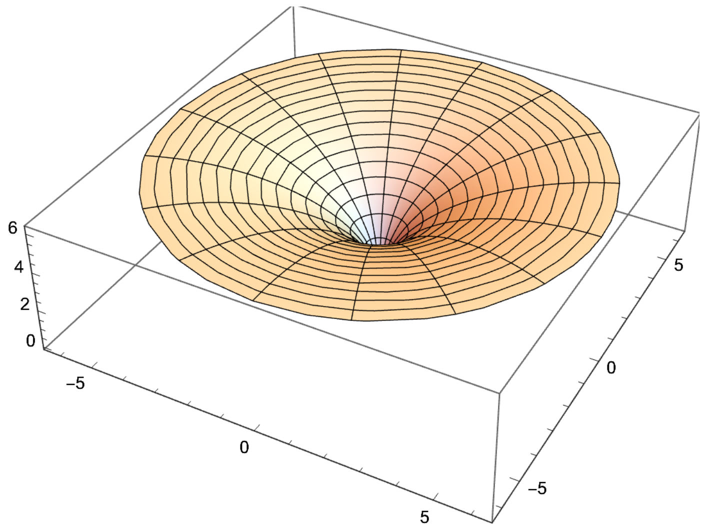
$$\left.\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\right)\}\},$$

```
{r1, -1, 1}, {r, -1, 1}]
```



5 Torus

$$\text{RevolutionPlot3D}\left[\sqrt{4\,\pi\,\theta-\theta^2},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



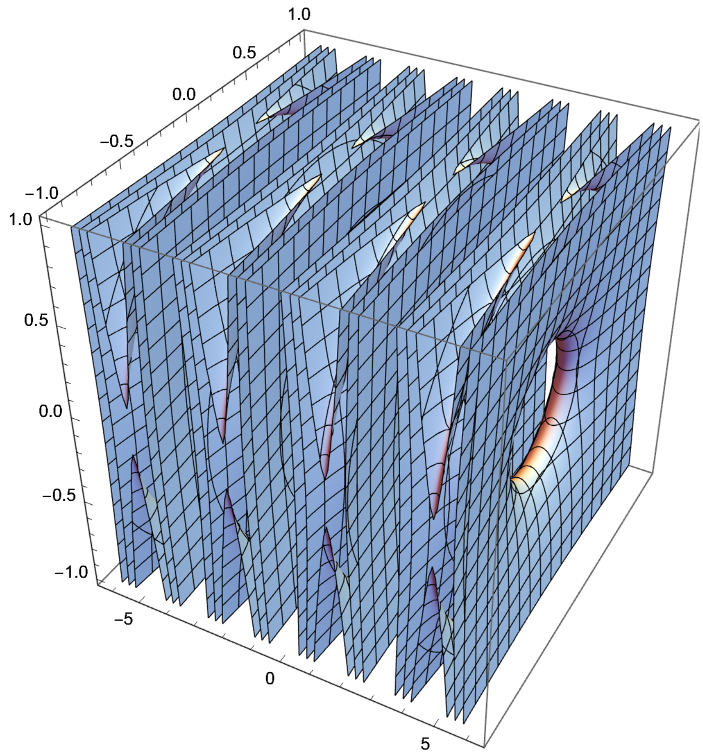
$$\text{ArcSin}\left[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\right]$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Abs}[x+i\,y]}{2\,\pi}=\right.$$
$$\left.\text{Abs}[x+i\,y]\ \text{Sin}[\beta],\ \beta\right]$$

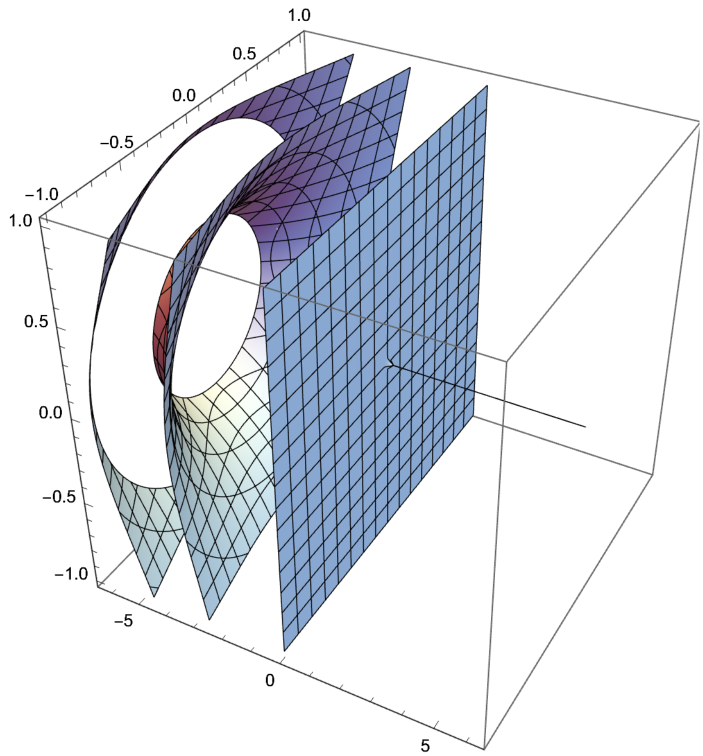
$$\text{Solve}\left[\frac{\sqrt{4\,\pi-\theta}\ \sqrt{\theta}}{2\,\pi}==\text{Sin}[\beta],\ \beta\right]$$

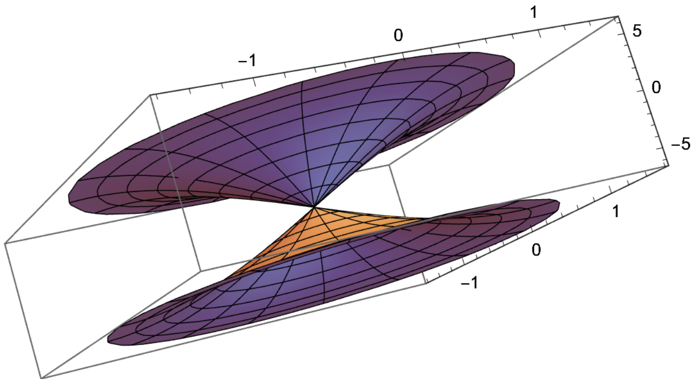
$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{4\,\pi-\theta}\ \sqrt{\theta}}{2\,\pi}\right]\right\}\right\}$$

```
ContourPlot3D[2 π Sin[ArcSin[
    (4 π Abs[x + ⅈ y] 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) - Abs[x + ⅈ y] (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2) / (4 π^2)]],
  {β, -2 π, 2 π}, {x, -1, 1}, {y, -1, 1}]
```

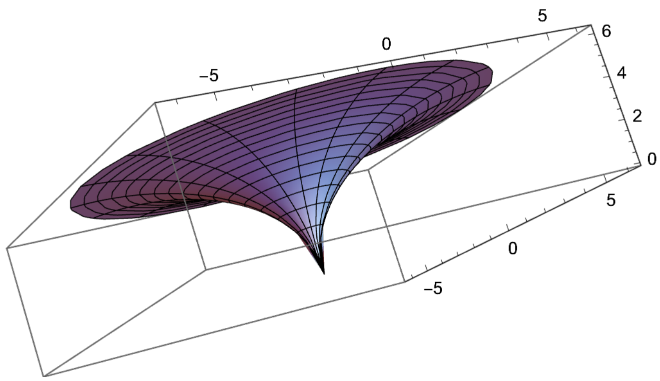


$$\text{ContourPlot3D}\left[2\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{4\,\pi\,\text{Abs}[x+\mathbb{i}\,y]\,\theta-\text{Abs}[x+\mathbb{i}\,y]\,\theta^2}{4\,\pi^2}\right]\right],\ \{\theta,-2\,\pi,2\,\pi\},\{x,-1,1\},\{y,-1,1\}\right]$$





==



8-Fold

$$c := (2.99792458 * 10^{\wedge}8)$$

$$r' * \theta' = r\,\theta = 2\,\pi\,r - 2\,\pi\,r_1 = 2\,\pi\,r - 2\,\pi\,\sqrt{r^{\wedge}2 - \eta^{\wedge}2} \tag{1}$$

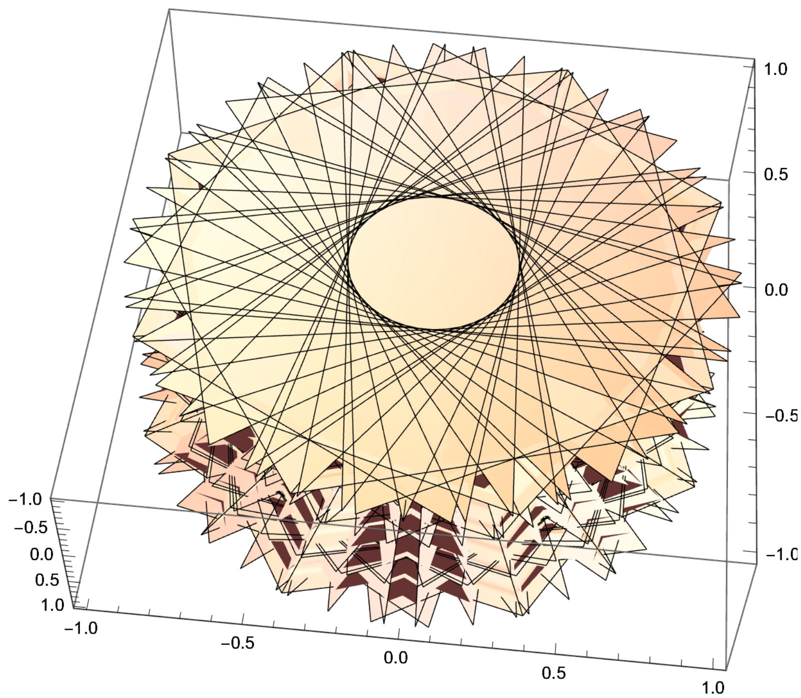
$$r' * \theta' == r\,\theta == 2\,\pi\,r' - 2\,\pi\,r_1' == 2\,\pi\,r' - 2\,\pi\,\sqrt{r'^{\wedge}2 - \eta'^{\wedge}2}$$

$$\eta' = \eta\,\sqrt{1 - ((v^{\wedge}2)\,/\,(c^{\wedge}2))} = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\sqrt{1 - ((v^{\wedge}2)\,/\,(c^{\wedge}2))}$$

$$r' * \theta' == r\,\theta == 2\,\pi\,r' - 2\,\pi\,r_1' ==$$

$$2\,\pi\,r' - 2\,\pi\,\sqrt{r'^{\wedge}2 - \left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\sqrt{1 - ((v^{\wedge}2)\,/\,(c^{\wedge}2))}\right)'^{\wedge}2}$$

$$\text{RevolutionPlot3D}\Big[\eta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\ ,\ \{\eta,\ -1,\ 1\},\ \{v,\ -100\,000,\ 100\,000\}\Big]$$



$$\eta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}$$

$$r'*\theta' == r\,\theta == 2\,\pi\,r' - 2\,\pi\,r_1' == 2\,\pi\,r' - 2\,\pi\ \sqrt{r'\text{^}2-\eta'\text{^}2}$$

$$r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)\theta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\ == 2\,\pi\,r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right) - 2\,\pi\ \sqrt{2\,\pi\,r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)-\left(\eta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)\text{^}2}$$

$$\text{Solve}\Big[\left(r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)\right)\left(\theta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right) == 2\,\pi\,r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right) - 2\,\pi\ \sqrt{2\,\pi\,r\left(\sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)-\left(\eta\ \sqrt{1-((v\text{^}2)\ /\ (c\text{^}2))}\right)\text{^}2}\ ,\ v\Big]$$

$$\text{RevolutionPlot3D}\Big[\Big\{(-c),\ (c),\ \Bigl(-\surd\Bigl(c^2-\frac{8\,c^2\,\pi^2}{3\,\theta^2}+\frac{8\,c^2\,\pi^2\,\eta^2}{3\,r^2\,\theta^2}+ \left(16\times 2^{1/3}\,c^4\,\pi^4\,r^4\right)\Big/\Bigl(3\,\bigl(128\,c^6\,\pi^6\,r^{12}\,\theta^6+4224\,c^6\,\pi^6\,r^{10}\,\eta^2\,\theta^6-4224\,c^6\,\pi^6\,r^8\,\eta^4\,\theta^6- 128\,c^6\,\pi^6\,r^6\,\eta^6\,\theta^6-4608\,c^6\,\pi^6\,r^{11}\,\theta^7+4608\,c^6\,\pi^6\,r^9\,\eta^2\,\theta^7-1728\,c^6\,\pi^6\,r^{10}\,\theta^8+ \sqrt{\Bigl(4\,\left(-16\,c^4\,\pi^4\,r^8\,\theta^4+224\,c^4\,\pi^4\,r^6\,\eta^2\,\theta^4-16\,c^4\,\pi^4\,r^4\,\eta^4\,\theta^4-192\,c^4\,\pi^4\,r^7\,\theta^5\right)^3+ \left(128\,c^6\,\pi^6\,r^{12}\,\theta^6+4224\,c^6\,\pi^6\,r^{10}\,\eta^2\,\theta^6-4224\,c^6\,\pi^6\,r^8\,\eta^4\,\theta^6-128\,c^6\,\pi^6\,r^6\,\eta^6\,\theta^6-4608\,c^6\,\pi^6\,r^{11}\,\theta^7+4608\,c^6\,\pi^6\,r^9\,\eta^2\,\theta^7-1728\,c^6\,\pi^6\,r^{10}\,\theta^8\right)^2\Bigr)}\bigr)^{1/3}\Bigr)-$$

$$\left(224\times 2^{1/3}\, c^4\, \pi^4\, r^2\, \eta^2\right) \Big/ \left(3\left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3}\right) +$$

$$\left(16\times 2^{1/3}\, c^4\, \pi^4\, \eta^4\right) \Big/ \left(3\left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3}\right) +$$

$$\left(64\times 2^{1/3}\, c^4\, \pi^4\, r^3\, \theta\right) \Big/ \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3} +$$

$$\frac{1}{3\times 2^{1/3}\, r^4\, \theta^4}\left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3}\Bigg)\Bigg),$$

$$\left(\sqrt{\left(c^2 - \frac{8\, c^2\, \pi^2}{3\, \theta^2} + \frac{8\, c^2\, \pi^2\, \eta^2}{3\, r^2\, \theta^2} + \left(16\times 2^{1/3}\, c^4\, \pi^4\, r^4\right) \Big/ \left(3\left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3}\right) -\right.}\right.$$

$$\left(224\times 2^{1/3}\, c^4\, \pi^4\, r^2\, \eta^2\right) \Big/ \left(3\left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 + \sqrt{\left(4\left(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\right)^3 + \left(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\right)^2\right)}\right)^{1/3}\right) +$$

$$\Bigl(16\times 2^{1/3}\, c^4\, \pi^4\, \eta^4\Bigr) \Big/ \Bigl(3\, \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3}\Bigr) +$$

$$\Bigl(64\times 2^{1/3}\, c^4\, \pi^4\, r^3\, \theta\Bigr) \Big/ \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3} +$$

$$\frac{1}{3\times 2^{1/3}\, r^4\, \theta^4}\, \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3}\Bigr)\Bigr),$$

$$\Bigl(-\surd\Bigl(c^2 - \frac{8\, c^2\, \pi^2}{3\, \theta^2} + \frac{8\, c^2\, \pi^2\, \eta^2}{3\, r^2\, \theta^2} - \Bigl(8\times 2^{1/3}\, c^4\, \pi^4\, r^4\Bigr) \Big/ \Bigl(3\, \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 +$$

$$4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3}\Bigr) +$$

$$\Bigl(8\, i\, 2^{1/3}\, c^4\, \pi^4\, r^4\Bigr) \Big/ \Bigl(\sqrt{3}\, \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3}\Bigr) +$$

$$\Bigl(112\times 2^{1/3}\, c^4\, \pi^4\, r^2\, \eta^2\Bigr) \Big/ \Bigl(3\, \Bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\surd\Bigl(4\, \bigl(-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5\bigr)^3 +$$

$$\bigl(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8\bigr)^2\Bigr)\Bigr)^{1/3}\Bigr) -$$

$$(112\, i\, 2^{1/3}\, c^4\, \pi^4\, r^2\, \eta^2) \Big/ \Big(\sqrt{3}\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 -
4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -
4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6
\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3}\Big) -$$

$$(8 \times 2^{1/3}\, c^4\, \pi^4\, \eta^4) \Big/ \Big(3\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -
128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6
\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3}\Big) +$$

$$(8\, i\, 2^{1/3}\, c^4\, \pi^4\, \eta^4) \Big/ \Big(\sqrt{3}\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -
128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6
\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3}\Big) -$$

$$(32 \times 2^{1/3}\, c^4\, \pi^4\, r^3\, \theta) \Big/ (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -
128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -
4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3} +$$

$$(32\, i\, 2^{1/3}\, \sqrt{3}\, c^4\, \pi^4\, r^3\, \theta) \Big/ (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -
128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -
4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3} -$$

$$\frac{1}{6 \times 2^{1/3}\, r^4\, \theta^4}\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -
128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +
\sqrt{(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +
(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -
4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2)})^{1/3} -$$

$$\frac{1}{2\times 2^{1/3}\ \sqrt{3}\ r^4\ \theta^4}\ i\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 -$$
$$4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8)^2))^{1/3})),$$

$$(\sqrt{(c^2 - \frac{8\ c^2\ \pi^2}{3\ \theta^2} + \frac{8\ c^2\ \pi^2\ \eta^2}{3\ r^2\ \theta^2} - (8\times 2^{1/3}\ c^4\ \pi^4\ r^4) \Big/ (3\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 +}$$
$$4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 -$$
$$4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8)^2))^{1/3}) +$$

$$(8\ i\ 2^{1/3}\ c^4\ \pi^4\ r^4) \Big/ (\sqrt{3}\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8)^2))^{1/3}) +$$

$$(112\times 2^{1/3}\ c^4\ \pi^4\ r^2\ \eta^2) \Big/ (3\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8)^2))^{1/3}) -$$

$$(112\ i\ 2^{1/3}\ c^4\ \pi^4\ r^2\ \eta^2) \Big/ (\sqrt{3}\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 -$$
$$4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 -$$
$$4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8)^2))^{1/3}) -$$

$$(8\times 2^{1/3}\ c^4\ \pi^4\ \eta^4) \Big/ (3\ (128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{(4\ (-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5)^3 +}$$
$$(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$

$$\theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(8\, i\, 2^{1/3} c^4 \pi^4 \eta^4\right) \Big/ \Big(\sqrt{3}\, \Big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 -$$
$$128\, c^6 \pi^6 r^6 \eta^6 \theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$
$$\sqrt{}\Big(4\, \left(-16\, c^4 \pi^4 r^8 \theta^4 + 224\, c^4 \pi^4 r^6 \eta^2 \theta^4 - 16\, c^4 \pi^4 r^4 \eta^4 \theta^4 - 192\, c^4 \pi^4 r^7 \theta^5\right)^3 +$$
$$\big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6$$
$$\theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(32 \times 2^{1/3} c^4 \pi^4 r^3 \theta\right) \Big/ \Big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 -$$
$$128\, c^6 \pi^6 r^6 \eta^6 \theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$
$$\sqrt{}\Big(4\, \left(-16\, c^4 \pi^4 r^8 \theta^4 + 224\, c^4 \pi^4 r^6 \eta^2 \theta^4 - 16\, c^4 \pi^4 r^4 \eta^4 \theta^4 - 192\, c^4 \pi^4 r^7 \theta^5\right)^3 +$$
$$\big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3} +$$

$$\left(32\, i\, 2^{1/3} \sqrt{3}\, c^4 \pi^4 r^3 \theta\right) \Big/ \Big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 -$$
$$4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$
$$\sqrt{}\Big(4\, \left(-16\, c^4 \pi^4 r^8 \theta^4 + 224\, c^4 \pi^4 r^6 \eta^2 \theta^4 - 16\, c^4 \pi^4 r^4 \eta^4 \theta^4 - 192\, c^4 \pi^4 r^7 \theta^5\right)^3 +$$
$$\big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3} -$$

$$\frac{1}{6 \times 2^{1/3} r^4 \theta^4} \Big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 -$$
$$128\, c^6 \pi^6 r^6 \eta^6 \theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$
$$\sqrt{}\Big(4\, \left(-16\, c^4 \pi^4 r^8 \theta^4 + 224\, c^4 \pi^4 r^6 \eta^2 \theta^4 - 16\, c^4 \pi^4 r^4 \eta^4 \theta^4 - 192\, c^4 \pi^4 r^7 \theta^5\right)^3 +$$
$$\big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3} -$$

$$\frac{1}{2 \times 2^{1/3} \sqrt{3}\, r^4 \theta^4}\, i\, \Big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 -$$
$$128\, c^6 \pi^6 r^6 \eta^6 \theta^6 - 4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$
$$\sqrt{}\Big(4\, \left(-16\, c^4 \pi^4 r^8 \theta^4 + 224\, c^4 \pi^4 r^6 \eta^2 \theta^4 - 16\, c^4 \pi^4 r^4 \eta^4 \theta^4 - 192\, c^4 \pi^4 r^7 \theta^5\right)^3 +$$
$$\big(128\, c^6 \pi^6 r^{12} \theta^6 + 4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8\big)^2\Big)\Big)^{1/3}\Big)\Big),$$

$$\Big(-\sqrt{}\Big(\Big(c^2 - \frac{8\, c^2 \pi^2}{3\, \theta^2} + \frac{8\, c^2 \pi^2 \eta^2}{3\, r^2 \theta^2} - \left(8 \times 2^{1/3} c^4 \pi^4 r^4\right) \Big/ \Big(3\, \Big(128\, c^6 \pi^6 r^{12} \theta^6 +$$
$$4224\, c^6 \pi^6 r^{10} \eta^2 \theta^6 - 4224\, c^6 \pi^6 r^8 \eta^4 \theta^6 - 128\, c^6 \pi^6 r^6 \eta^6 \theta^6 -$$
$$4608\, c^6 \pi^6 r^{11} \theta^7 + 4608\, c^6 \pi^6 r^9 \eta^2 \theta^7 - 1728\, c^6 \pi^6 r^{10} \theta^8 +$$

$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\big(8\ \mathrm{i}\ 2^{1/3}\ c^4\ \pi^4\ r^4\big) \Big/ \Big(\sqrt{3}\ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\big(112 \times 2^{1/3}\ c^4\ \pi^4\ r^2\ \eta^2\big) \Big/ \Big(3\ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\big(112\ \mathrm{i}\ 2^{1/3}\ c^4\ \pi^4\ r^2\ \eta^2\big) \Big/ \Big(\sqrt{3}\ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 -$$
$$4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 -$$
$$4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\big(8 \times 2^{1/3}\ c^4\ \pi^4\ \eta^4\big) \Big/ \Big(3\ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\big(8\ \mathrm{i}\ 2^{1/3}\ c^4\ \pi^4\ \eta^4\big) \Big/ \Big(\sqrt{3}\ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$
$$\big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 - 128\ c^6\ \pi^6\ r^6\ \eta^6$$
$$\theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\big(32 \times 2^{1/3}\ c^4\ \pi^4\ r^3\ \theta\big) \Big/ \Big(128\ c^6\ \pi^6\ r^{12}\ \theta^6 + 4224\ c^6\ \pi^6\ r^{10}\ \eta^2\ \theta^6 - 4224\ c^6\ \pi^6\ r^8\ \eta^4\ \theta^6 -$$
$$128\ c^6\ \pi^6\ r^6\ \eta^6\ \theta^6 - 4608\ c^6\ \pi^6\ r^{11}\ \theta^7 + 4608\ c^6\ \pi^6\ r^9\ \eta^2\ \theta^7 - 1728\ c^6\ \pi^6\ r^{10}\ \theta^8 +$$
$$\sqrt{\;}\Big(4\ \big(-16\ c^4\ \pi^4\ r^8\ \theta^4 + 224\ c^4\ \pi^4\ r^6\ \eta^2\ \theta^4 - 16\ c^4\ \pi^4\ r^4\ \eta^4\ \theta^4 - 192\ c^4\ \pi^4\ r^7\ \theta^5\big)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3} -$$

$$(32\, i\, 2^{1/3}\, \sqrt{3}\, c^4\, \pi^4\, r^3\, \theta) \Big/ (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 -$$

$$4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{}(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3} -$$

$$\frac{1}{6 \times 2^{1/3}\, r^4\, \theta^4}\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{}(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3} +$$

$$\frac{1}{2 \times 2^{1/3}\, \sqrt{3}\, r^4\, \theta^4}\, i\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{}(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3})),$$

$$(\sqrt{}(c^2 - \frac{8\, c^2\, \pi^2}{3\, \theta^2} + \frac{8\, c^2\, \pi^2\, \eta^2}{3\, r^2\, \theta^2} - (8 \times 2^{1/3}\, c^4\, \pi^4\, r^4) \Big/ (3\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 +$$

$$4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 -$$

$$4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{}(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3}) -$$

$$(8\, i\, 2^{1/3}\, c^4\, \pi^4\, r^4) \Big/ (\sqrt{3}\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{}(4\, (-16\, c^4\, \pi^4\, r^8\, \theta^4 + 224\, c^4\, \pi^4\, r^6\, \eta^2\, \theta^4 - 16\, c^4\, \pi^4\, r^4\, \eta^4\, \theta^4 - 192\, c^4\, \pi^4\, r^7\, \theta^5)^3 +$$

$$(128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 - 128\, c^6\, \pi^6\, r^6\, \eta^6$$

$$\theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8)^2))^{1/3}) +$$

$$(112 \times 2^{1/3}\, c^4\, \pi^4\, r^2\, \eta^2) \Big/ (3\, (128\, c^6\, \pi^6\, r^{12}\, \theta^6 + 4224\, c^6\, \pi^6\, r^{10}\, \eta^2\, \theta^6 - 4224\, c^6\, \pi^6\, r^8\, \eta^4\, \theta^6 -$$

$$128\, c^6\, \pi^6\, r^6\, \eta^6\, \theta^6 - 4608\, c^6\, \pi^6\, r^{11}\, \theta^7 + 4608\, c^6\, \pi^6\, r^9\, \eta^2\, \theta^7 - 1728\, c^6\, \pi^6\, r^{10}\, \theta^8 +$$

$$\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}\Big)+$$

$$\left(112\,i\,2^{1/3}c^4\pi^4r^2\eta^2\right)\Big/\Big(\sqrt{3}\,\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}\Big)-$$

$$\left(8\times2^{1/3}c^4\pi^4\eta^4\right)\Big/\Big(3\,\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}\Big)-$$

$$\left(8\,i\,2^{1/3}c^4\pi^4\eta^4\right)\Big/\Big(\sqrt{3}\,\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}\Big)-$$

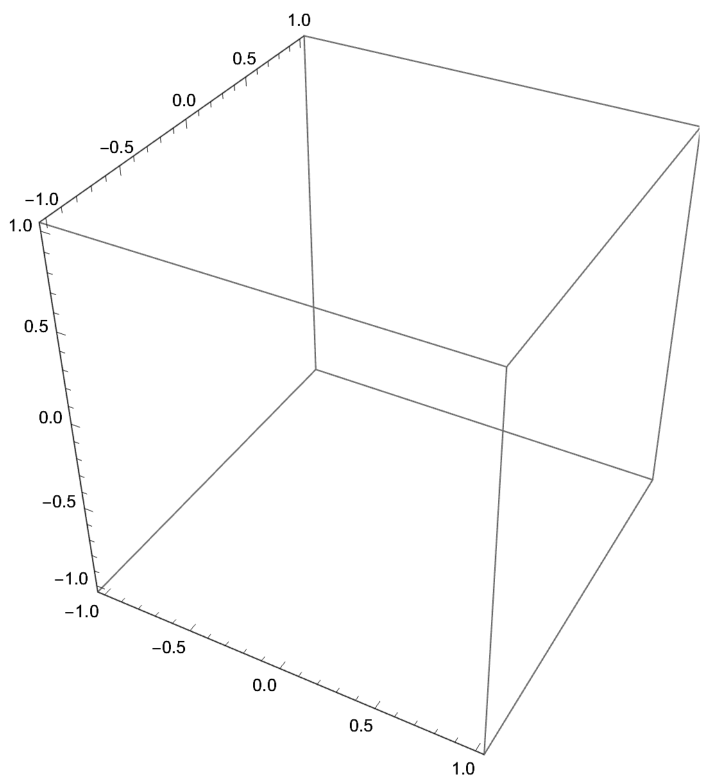
$$\left(32\times2^{1/3}c^4\pi^4r^3\theta\right)\Big/\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}-$$

$$\left(32\,i\,2^{1/3}\sqrt{3}\,c^4\pi^4r^3\theta\right)\Big/\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4r^8\theta^4+224\,c^4\pi^4r^6\eta^2\theta^4-16\,c^4\pi^4r^4\eta^4\theta^4-192\,c^4\pi^4r^7\theta^5\right)^3+\left(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8\right)^2\right)}\Big)^{1/3}-$$

$$\frac{1}{6\times2^{1/3}r^4\theta^4}\Big(128\,c^6\pi^6r^{12}\theta^6+4224\,c^6\pi^6r^{10}\eta^2\theta^6-4224\,c^6\pi^6r^8\eta^4\theta^6-128\,c^6\pi^6r^6\eta^6\theta^6-4608\,c^6\pi^6r^{11}\theta^7+4608\,c^6\pi^6r^9\eta^2\theta^7-1728\,c^6\pi^6r^{10}\theta^8+$$

$$\sqrt{\left(4\left(-16\,c^4\pi^4 r^8\theta^4+224\,c^4\pi^4 r^6\eta^2\theta^4-16\,c^4\pi^4 r^4\eta^4\theta^4-192\,c^4\pi^4 r^7\theta^5\right)^3+\left(128\,c^6\pi^6 r^{12}\theta^6+4224\,c^6\pi^6 r^{10}\eta^2\theta^6-4224\,c^6\pi^6 r^8\eta^4\theta^6-128\,c^6\pi^6 r^6\eta^6\theta^6-4608\,c^6\pi^6 r^{11}\theta^7+4608\,c^6\pi^6 r^9\eta^2\theta^7-1728\,c^6\pi^6 r^{10}\theta^8\right)^2\right)}\Bigg)^{1/3}+$$

$$\frac{1}{2\times 2^{1/3}\sqrt{3}\,r^4\theta^4}\,\mathbb{i}\,\Bigg(128\,c^6\pi^6 r^{12}\theta^6+4224\,c^6\pi^6 r^{10}\eta^2\theta^6-4224\,c^6\pi^6 r^8\eta^4\theta^6-128\,c^6\pi^6 r^6\eta^6\theta^6-4608\,c^6\pi^6 r^{11}\theta^7+4608\,c^6\pi^6 r^9\eta^2\theta^7-1728\,c^6\pi^6 r^{10}\theta^8+\sqrt{\left(4\left(-16\,c^4\pi^4 r^8\theta^4+224\,c^4\pi^4 r^6\eta^2\theta^4-16\,c^4\pi^4 r^4\eta^4\theta^4-192\,c^4\pi^4 r^7\theta^5\right)^3+\left(128\,c^6\pi^6 r^{12}\theta^6+4224\,c^6\pi^6 r^{10}\eta^2\theta^6-4224\,c^6\pi^6 r^8\eta^4\theta^6-128\,c^6\pi^6 r^6\eta^6\theta^6-4608\,c^6\pi^6 r^{11}\theta^7+4608\,c^6\pi^6 r^9\eta^2\theta^7-1728\,c^6\pi^6 r^{10}\theta^8\right)^2\right)}\Bigg)^{1/3}\Bigg)\Bigg\}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\Big]$$



$$\text{Solve}\Big[\left(r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)\right)\left(\theta\Big/\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)==2\pi r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)-2\pi\sqrt{\left(2\pi r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)-\left(\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)^{\wedge}2\right)}, v\Big]$$

$$\Bigg\{\Bigg\{v\to-\sqrt{\Bigg(-\frac{32\,c^2\pi^6}{16\,\pi^4 r^2+32\,\pi^3 r^2\theta+8\,\pi^2 r^2\theta^2-8\,\pi\,r^2\theta^3+r^2\theta^4}+}$$

$$\frac{16 c^2 \pi^4 r^2}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \frac{32 c^2 \pi^4 r \theta}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{32 c^2 \pi^3 r^2 \theta}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{4 c^2 \pi^2 r^2 \theta^2}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \frac{4 c^2 \pi r^2 \theta^3}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \left(4 \pi \sqrt{\left(64 c^4 \pi^{10} + 128 c^4 \pi^8 r \theta + 80 c^4 \pi^6 r^2 \theta^2 - 16 c^4 \pi^5 r^2 \theta^3 + 16 c^4 \pi^4 r^3 \theta^3 + 4 c^4 \pi^4 r^2 \theta^4 - 16 c^4 \pi^3 r^3 \theta^4 + 4 c^4 \pi^2 r^3 \theta^5 - 4 c^4 \pi r^4 \theta^5 + c^4 r^4 \theta^6\right)}\right) \Big/ \left(16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4\right)\Bigg)}\Bigg\},$$

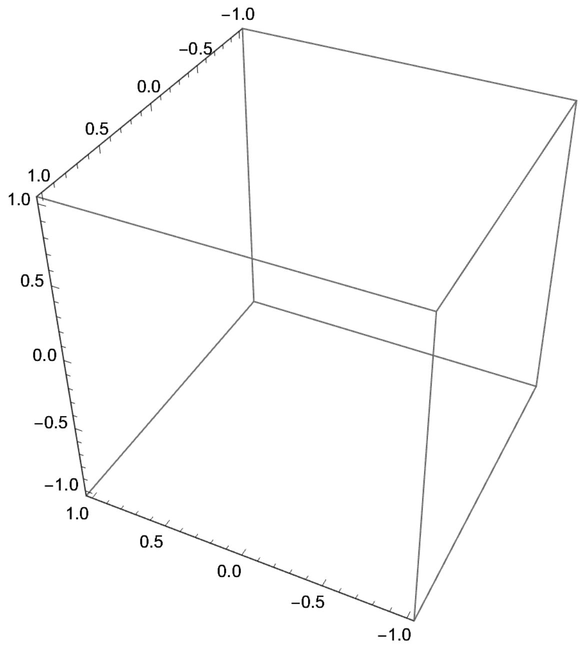
$$\Bigg\{v \to \sqrt{\Bigg(-\frac{32 c^2 \pi^6}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{16 c^2 \pi^4 r^2}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \frac{32 c^2 \pi^4 r \theta}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{32 c^2 \pi^3 r^2 \theta}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{4 c^2 \pi^2 r^2 \theta^2}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \frac{4 c^2 \pi r^2 \theta^3}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \left(4 \pi \sqrt{\left(64 c^4 \pi^{10} + 128 c^4 \pi^8 r \theta + 80 c^4 \pi^6 r^2 \theta^2 - 16 c^4 \pi^5 r^2 \theta^3 + 16 c^4 \pi^4 r^3 \theta^3 + 4 c^4 \pi^4 r^2 \theta^4 - 16 c^4 \pi^3 r^3 \theta^4 + 4 c^4 \pi^2 r^3 \theta^5 - 4 c^4 \pi r^4 \theta^5 + c^4 r^4 \theta^6\right)}\right) \Big/ \left(16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4\right)\Bigg)}\Bigg\},$$

$$\Bigg\{v \to -\sqrt{\Bigg(-\frac{32 c^2 \pi^6}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} + \frac{16 c^2 \pi^4 r^2}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} - \frac{32 c^2 \pi^4 r \theta}{16 \pi^4 r^2 + 32 \pi^3 r^2 \theta + 8 \pi^2 r^2 \theta^2 - 8 \pi r^2 \theta^3 + r^2 \theta^4} +$$

$$\frac{32\,c^2\,\pi^3\,r^2\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\frac{4\,c^2\,\pi^2\,r^2\,\theta^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}-\frac{4\,c^2\,\pi\,r^2\,\theta^3}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\left(4\,\pi\,\sqrt{\left(64\,c^4\,\pi^{10}+128\,c^4\,\pi^8\,r\,\theta+80\,c^4\,\pi^6\,r^2\,\theta^2-16\,c^4\,\pi^5\,r^2\,\theta^3+16\,c^4\,\pi^4\,r^3\,\theta^3+4\,c^4\,\pi^4\,r^2\,\theta^4-16\,c^4\,\pi^3\,r^3\,\theta^4+4\,c^4\,\pi^2\,r^3\,\theta^5-4\,c^4\,\pi\,r^4\,\theta^5+c^4\,r^4\,\theta^6\right)}\right)\Big/\left(16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4\right)\Bigg)\Big\},$$

$$\Big\{v\to\sqrt{\Bigg(-\frac{32\,c^2\,\pi^6}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\frac{16\,c^2\,\pi^4\,r^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}-\frac{32\,c^2\,\pi^4\,r\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\frac{32\,c^2\,\pi^3\,r^2\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\frac{4\,c^2\,\pi^2\,r^2\,\theta^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}-\frac{4\,c^2\,\pi\,r^2\,\theta^3}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+\left(4\,\pi\,\sqrt{\left(64\,c^4\,\pi^{10}+128\,c^4\,\pi^8\,r\,\theta+80\,c^4\,\pi^6\,r^2\,\theta^2-16\,c^4\,\pi^5\,r^2\,\theta^3+16\,c^4\,\pi^4\,r^3\,\theta^3+4\,c^4\,\pi^4\,r^2\,\theta^4-16\,c^4\,\pi^3\,r^3\,\theta^4+4\,c^4\,\pi^2\,r^3\,\theta^5-4\,c^4\,\pi\,r^4\,\theta^5+c^4\,r^4\,\theta^6\right)}\right)\Big/\left(16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4\right)\Bigg)}\Big\}\Big\}$$

$$
\begin{aligned}
&\texttt{RevolutionPlot3D}\Big[\Big\{\sqrt{\Big(-\frac{32\,c^2\,\pi^6}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+} \\
&\quad\frac{16\,c^2\,\pi^4\,r^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}- \\
&\quad\frac{32\,c^2\,\pi^4\,r\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+ \\
&\quad\frac{32\,c^2\,\pi^3\,r^2\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+ \\
&\quad\frac{4\,c^2\,\pi^2\,r^2\,\theta^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}- \\
&\quad\frac{4\,c^2\,\pi\,r^2\,\theta^3}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}- \\
&\quad\Big(4\,\pi\,\sqrt{\big(64\,c^4\,\pi^{10}+128\,c^4\,\pi^8\,r\,\theta+80\,c^4\,\pi^6\,r^2\,\theta^2-16\,c^4\,\pi^5\,r^2\,\theta^3+16\,c^4\,\pi^4\,r^3\,\theta^3+} \\
&\qquad\quad 4\,c^4\,\pi^4\,r^2\,\theta^4-16\,c^4\,\pi^3\,r^3\,\theta^4+4\,c^4\,\pi^2\,r^3\,\theta^5-4\,c^4\,\pi\,r^4\,\theta^5+c^4\,r^4\,\theta^6\big)\Big)\Big/ \\
&\quad\big(16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4\big)\Big), \\
&-\sqrt{\Big(-\frac{32\,c^2\,\pi^6}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+} \\
&\quad\frac{16\,c^2\,\pi^4\,r^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}- \\
&\quad\frac{32\,c^2\,\pi^4\,r\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+ \\
&\quad\frac{32\,c^2\,\pi^3\,r^2\,\theta}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+ \\
&\quad\frac{4\,c^2\,\pi^2\,r^2\,\theta^2}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}- \\
&\quad\frac{4\,c^2\,\pi\,r^2\,\theta^3}{16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4}+ \\
&\quad\Big(4\,\pi\,\sqrt{\big(64\,c^4\,\pi^{10}+128\,c^4\,\pi^8\,r\,\theta+80\,c^4\,\pi^6\,r^2\,\theta^2-16\,c^4\,\pi^5\,r^2\,\theta^3+16\,c^4\,\pi^4\,r^3\,\theta^3+} \\
&\qquad\quad 4\,c^4\,\pi^4\,r^2\,\theta^4-16\,c^4\,\pi^3\,r^3\,\theta^4+4\,c^4\,\pi^2\,r^3\,\theta^5-4\,c^4\,\pi\,r^4\,\theta^5+c^4\,r^4\,\theta^6\big)\Big)\Big/ \\
&\quad\big(16\,\pi^4\,r^2+32\,\pi^3\,r^2\,\theta+8\,\pi^2\,r^2\,\theta^2-8\,\pi\,r^2\,\theta^3+r^2\,\theta^4\big)\Big)\Big\},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\Big]
\end{aligned}
$$



Solve$\left[\left(r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)\right)\left(\theta\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right) == 2\,\pi\,r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right) - 2\,\pi\sqrt{2\,\pi\,r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)-\left(\eta\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)^{\wedge}2}\,,\ \eta\right]$

$$\left\{\left\{\eta\to-\frac{1}{2\,\pi\,\sqrt{-c^2+v^2}}\left(\sqrt{\left(4\,c^2\,\pi^2\,r^2-4\,\pi^2\,r^2\,v^2-8\,c^2\,\pi^3\,r\,\sqrt{\frac{c^2-v^2}{c^2}}-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+4\,\pi\,r^2\,v^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+c^2\,r^2\,\theta^2-2\,r^2\,v^2\,\theta^2+\frac{r^2\,v^4\,\theta^2}{c^2}\right)}\right)\right\},\right.$$
$$\left.\left\{\eta\to\frac{1}{2\,\pi\,\sqrt{-c^2+v^2}}\left(\sqrt{\left(4\,c^2\,\pi^2\,r^2-4\,\pi^2\,r^2\,v^2-8\,c^2\,\pi^3\,r\,\sqrt{\frac{c^2-v^2}{c^2}}-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+4\,\pi\,r^2\,v^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+c^2\,r^2\,\theta^2-2\,r^2\,v^2\,\theta^2+\frac{r^2\,v^4\,\theta^2}{c^2}\right)}\right)\right\}\right\}$$

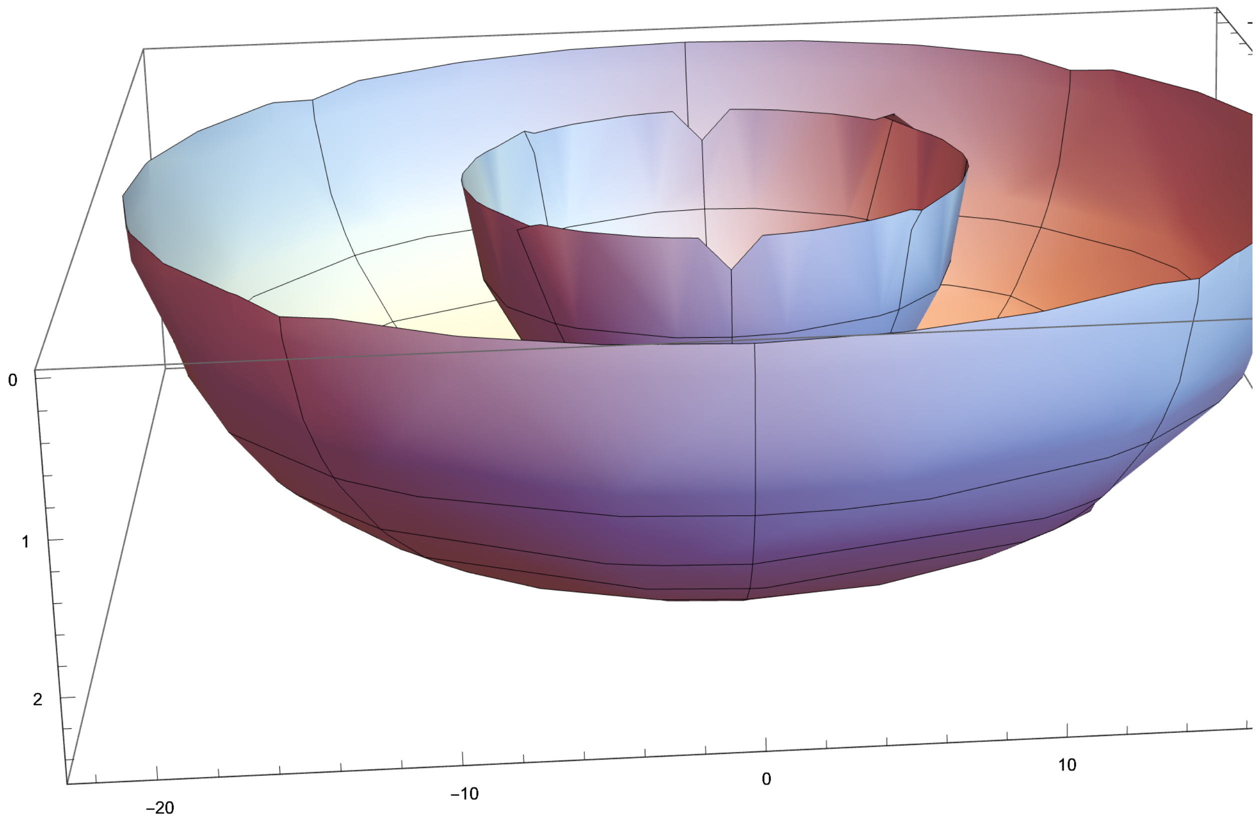
```
c := (2.99792458 * 10^8)
```

```
v := c
```

```
r := 1
```

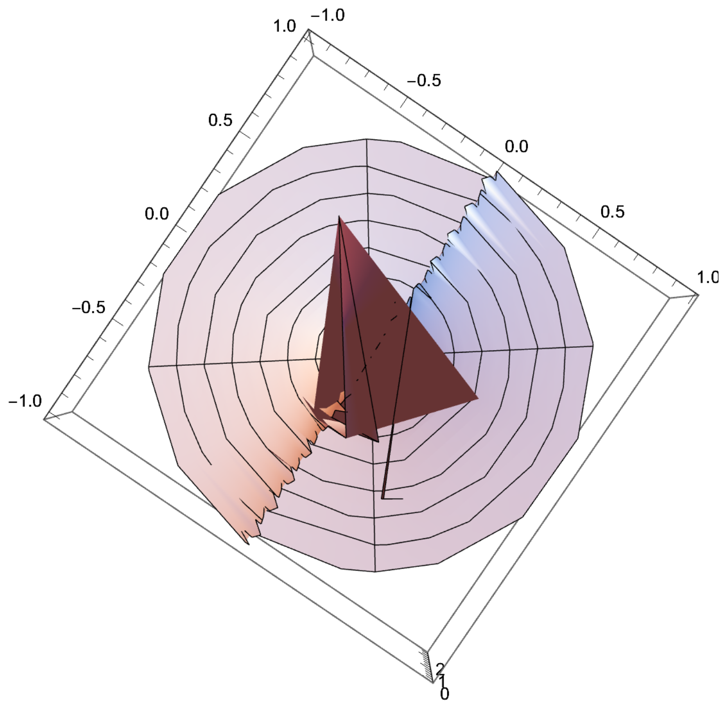
RevolutionPlot3D

$$\text{RevolutionPlot3D}\left[\frac{1}{2\,\pi\,\sqrt{-c^2+v^2}}\left(\sqrt{\left(4\,c^2\,\pi^2\,r^2-4\,\pi^2\,r^2\,v^2-8\,c^2\,\pi^3\,r\,\sqrt{\frac{c^2-v^2}{c^2}}-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+4\,\pi\,r^2\,v^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+c^2\,r^2\,\theta^2-2\,r^2\,v^2\,\theta^2+\frac{r^2\,v^4\,\theta^2}{c^2}\right)}\right),\{\theta,-41,41\},\{v,-2\,\pi,2\,\pi\}\right]$$



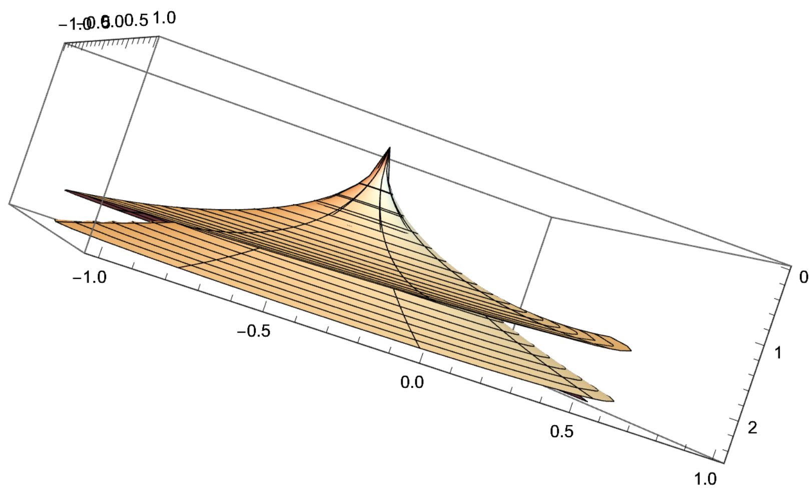

```
r := 1
v := c
```

```
RevolutionPlot3D[(√(1.4006047365452214`*^116 r^2 - 1.5583829386260045`*^99 r^2 v^2 -
    2.9354504648102485`*^108 r √(8.987551787368176`*^16 - 1.` v^2) -
    1.487116578090125`*^107 r^2 √(8.987551787368176`*^16 - 1.` v^2) θ +
    1.6546403439702433`*^90 r^2 v^2 √(8.987551787368176`*^16 - 1.` v^2) θ +
    3.5477732430456623`*^114 r^2 θ^2 - 7.894860195480569`*^97 r^2 v^2 θ^2 +
    4.3921083195184683`*^80 r^2 v^4 θ^2)) /
  (√(-1.4006047365452214`*^116 + 1.5583829386260045`*^99 v^2)), {v,
  -1, 1}, {θ,
  -4 π, 4 π}]
```




```
r := 1
```

```
RevolutionPlot3D[
 (√(1.4006047365452214`*^116 r^2 - 1.5583829386260045`*^99 r^2 (r / (2 π θ))^2 -
      2.9354504648102485`*^108 r √(8.987551787368176`*^16 - 1.` (r / (2 π θ))^2) -
      1.487116578090125`*^107 r^2 √(8.987551787368176`*^16 - 1.` (r / (2 π θ))^2) θ +
      1.6546403439702433`*^90 r^2 (r / (2 π θ))^2
       √(8.987551787368176`*^16 - 1.` (r / (2 π θ))^2) θ +
      3.5477732430456623`*^114 r^2 θ^2 - 7.894860195480569`*^97 r^2 (r / (2 π θ))^2 θ^2 +
      4.3921083195184683`*^80 r^2 (r / (2 π θ))^4 θ^2)) /
  (√(-1.4006047365452214`*^116 + 1.5583829386260045`*^99 (r / (2 π θ))^2)),
 {r, -1, 1}, {θ, -2 π, 2 π}]
```




```
v := (r / (2 πθ))
```

$$\text{Solve}\Big[\left(r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)\right)\left(\theta\Big/\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right) == 2\,\pi\, r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right) - 2\,\pi\sqrt{2\,\pi\, r\left(\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)-\left(\eta\sqrt{1-((v^{\wedge}2)/(c^{\wedge}2))}\right)^{\wedge}2}\,,\ v\Big]$$

$$\Big\{\Big\{v\to-\sqrt{\Big(-\frac{2\,c^2\,\pi^2\,r^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,r^4}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{2\,c^2\,r^2\,\eta^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,\eta^4}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{2\,c^2\,r^3\,\theta}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{c^2\,r^4\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\frac{c^2\,r^2\,\eta^2\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}-\Big(\sqrt{\left(16\,c^4\,\pi^8\,r^4+32\,c^4\,\pi^6\,r^5\,\theta+20\,c^4\,\pi^4\,r^6\,\theta^2-4\,c^4\,\pi^4\,r^4\,\eta^2\,\theta^2+4\,c^4\,\pi^2\,r^7\,\theta^3-4\,c^4\,\pi^2\,r^5\,\eta^2\,\theta^3-c^4\,r^6\,\eta^2\,\theta^4\right)}\Big)\Big/\left(2\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)\right)\Big)}\Big\},$$

$$\Big\{v\to\sqrt{\Big(-\frac{2\,c^2\,\pi^2\,r^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,r^4}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{2\,c^2\,r^2\,\eta^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,\eta^4}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{2\,c^2\,r^3\,\theta}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{c^2\,r^4\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\frac{c^2\,r^2\,\eta^2\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}-\Big(\sqrt{\left(16\,c^4\,\pi^8\,r^4+32\,c^4\,\pi^6\,r^5\,\theta+20\,c^4\,\pi^4\,r^6\,\theta^2-4\,c^4\,\pi^4\,r^4\,\eta^2\,\theta^2+4\,c^4\,\pi^2\,r^7\,\theta^3-4\,c^4\,\pi^2\,r^5\,\eta^2\,\theta^3-c^4\,r^6\,\eta^2\,\theta^4\right)}\Big)\Big/\left(2\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)\right)\Big)}\Big\},$$

$$\Big\{v\to-\sqrt{\Big(-\frac{2\,c^2\,\pi^2\,r^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,r^4}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{2\,c^2\,r^2\,\eta^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,\eta^4}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{2\,c^2\,r^3\,\theta}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{c^2\,r^4\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\frac{c^2\,r^2\,\eta^2\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\Big(\sqrt{\left(16\,c^4\,\pi^8\,r^4+32\,c^4\,\pi^6\,r^5\,\theta+20\,c^4\,\pi^4\,r^6\,\theta^2-4\,c^4\,\pi^4\,r^4\,\eta^2\,\theta^2+4\,c^4\,\pi^2\,r^7\,\theta^3-4\,c^4\,\pi^2\,r^5\,\eta^2\,\theta^3-c^4\,r^6\,\eta^2\,\theta^4\right)}\Big)\Big/\left(2\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)\right)\Big)}\Big\},$$

$$\Big\{v\to\sqrt{\Big(-\frac{2\,c^2\,\pi^2\,r^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,r^4}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{2\,c^2\,r^2\,\eta^2}{r^4+2\,r^2\,\eta^2+\eta^4}+\frac{c^2\,\eta^4}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{2\,c^2\,r^3\,\theta}{r^4+2\,r^2\,\eta^2+\eta^4}-\frac{c^2\,r^4\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\frac{c^2\,r^2\,\eta^2\,\theta^2}{4\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)}+\Big(\sqrt{\left(16\,c^4\,\pi^8\,r^4+32\,c^4\,\pi^6\,r^5\,\theta+20\,c^4\,\pi^4\,r^6\,\theta^2-4\,c^4\,\pi^4\,r^4\,\eta^2\,\theta^2+4\,c^4\,\pi^2\,r^7\,\theta^3-4\,c^4\,\pi^2\,r^5\,\eta^2\,\theta^3-c^4\,r^6\,\eta^2\,\theta^4\right)}\Big)\Big/\left(2\,\pi^2\left(r^4+2\,r^2\,\eta^2+\eta^4\right)\right)\Big)}\Big\}\Big\}$$

$$\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}$$

$$\text{Solve}\left[\theta r == \left(\left(2\pi r\left(\sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\right) - 2\pi\sqrt{\left(\left(r\left(\sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\right)\wedge 2 - \left(\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}\ \sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\wedge 2\right)}\right), v\right]$$

$$\left\{\{v\to 0\},\left\{v\to -\frac{2\sqrt{2\pi}\ \sqrt{2c^2\pi-c^2\theta}}{\sqrt{16\pi^2-8\pi\theta+\theta^2}}\right\},\left\{v\to \frac{2\sqrt{2\pi}\ \sqrt{2c^2\pi-c^2\theta}}{\sqrt{16\pi^2-8\pi\theta+\theta^2}}\right\}\right\}$$

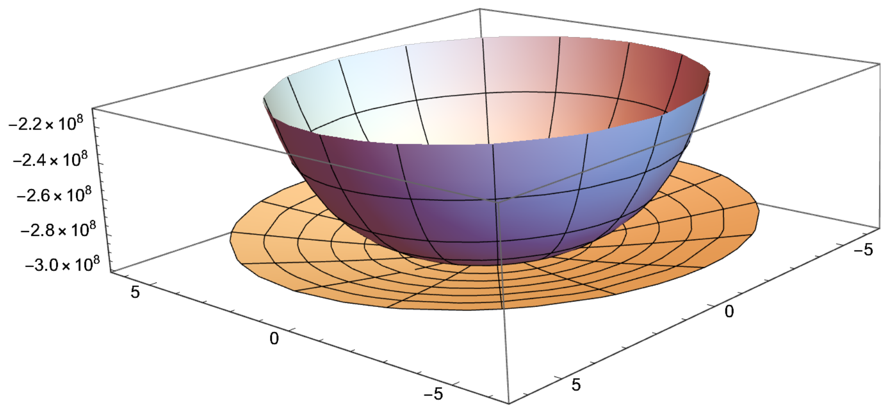
$$\text{Solve}\left[\theta r == \left(\left(2\pi r\left(\sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\right) - 2\pi\sqrt{\left(\left(r\left(\sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\right)\wedge 2 - \left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\ \sqrt{1-((v\wedge 2)/(c\wedge 2))}\right)\wedge 2\right)}\right), v\right]$$

$$\left\{\{v\to 0\},\left\{v\to -\frac{2\sqrt{2\pi}\ \sqrt{2c^2\pi-c^2\theta}}{\sqrt{16\pi^2-8\pi\theta+\theta^2}}\right\},\left\{v\to \frac{2\sqrt{2\pi}\ \sqrt{2c^2\pi-c^2\theta}}{\sqrt{16\pi^2-8\pi\theta+\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[\frac{2\sqrt{2\pi}\ \sqrt{2c^2\pi-c^2\theta}}{\sqrt{16\pi^2-8\pi\theta+\theta^2}} == c, \theta\right]$$

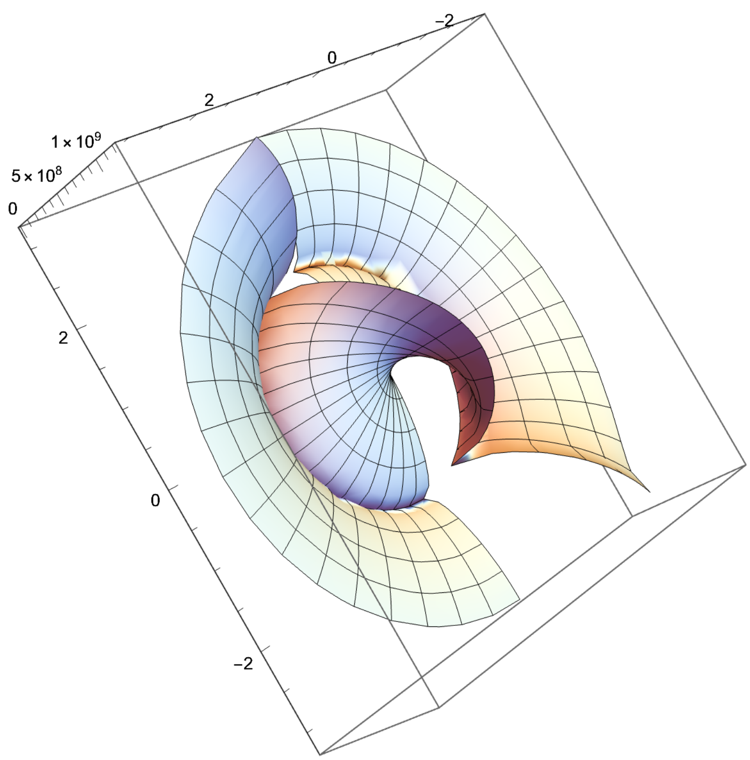
$$\{\{\theta\to 0\}\}$$

$$\text{RevolutionPlot3D}\left[-\frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\,\theta}}{\sqrt{16\,\pi^2 - 8\,\pi\,\theta + \theta^2}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



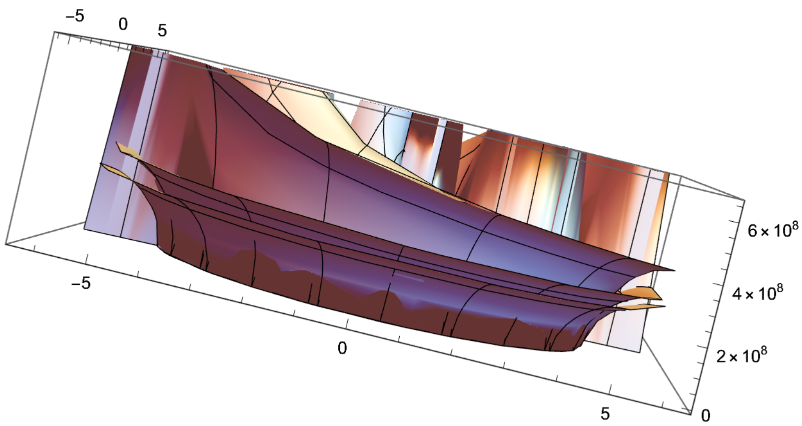
$$2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{RevolutionPlot3D}\left[\frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\,(\theta) + (\theta)^2}},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



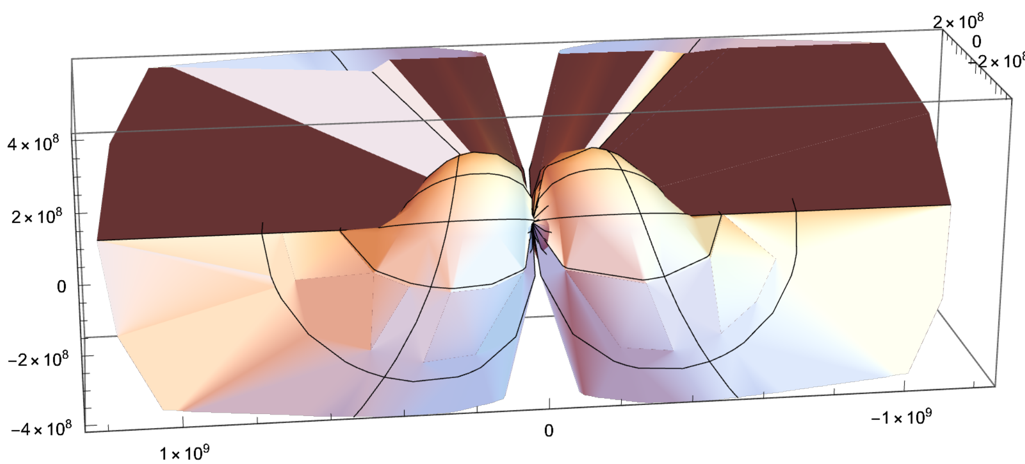
$$\text{RevolutionPlot3D}\left[\frac{2\sqrt{2\pi}\,\sqrt{2\,c^2\,\pi - c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\,(\theta) + (\theta)^2}},\right.$$

$$\left.\{\beta, -2\,\pi, 2\,\pi\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



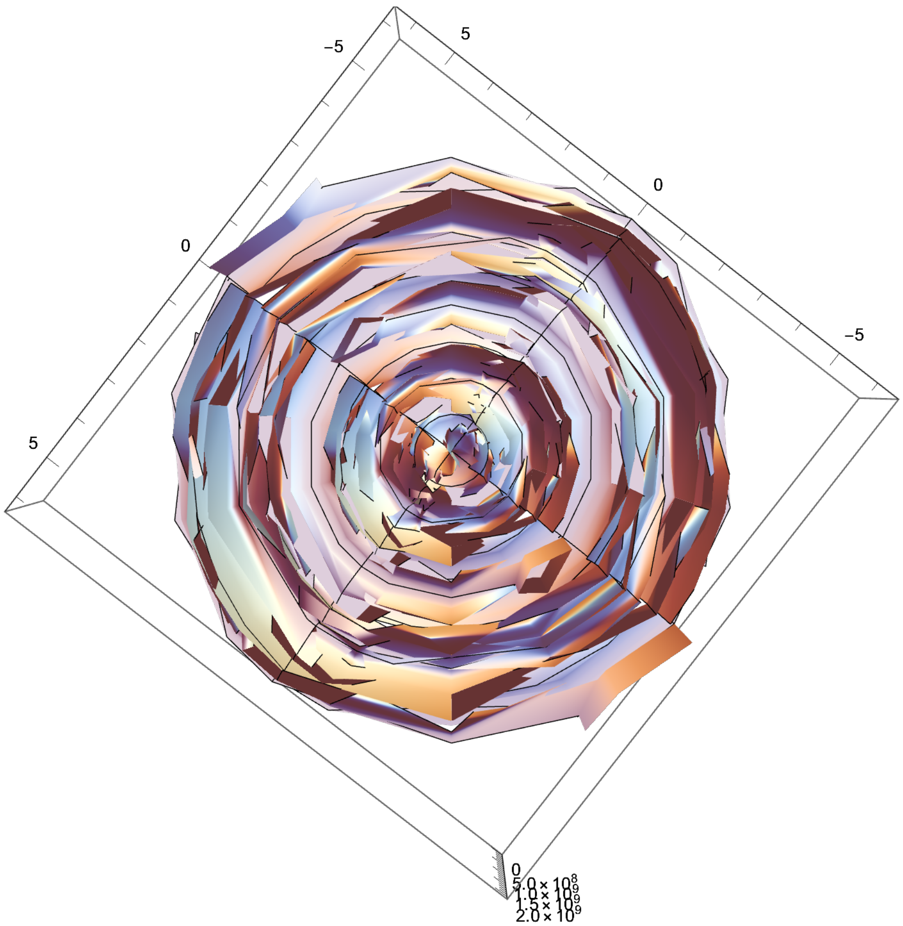
$$\text{SphericalPlot3D}\left[\frac{2\sqrt{2\pi}\,\sqrt{2\,c^2\,\pi - c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\,(\theta) + (\theta)^2}},\right.$$

$$\left.\{\beta, -2\,\pi, 2\,\pi\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



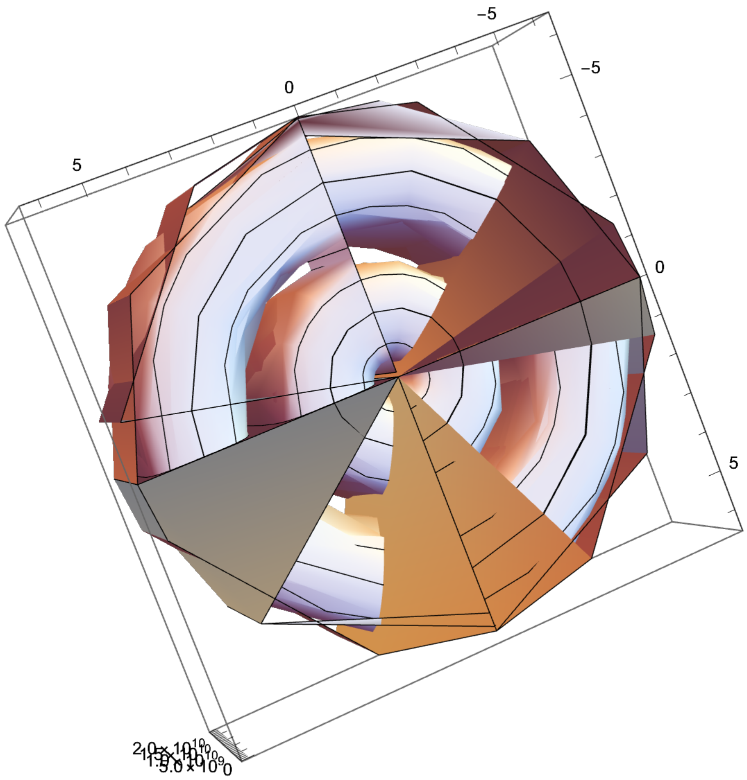
$$\text{RevolutionPlot3D}\Big[\frac{2\ \sqrt{2\,\pi}\ \sqrt{2\,c^2\,\pi - c^2\,(\theta)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + (\theta)^2}},$$

$$\{\beta,\ -2\,\pi,\ 2\,\pi\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\Big]$$

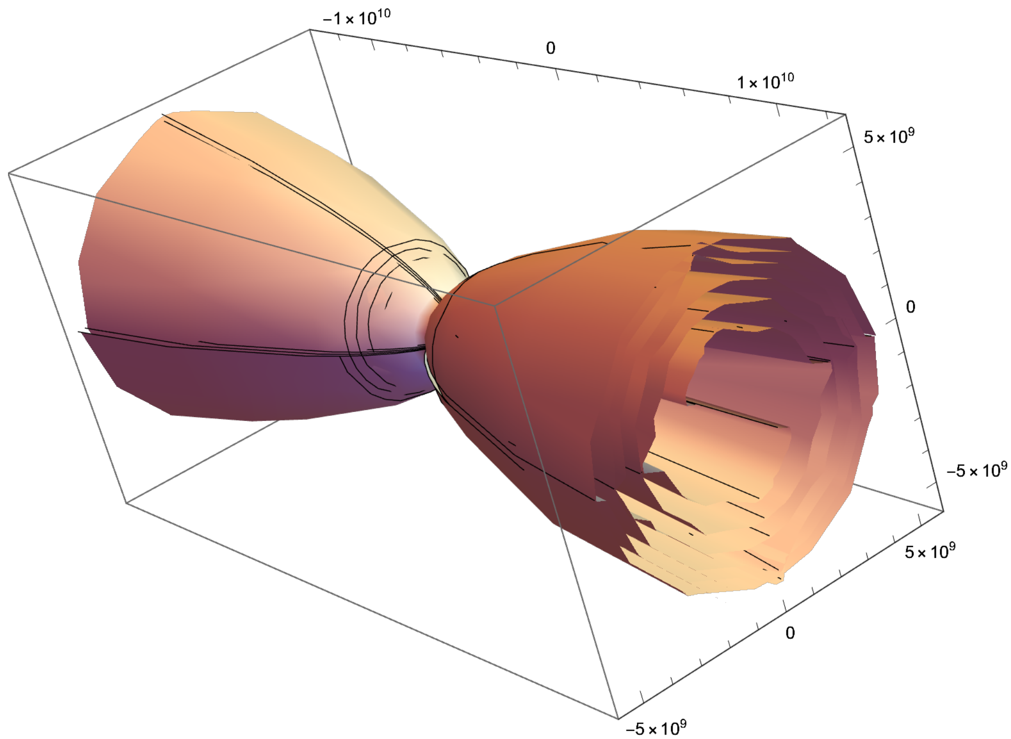


$$\text{RevolutionPlot3D}\left[\frac{2\sqrt{2\pi}\,\sqrt{2\,c^2\,\pi - c^2\,(\theta)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}},\right.$$

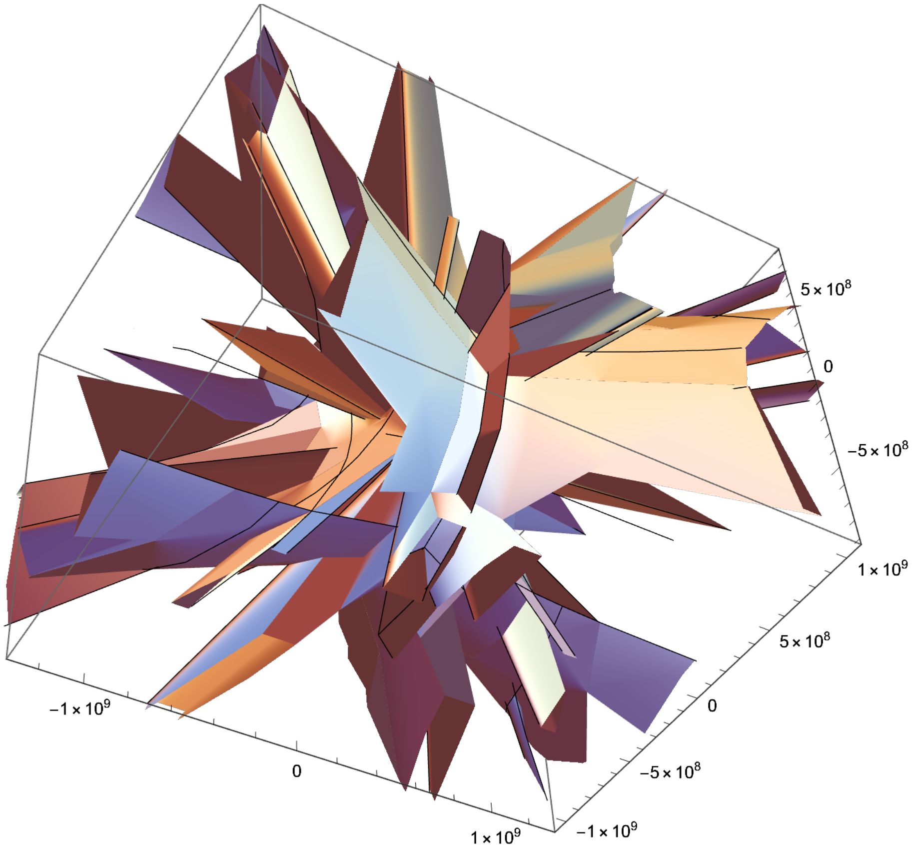
$$\left.\{\beta, -2\,\pi, 2\,\pi\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



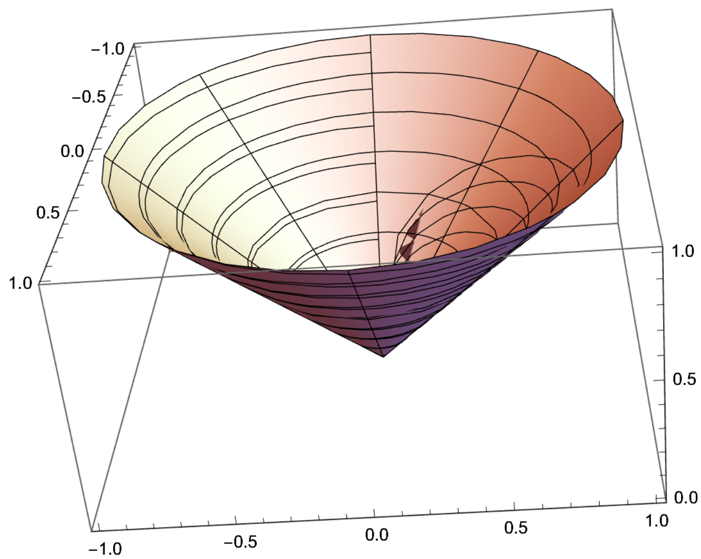
$$\text{SphericalPlot3D}\left[\frac{2\sqrt{2\pi}\sqrt{2c^2\pi - c^2(\theta)}}{\sqrt{16\pi^2 - 8\pi 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right)\right)^2}},\right.$$
$$\left.\{\beta, -2\pi, 2\pi\}, \{\theta, -4\pi, 4\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\,(\theta)}}{\sqrt{16\,\pi^2 - 8\,\pi\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + \theta^2}}, \{\beta, -2\,\pi, 2\,\pi\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{-\frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\,\theta}}{\sqrt{16\,\pi^2 - 8\,\pi\,\theta + \theta^2}}, \frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\,\theta}}{\sqrt{16\,\pi^2 - 8\,\pi\,\theta + \theta^2}}\right\}, \{c, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$

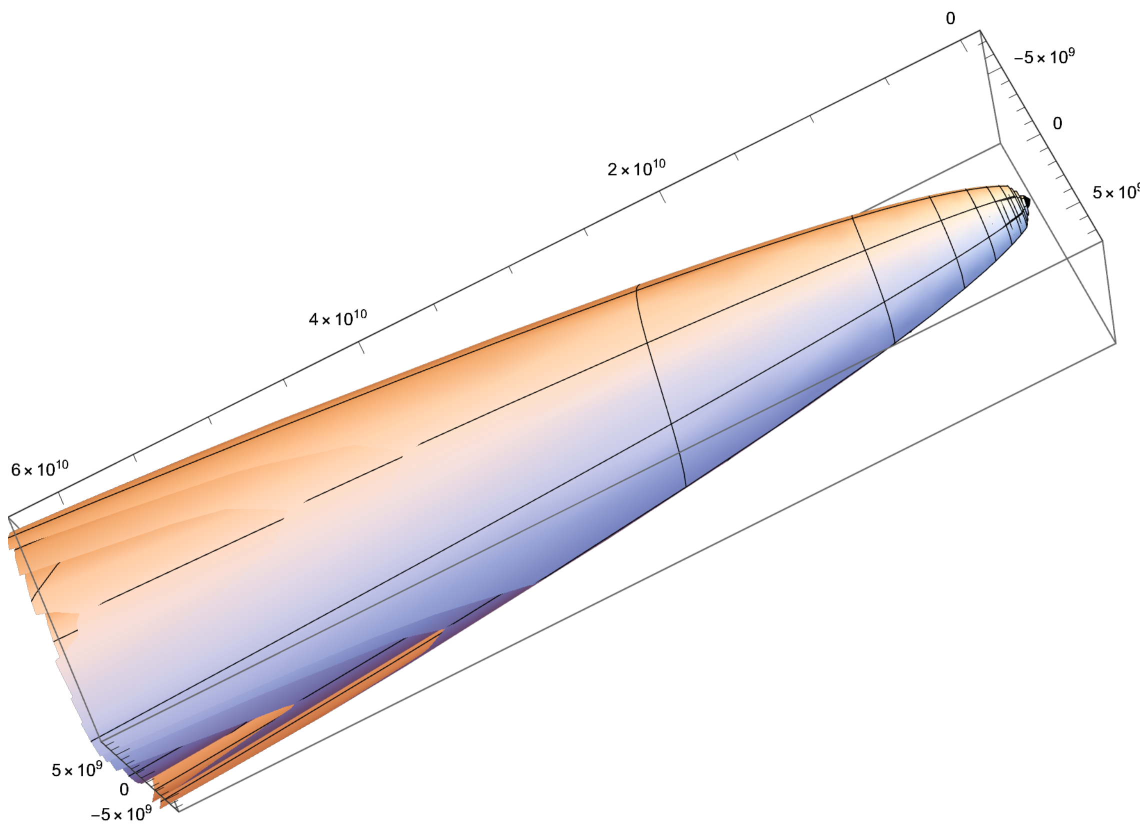


-1.0
-0.5
0.0
0.5
1.0
1.0
0.5
0.0
-1.0
-0.5
0.0
0.5
1.0

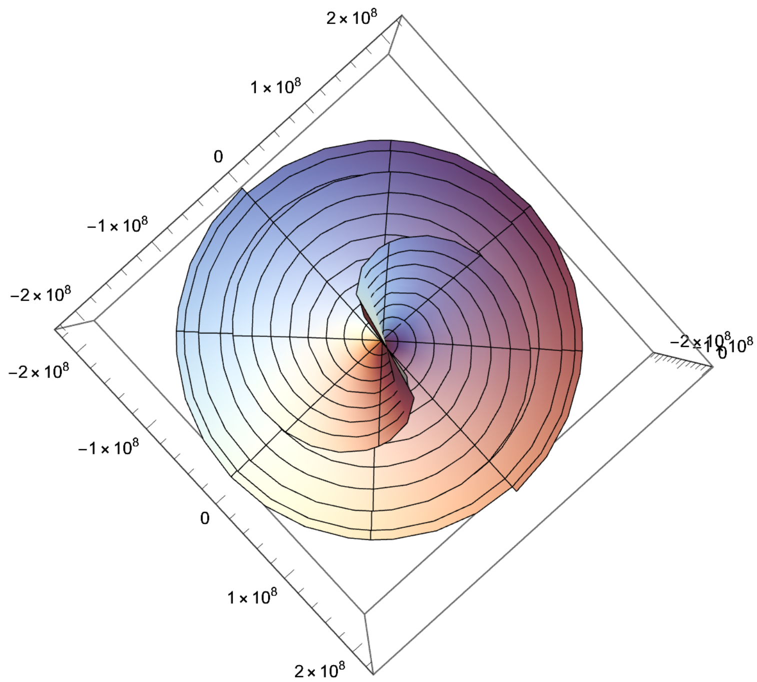
$$\text{SphericalPlot3D}\left[\left\{-\frac{2\sqrt{2\pi}\sqrt{2c^2\pi-c^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\pi^2-8\pi\,\theta+\theta^2}},\right.\right.$$

$$\left.\frac{2\sqrt{2\pi}\sqrt{2c^2\pi-c^2\,(\theta)}}{\sqrt{16\pi^2-8\pi\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)^2}}\right\},$$

$$\left.\{\beta,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

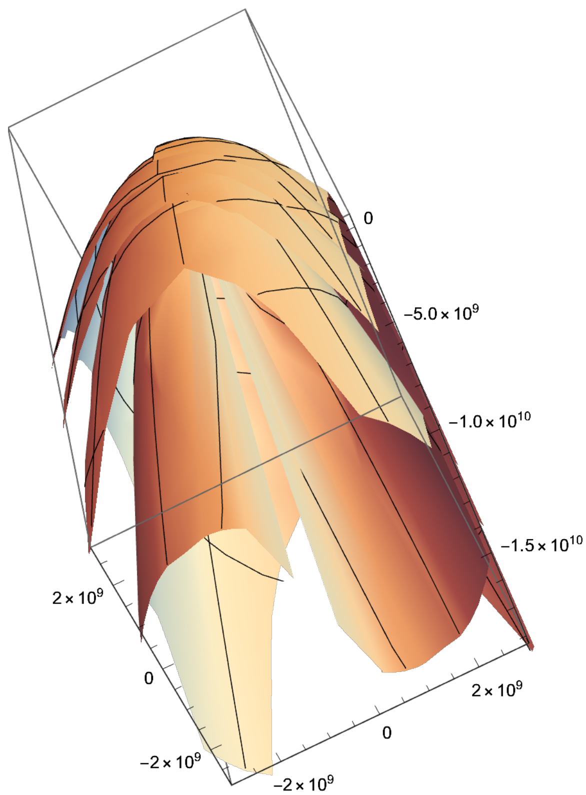


$$\text{SphericalPlot3D}\left[\left\{-\frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\,\theta}}{\sqrt{16\,\pi^2 - 8\,\pi\,\theta + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}},\ \frac{2\sqrt{2\pi}\ \sqrt{2\,c^2\,\pi - c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\,\pi^2 - 8\,\pi\,\theta + \theta^2}}\right\},\ \{\beta, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[\left\{-\frac{2\sqrt{2\pi}\sqrt{2c^2\pi - c^2\theta}}{\sqrt{16\pi^2 - 8\pi\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right) + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}},\right.\right.$$

$$\left.\left.\frac{2\sqrt{2\pi}\sqrt{2c^2\pi - c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)}}{\sqrt{16\pi^2 - 8\pi\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right) + \theta^2}}\right\}, \{\beta, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



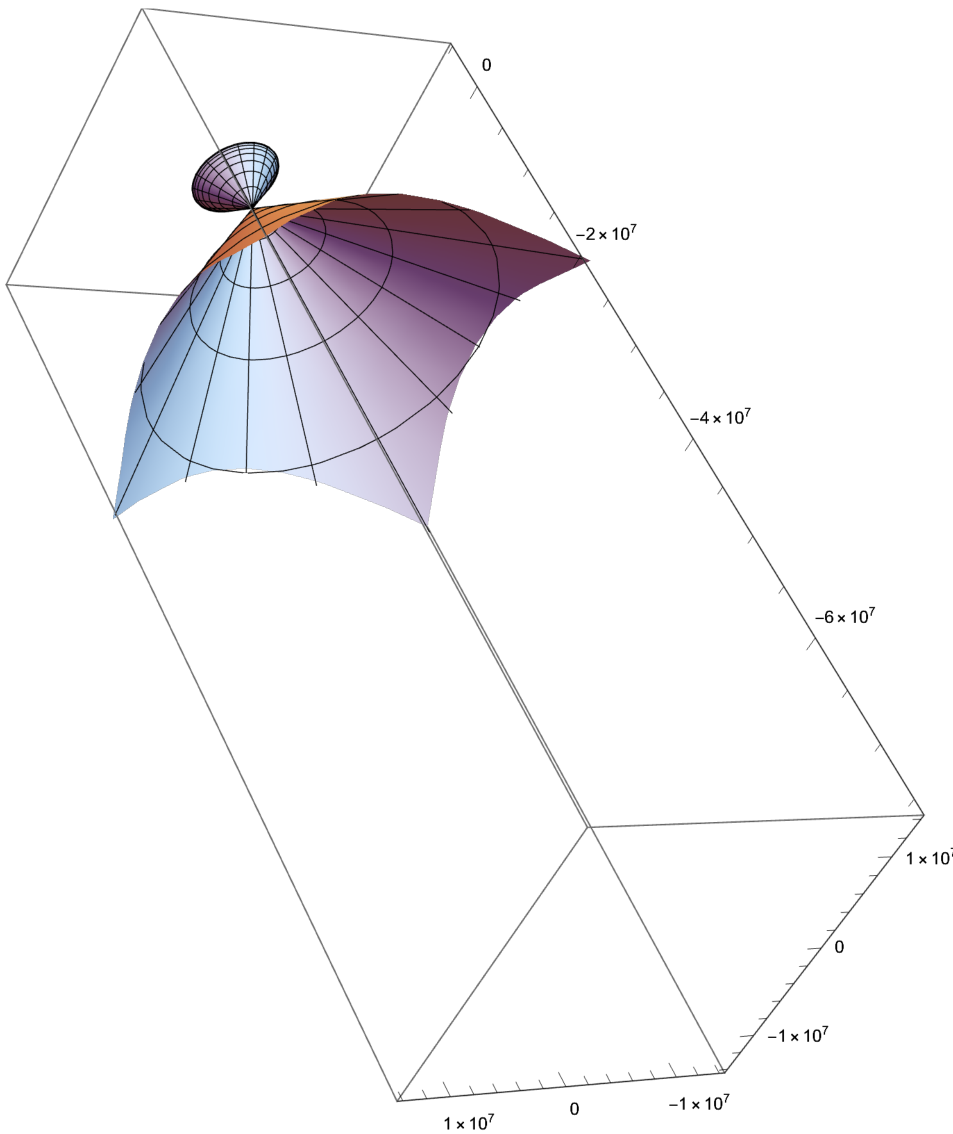
$$\texttt{D}\left[\frac{2\sqrt{2\pi}\sqrt{2c^2\pi - c^2\theta}}{\sqrt{16\pi^2 - 8\pi\theta + \theta^2}}, \theta\right]$$

$$\texttt{D}\left[-\frac{2\sqrt{2\pi}\sqrt{2c^2\pi - c^2\theta}}{\sqrt{16\pi^2 - 8\pi\theta + \theta^2}}, \theta\right]$$

$$\frac{\sqrt{2\pi}\sqrt{5.64705\times10^{17} - 8.98755\times10^{16}\,\theta}\,(-8\pi + 2\theta)}{\left(16\pi^2 - 8\pi\theta + \theta^2\right)^{3/2}} + \frac{2.25285\times10^{17}}{\sqrt{5.64705\times10^{17} - 8.98755\times10^{16}\,\theta}\,\sqrt{16\pi^2 - 8\pi\theta + \theta^2}}$$

```
RevolutionPlot3D[
```

$$\left\{\left(\frac{\sqrt{2\,\pi}\ \sqrt{5.6470453337907354`*^17-8.987551787368176`*^16\,\theta}\ (-8\,\pi+2\,\theta)}{\left(16\,\pi^2-8\,\pi\,\theta+\theta^2\right)^{3/2}}+\frac{2.2528451429927453`*^17}{\sqrt{5.6470453337907354`*^17-8.987551787368176`*^16\,\theta}\ \sqrt{16\,\pi^2-8\,\pi\,\theta+\theta^2}}\right),\left(-\frac{\sqrt{2\,\pi}\ (-8\,\pi+2\,\theta)\ \sqrt{2\,c^2\,\pi-c^2\,\theta}}{\left(16\,\pi^2-8\,\pi\,\theta+\theta^2\right)^{3/2}}-\frac{c^2\ \sqrt{2\,\pi}}{\sqrt{2\,c^2\,\pi-c^2\,\theta}\ \sqrt{16\,\pi^2-8\,\pi\,\theta+\theta^2}}\right)\right\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Big]$$



11 Dimensional

Touching on the 11th dimension.

by Parker Emmerson © 2010

We start by examining the wavelength with constant value :

Theorem 4 : The derivative of the height of the cone with respect to time equals the average rate of the circumference of the initial circle divided by θ when $\theta = k\,t$ (the angle is a constant function of time like a clock).

velocity =

$$\text{wavelength of frequency} = v = \lambda f = r f = r/\tau = r\,(1/(\theta/(2\pi))) = \frac{2\pi r}{\theta} =$$

$$\frac{(2\pi r_1 + \theta r)}{\theta} = \frac{2\pi\theta r}{\theta\text{^}2} = \frac{2\pi s}{\theta^2} = \frac{2\pi\,\frac{(2\pi r - 2\pi r_1)}{\theta}}{\theta} = \frac{2\pi\,\frac{\left(2\pi r - 2\pi\sqrt{r^2-\eta^2}\right)}{\theta}}{\theta} = \quad (2)$$

$$\frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2-\eta^2}\right)}{\theta^2} = \frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2 - \left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2}\right)}{\theta^2} =$$

$$(1/(1/(2\pi)))\,D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right] = \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

Theorem 5 : The derivative of the height of the cone with respect to time equals the average rate of the circumference of the initial circle divided by θ when $\theta = k\,t$ (the angle is a constant function of time like a clock).

We Solve for r

$$\text{Solve}\left[\frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2 - (\eta)^2}\right)}{\theta^2} == \frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}}, r\right]$$

$$\Big\{\Big\{r \to -\sqrt{\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)}\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)}\Big\},$$

$$\Big\{r \to \sqrt{\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)}\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)}\Big\},$$

$$\Big\{r \to -\sqrt{\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)}\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)}\Big\},$$

$$\Big\{r \to \sqrt{\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)}\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)}\Big\}\Big\}$$

I construct the expression: $\frac{r^2}{\frac{\theta}{2\,\pi}}$ (the ratio or rate of r^2 to

theta) from the solutions from the previous section:

$$
\begin{aligned}
&\frac{r^2}{\frac{\theta}{2\pi}} == \\
&\frac{1}{\frac{\theta}{2\pi}} \Big(\sqrt{}\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \\
&\left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)\Big)^2 =
\end{aligned}
$$

$$
\begin{aligned}
&\frac{1}{\theta}\,2\,\pi\,\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \\
&\left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big) ==
\end{aligned}
$$

$$
\begin{aligned}
&2\,\pi\,\Big(-\frac{1}{\theta}\left(256\,\pi^7\,\eta^2\,\theta^3\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\frac{1}{\theta}\left(320\,\pi^6\,\eta^2\,\theta^4\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \\
&\frac{1}{\theta}\left(128\,\pi^5\,\eta^2\,\theta^5\right) \big/ \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \frac{1}{\theta}\left(16\,\pi^4\,\eta^2\,\theta^6\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \\
&\frac{1}{\theta}\Big(\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)\right) \big/ \\
&\left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\Big)\Big) =
\end{aligned}
$$

$$2 \pi \left(-\frac{256 \pi^7 \eta^2 \theta^2}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \frac{320 \pi^6 \eta^2 \theta^3}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} - \frac{128 \pi^5 \eta^2 \theta^4}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \frac{16 \pi^4 \eta^2 \theta^5}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \left(128 \pi^6 \sqrt{256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8}\right) \Big/ \left(\theta \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\right)\right) =$$

$$2 \pi \left(-\left(256 \pi^7 \eta^2 \theta^2\right) \Big/ \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \frac{320 \pi^6 \eta^2 \theta^3}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} - \frac{128 \pi^5 \eta^2 \theta^4}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \frac{16 \pi^4 \eta^2 \theta^5}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \left(128 \pi^6 \sqrt{256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8}\right) \Big/ \left(\left(-1024 \pi^7 \theta \theta^3 + 1280 \pi^6 \theta \theta^4 - 512 \pi^5 \theta \theta^5 + 80 \pi^4 \theta \theta^6 - 32 \pi^3 \theta \theta^7 + 24 \pi^2 \theta \theta^8 - 8 \pi \theta \theta^9 + \theta \theta^{10}\right)\right)\right) =$$

$$2 \pi \left(-\frac{256 \pi^7 \eta^2 \theta^2}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \frac{320 \pi^6 \eta^2 \theta^3}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} - \frac{128 \pi^5 \eta^2 \theta^4}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \frac{16 \pi^4 \eta^2 \theta^5}{-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}} + \left(128 \pi^6 \sqrt{256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8}\right) \Big/ \left(-1024 \pi^7 \theta^4 + 1280 \pi^6 \theta^5 - 512 \pi^5 \theta^6 + 80 \pi^4 \theta^7 - 32 \pi^3 \theta^8 + 24 \pi^2 \theta^9 - 8 \pi \theta^{10} + \theta^{11}\right)\right)$$

$$\frac{r^2}{\frac{\theta}{2\pi}} == 2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\right.$$
$$\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$
$$\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$
$$\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$
$$\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/$$
$$\left.\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\right)$$

```
Solve[
 r^2/(θ/(2 π)) == 2 π (-(256 π^7 η^2 θ^2)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
       8 π θ^9 + θ^10) + (320 π^6 η^2 θ^3)/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
    (128 π^5 η^2 θ^4)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
       32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^5)/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8))/
     (-1024 π^7 θ^4 + 1280 π^6 θ^5 - 512 π^5 θ^6 + 80 π^4 θ^7 - 32 π^3 θ^8 + 24 π^2 θ^9 - 8 π θ^10 + θ^11)), r]
```

```
{{r → -1/√2
    √θ √((512 π^7 η^2 θ^2)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 +
          8 π θ^9 - θ^10) - (640 π^6 η^2 θ^3)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
          32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) + (256 π^5 η^2 θ^4)/(1024 π^7 θ^3 - 1280 π^6 θ^4 +
          512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5)/
        (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
       (256 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8))/
        (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 - 24 π^2 θ^9 + 8 π θ^10 - θ^11))},
 {r → 1/√2 √θ √((512 π^7 η^2 θ^2)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
       (640 π^6 η^2 θ^3)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 -
          24 π^2 θ^8 + 8 π θ^9 - θ^10) + (256 π^5 η^2 θ^4)/(1024 π^7 θ^3 - 1280 π^6 θ^4 +
          512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5)/
        (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
       (256 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8))/
        (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 - 24 π^2 θ^9 + 8 π θ^10 - θ^11))}}
```

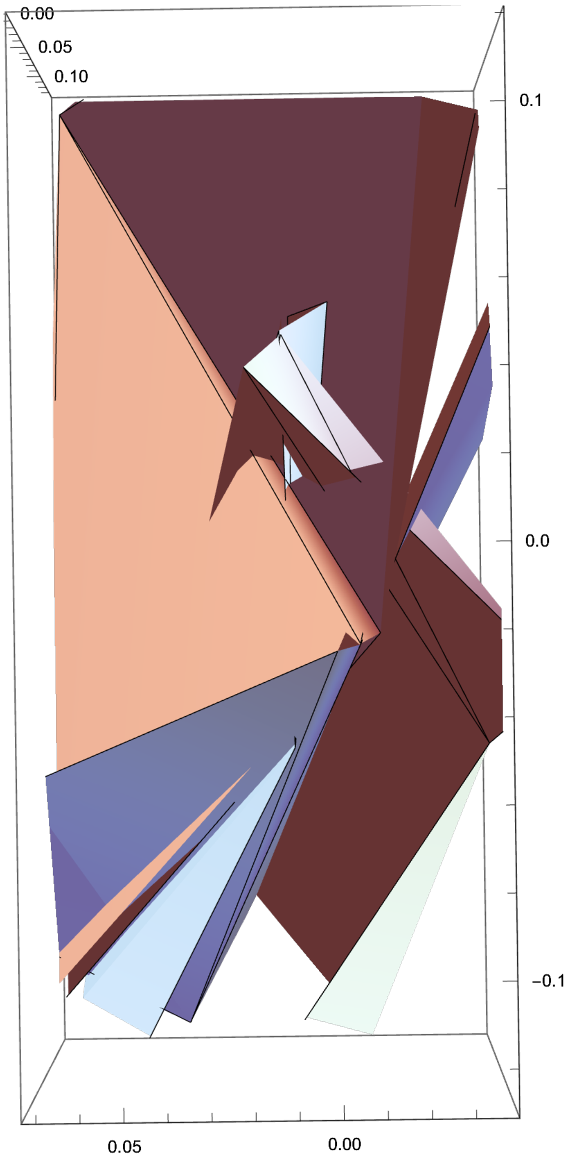
```
RevolutionPlot3D[
 {-1/Sqrt[2] Sqrt[θ] Sqrt[((512 π^7 η^2 θ^2)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 -
        24 π^2 θ^8 + 8 π θ^9 - θ^10) - (640 π^6 η^2 θ^3)/
      (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
     (256 π^5 η^2 θ^4)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5)/
      (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
     (256 π^6 Sqrt[(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)])/
      (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 - 24 π^2 θ^9 + 8 π θ^10 - θ^11))],
  1/Sqrt[2] Sqrt[θ] Sqrt[((512 π^7 η^2 θ^2)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (640 π^6 η^2 θ^3)/
      (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
     (256 π^5 η^2 θ^4)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5)/
      (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
     (256 π^6 Sqrt[(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)])/
      (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 -
        24 π^2 θ^9 + 8 π θ^10 - θ^11))]}, {η, -1, 1}, {θ, -2 π, 2 π}]
```

ComputationalGeometry`Methods`SpatialSearch::spoutbounds : -- Message text not found -- ({-5.98759, -42.1091})

ComputationalGeometry`Methods`SpatialSearch::spoutbounds : -- Message text not found -- ({5.55128, -39.8165})

ComputationalGeometry`Methods`SpatialSearch::spoutbounds : -- Message text not found -- ({5.98759, -42.1091})

General::stop : Further output of ComputationalGeometry`Methods`SpatialSearch::spoutbounds will be suppressed during this calculation. ≫

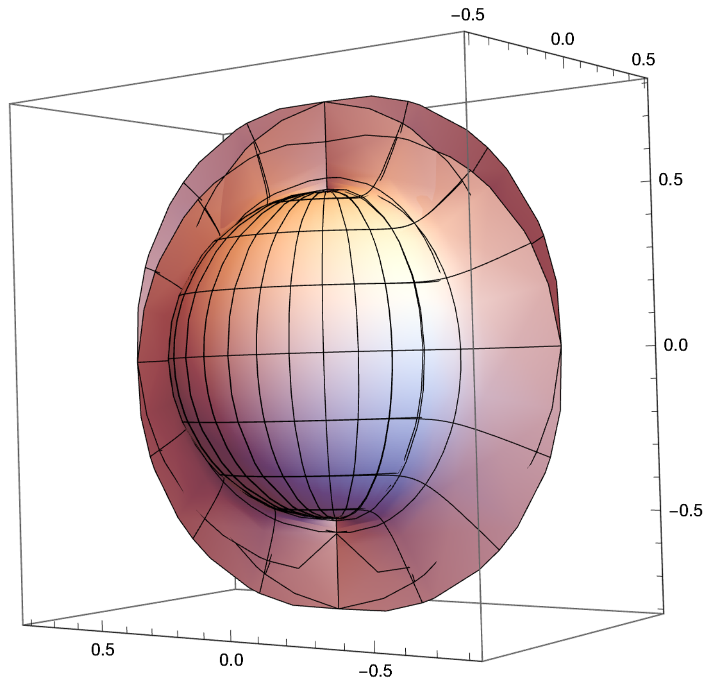


$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$r := \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$\theta :=$$

```
SphericalPlot3D[
 {-1/Sqrt[2] Sqrt[θ] Sqrt[((512 π^7 η^2 θ^2) / (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 -
        24 π^2 θ^8 + 8 π θ^9 - θ^10) - (640 π^6 η^2 θ^3) /
       (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
      (256 π^5 η^2 θ^4) / (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5) /
       (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
      (256 π^6 Sqrt[(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)]) /
       (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 -
         24 π^2 θ^9 + 8 π θ^10 - (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^11))],
  1/Sqrt[2] Sqrt[θ] Sqrt[((512 π^7 η^2 θ^2) / (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (640 π^6 η^2 θ^3) /
       (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
      (256 π^5 η^2 θ^4) / (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 +
        32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) - (32 π^4 η^2 θ^5) /
       (1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
      (256 π^6 Sqrt[(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)]) /
       (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 - 24 π^2 θ^9 + 8 π θ^10 -
         (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^11))]}, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```


-0.5
0.0
0.5
0.5
0.0
-0.5
0.5
0.0
-0.5

Having composed the expression for $\frac{r^2}{\frac{\theta}{2\pi}}$ in the 11th dimension, we solve for the 11th dimensional position of theta. This takes two "runs through."

First run-through.

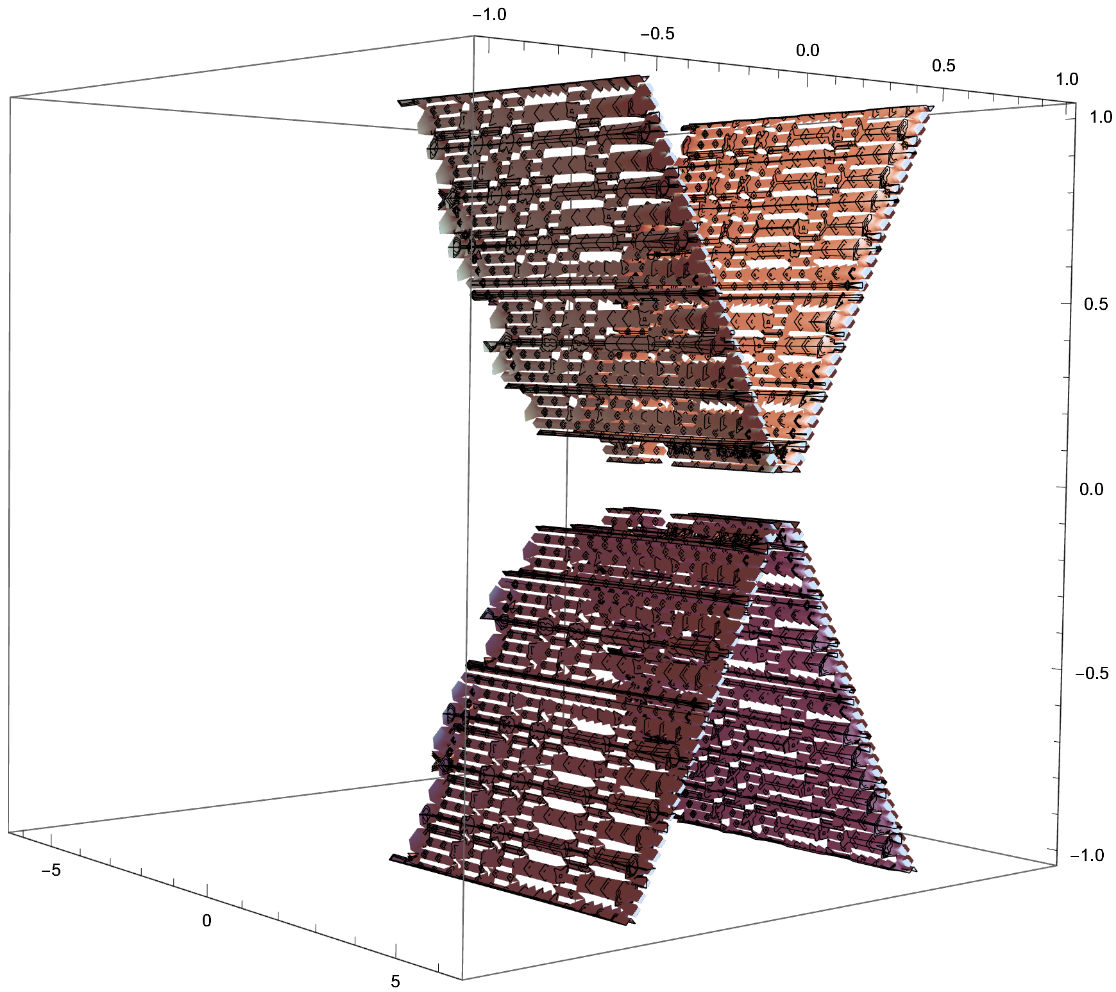
$$\text{Solve}\Big[\frac{r^2}{\frac{\theta}{2\pi}} == 2\pi\Big(-\left(256\pi^7\eta^2\theta^2\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^3\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-\left(128\pi^5\eta^2\theta^4\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^5\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(128\pi^6\sqrt{\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)}\right)\Big/\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+x\right)\Big), x\Big]$$

$$\Big\{\Big\{x\to\Big(-262\,144\pi^{12}r^2\theta^4+65\,536\pi^{12}\eta^2\theta^4+393\,216\pi^{11}r^2\theta^5-98\,304\pi^{11}\eta^2\theta^5-212\,992\pi^{10}r^2\theta^6+53\,248\pi^{10}\eta^2\theta^6+57\,344\pi^9r^2\theta^7-13\,312\pi^9\eta^2\theta^7-22\,528\pi^8r^2\theta^8+3328\pi^8\eta^2\theta^8+16\,384\pi^7r^2\theta^9-2048\pi^7\eta^2\theta^9-7232\pi^6r^2\theta^{10}+896\pi^6\eta^2\theta^{10}+1472\pi^5r^2\theta^{11}-128\pi^5\eta^2\theta^{11}-304\pi^4r^2\theta^{12}+160\pi^3r^2\theta^{13}-56\pi^2r^2\theta^{14}+8\pi r^2\theta^{15}-32\,768\pi^{11}\theta\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+8192\pi^{10}\theta^2\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+512\pi^8\theta^4\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}-512\pi^7\theta^5\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+128\pi^6\theta^6\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}\Big)\Big/\left(-256\pi^5r^2+64\pi^5\eta^2+64\pi^4r^2\theta-16\pi^4\eta^2\theta+4\pi^2r^2\theta^3-4\pi r^2\theta^4+r^2\theta^5\right)\Big\}\Big\}$$

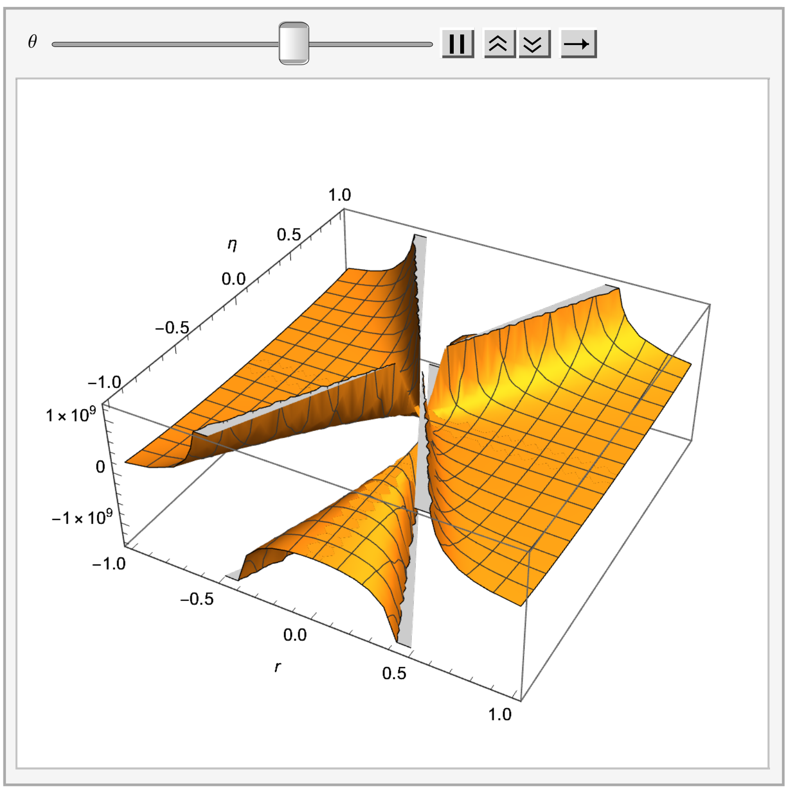
ContourPlot3D[

$$\left(-262144\,\pi^{12}\,r^2\,\theta^4+65536\,\pi^{12}\,\eta^2\,\theta^4+393216\,\pi^{11}\,r^2\,\theta^5-98304\,\pi^{11}\,\eta^2\,\theta^5-212992\,\pi^{10}\,r^2\,\theta^6+53248\,\pi^{10}\,\eta^2\,\theta^6+57344\,\pi^9\,r^2\,\theta^7-13312\,\pi^9\,\eta^2\,\theta^7-22528\,\pi^8\,r^2\,\theta^8+3328\,\pi^8\,\eta^2\,\theta^8+16384\,\pi^7\,r^2\,\theta^9-2048\,\pi^7\,\eta^2\,\theta^9-7232\,\pi^6\,r^2\,\theta^{10}+896\,\pi^6\,\eta^2\,\theta^{10}+1472\,\pi^5\,r^2\,\theta^{11}-128\,\pi^5\,\eta^2\,\theta^{11}-304\,\pi^4\,r^2\,\theta^{12}+160\,\pi^3\,r^2\,\theta^{13}-56\,\pi^2\,r^2\,\theta^{14}+8\,\pi\,r^2\,\theta^{15}-32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}-512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5\right),$$

{r, -1, 1}, {η, -1, 1}, {θ, -2 π, 2 π}]



$$\text{Animate}\Big[\text{Plot3D}\Big[\big(-262\,144\,\pi^{12}\,r^2\,\theta^4 + 65\,536\,\pi^{12}\,\eta^2\,\theta^4 + 393\,216\,\pi^{11}\,r^2\,\theta^5 - 98\,304\,\pi^{11}\,\eta^2\,\theta^5 - 212\,992\,\pi^{10}\,r^2\,\theta^6 + 53\,248\,\pi^{10}\,\eta^2\,\theta^6 + 57\,344\,\pi^9\,r^2\,\theta^7 - 13\,312\,\pi^9\,\eta^2\,\theta^7 - 22\,528\,\pi^8\,r^2\,\theta^8 + 3328\,\pi^8\,\eta^2\,\theta^8 + 16\,384\,\pi^7\,r^2\,\theta^9 - 2048\,\pi^7\,\eta^2\,\theta^9 - 7232\,\pi^6\,r^2\,\theta^{10} + 896\,\pi^6\,\eta^2\,\theta^{10} + 1472\,\pi^5\,r^2\,\theta^{11} - 128\,\pi^5\,\eta^2\,\theta^{11} - 304\,\pi^4\,r^2\,\theta^{12} + 160\,\pi^3\,r^2\,\theta^{13} - 56\,\pi^2\,r^2\,\theta^{14} + 8\,\pi\,r^2\,\theta^{15} - 32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3} + 8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3} + 512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3} - 512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3} + 128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}\big) \Big/ \big(-256\,\pi^5\,r^2 + 64\,\pi^5\,\eta^2 + 64\,\pi^4\,r^2\,\theta - 16\,\pi^4\,\eta^2\,\theta + 4\,\pi^2\,r^2\,\theta^3 - 4\,\pi\,r^2\,\theta^4 + r^2\,\theta^5\big),\ \{r, -1, 1\}, \{\eta, -1, 1\}, \text{AxesLabel} \to \text{Automatic}\Big], \{\theta, -2\pi, 2\pi\}\Big]$$

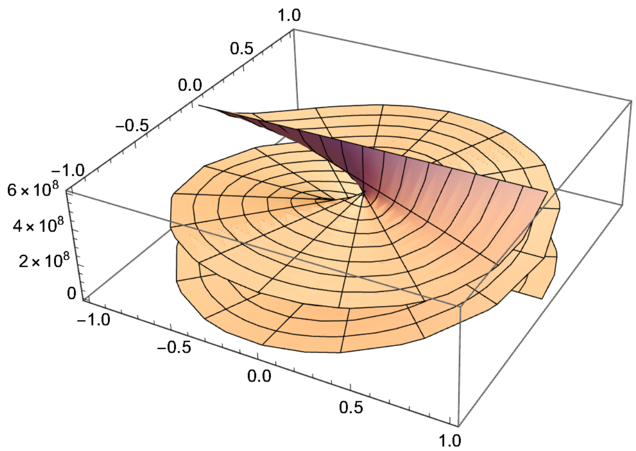


$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

RevolutionPlot3D[

$$\Big(-262144\,\pi^{12}\,r^2\,\theta^4+65536\,\pi^{12}\,\eta^2\,\theta^4+393216\,\pi^{11}\,r^2\,\theta^5-98304\,\pi^{11}\,\eta^2\,\theta^5-212992\,\pi^{10}\,r^2\,\theta^6+53248\,\pi^{10}\,\eta^2\,\theta^6+57344\,\pi^9\,r^2\,\theta^7-13312\,\pi^9\,\eta^2\,\theta^7-22528\,\pi^8\,r^2\,\theta^8+3328\,\pi^8\,\eta^2\,\theta^8+16384\,\pi^7\,r^2\,\theta^9-2048\,\pi^7\,\eta^2\,\theta^9-7232\,\pi^6\,r^2\,\theta^{10}+896\,\pi^6\,\eta^2\,\theta^{10}+1472\,\pi^5\,r^2\,\theta^{11}-128\,\pi^5\,\eta^2\,\theta^{11}-304\,\pi^4\,r^2\,\theta^{12}+160\,\pi^3\,r^2\,\theta^{13}-56\,\pi^2\,r^2\,\theta^{14}+8\,\pi\,r^2\,\theta^{15}-32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}+8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}+512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}-512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}+128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}\Big)\Big/\Big(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5\Big),$$

{r, -1, 1}, {θ, -2 π, 2 π}]

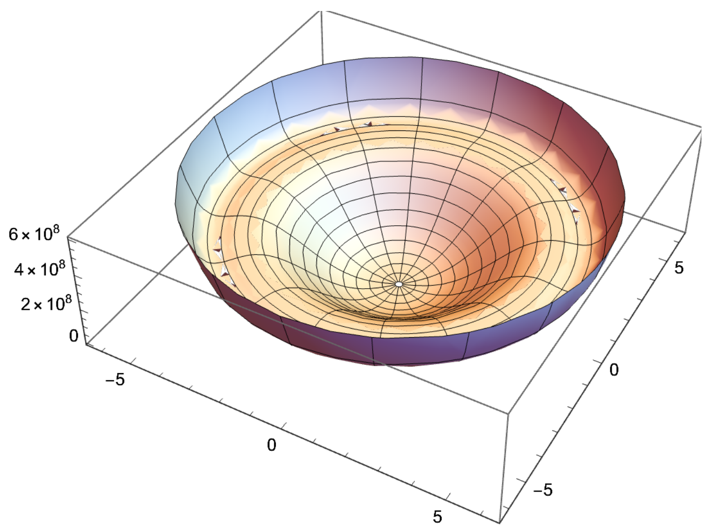


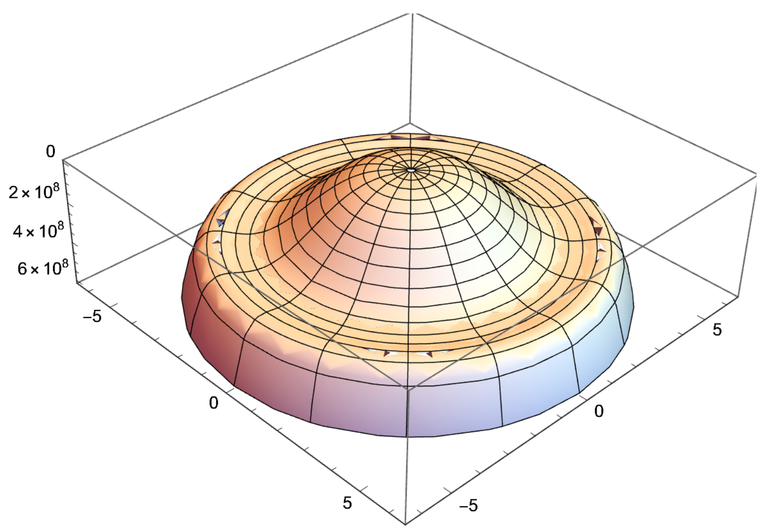
$$r := \frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

RevolutionPlot3D$\Big[$

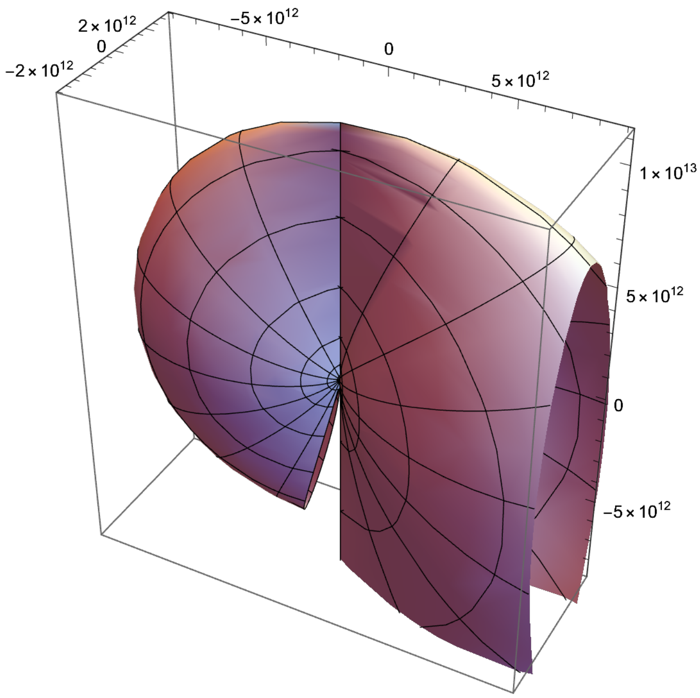
$$\Big(-262\,144\,\pi^{12}\,r^2\,\theta^4+65\,536\,\pi^{12}\,\eta^2\,\theta^4+393\,216\,\pi^{11}\,r^2\,\theta^5-98\,304\,\pi^{11}\,\eta^2\,\theta^5-212\,992\,\pi^{10}\,r^2\,\theta^6+53\,248\,\pi^{10}\,\eta^2\,\theta^6+57\,344\,\pi^9\,r^2\,\theta^7-13\,312\,\pi^9\,\eta^2\,\theta^7-22\,528\,\pi^8\,r^2\,\theta^8+3328\,\pi^8\,\eta^2\,\theta^8+16\,384\,\pi^7\,r^2\,\theta^9-2048\,\pi^7\,\eta^2\,\theta^9-7232\,\pi^6\,r^2\,\theta^{10}+896\,\pi^6\,\eta^2\,\theta^{10}+1472\,\pi^5\,r^2\,\theta^{11}-128\,\pi^5\,\eta^2\,\theta^{11}-304\,\pi^4\,r^2\,\theta^{12}+160\,\pi^3\,r^2\,\theta^{13}-56\,\pi^2\,r^2\,\theta^{14}+8\,\pi\,r^2\,\theta^{15}-32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}-512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\Big)\Big/$$

$$\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Big]$$

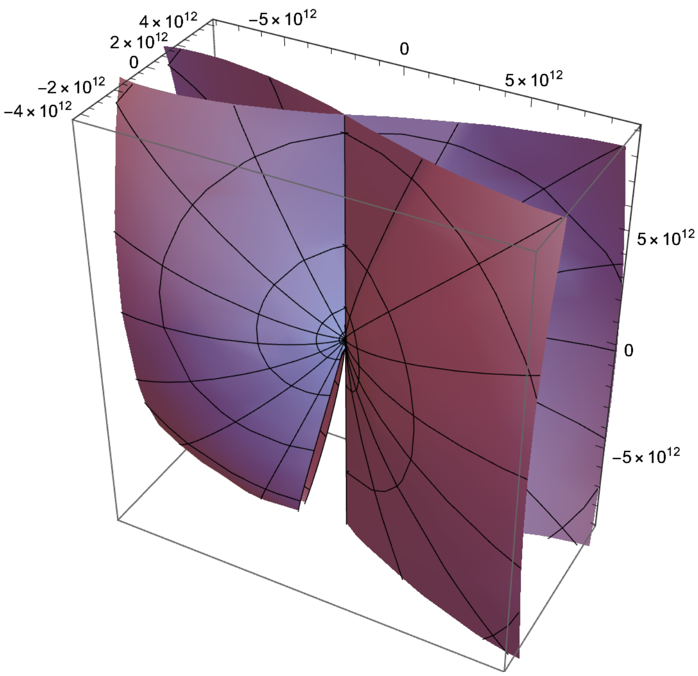




$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\\
&\Big(-262\,144\,\pi^{12}\,r^2\,\theta^4+65\,536\,\pi^{12}\,\eta^2\,\theta^4+393\,216\,\pi^{11}\,r^2\,\theta^5-98\,304\,\pi^{11}\,\eta^2\,\theta^5-212\,992\,\pi^{10}\,r^2\,\theta^6+\\
&\quad 53\,248\,\pi^{10}\,\eta^2\,\theta^6+57\,344\,\pi^9\,r^2\,\theta^7-13\,312\,\pi^9\,\eta^2\,\theta^7-22\,528\,\pi^8\,r^2\,\theta^8+3328\,\pi^8\,\eta^2\,\theta^8+\\
&\quad 16\,384\,\pi^7\,r^2\,\theta^9-2048\,\pi^7\,\eta^2\,\theta^9-7232\,\pi^6\,r^2\,\theta^{10}+896\,\pi^6\,\eta^2\,\theta^{10}+1472\,\pi^5\,r^2\\
&\quad\Big(2\Big(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\Big)\Big)^{11}-128\,\pi^5\,\eta^2\,\Big(2\Big(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\Big)\Big)^{11}-304\,\pi^4\,r^2\,\theta^{12}+\\
&\quad 160\,\pi^3\,r^2\,\theta^{13}-56\,\pi^2\,r^2\,\theta^{14}+8\,\pi\,r^2\,\theta^{15}-32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+\\
&\quad 8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}-\\
&\quad 512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\Big)\Big/\\
&\Big(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5\Big),\\
&\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]
\end{aligned}
$$



```
SphericalPlot3D[(-262 144 π^12 r^2 θ^4 + 65 536 π^12 η^2 θ^4 + 393 216 π^11 r^2 θ^5 -
    98 304 π^11 η^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^5 - 212 992 π^10 r^2 θ^6 + 53 248 π^10 η^2 θ^6 +
    57 344 π^9 r^2 θ^7 - 13 312 π^9 η^2 θ^7 - 22 528 π^8 r^2 θ^8 + 3328 π^8 η^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^8 +
    16 384 π^7 r^2 θ^9 - 2048 π^7 η^2 θ^9 - 7232 π^6 r^2 θ^10 + 896 π^6 η^2 θ^10 + 1472 π^5 r^2 (θ)^11 -
    128 π^5 η^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^11 - 304 π^4 r^2 θ^12 + 160 π^3 r^2 θ^13 - 56 π^2 r^2 θ^14 +
    8 π r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^15 - 32 768 π^11 θ Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] +
    8192 π^10 θ^2 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] + 512 π^8 θ^4 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] -
    512 π^7 θ^5 Sqrt[η^4 (2 π - θ)^2 (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^3 θ^3] +
    128 π^6 θ^6 Sqrt[η^4 (2 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 (4 π - θ)^3 θ^3]) /
  (-256 π^5 r^2 + 64 π^5 η^2 + 64 π^4 r^2 θ - 16 π^4 η^2 θ + 4 π^2 r^2 θ^3 - 4 π r^2 θ^4 + r^2 θ^5),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



Second run-through

```
Solve[
 x == (-262 144 π^12 r^2 θ^4 + 65 536 π^12 η^2 θ^4 + 393 216 π^11 r^2 θ^5 - 98 304 π^11 η^2 θ^5 - 212 992 π^10 r^2 θ^6 +
     53 248 π^10 η^2 θ^6 + 57 344 π^9 r^2 θ^7 - 13 312 π^9 η^2 θ^7 - 22 528 π^8 r^2 θ^8 +
     3328 π^8 η^2 θ^8 + 16 384 π^7 r^2 θ^9 - 2048 π^7 η^2 θ^9 - 7232 π^6 r^2 θ^10 +
     896 π^6 η^2 θ^10 + 1472 π^5 r^2 x - 128 π^5 η^2 x - 304 π^4 r^2 θ^12 + 160 π^3 r^2 θ^13 -
     56 π^2 r^2 θ^14 + 8 π r^2 θ^15 - 32 768 π^11 θ Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] +
     8192 π^10 θ^2 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] + 512 π^8 θ^4 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] -
     512 π^7 θ^5 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] + 128 π^6 θ^6 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3]) /
   (-256 π^5 r^2 + 64 π^5 η^2 + 64 π^4 r^2 θ - 16 π^4 η^2 θ + 4 π^2 r^2 θ^3 - 4 π r^2 θ^4 + r^2 θ^5), x]
```

$$\Bigg\{\Bigg\{x \to \Bigg(-\frac{262144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{65536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{393216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{57344\,\pi^{9}\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{13312\,\pi^{9}\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{22528\,\pi^{8}\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{3328\,\pi^{8}\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{16384\,\pi^{7}\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\}\}$$

ContourPlot3D$\left[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

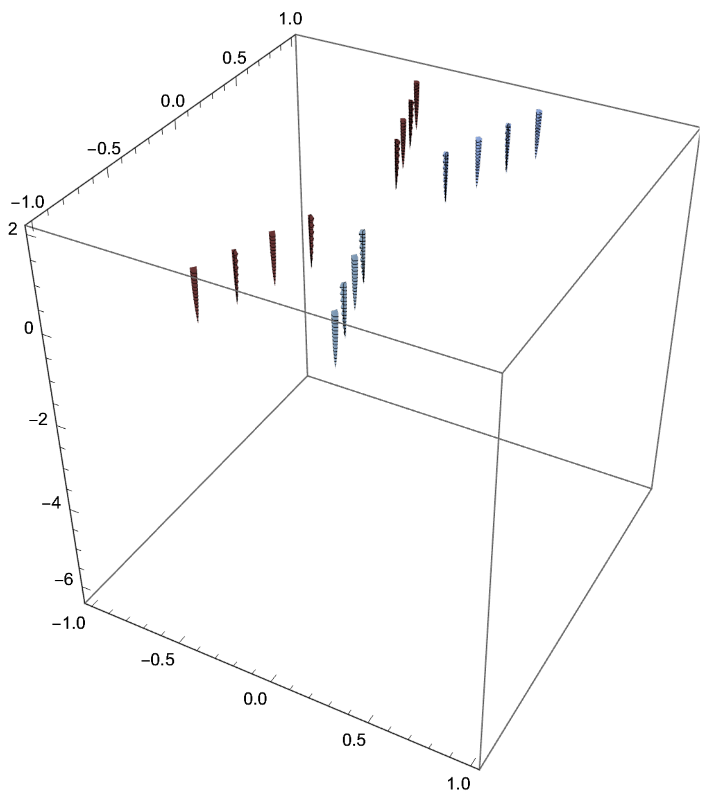
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

{r, -1, 1}, {η, -1, 1}, {θ, -2 π, 2}]



η := r Sin[β]

$$\text{ContourPlot3D}\left[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

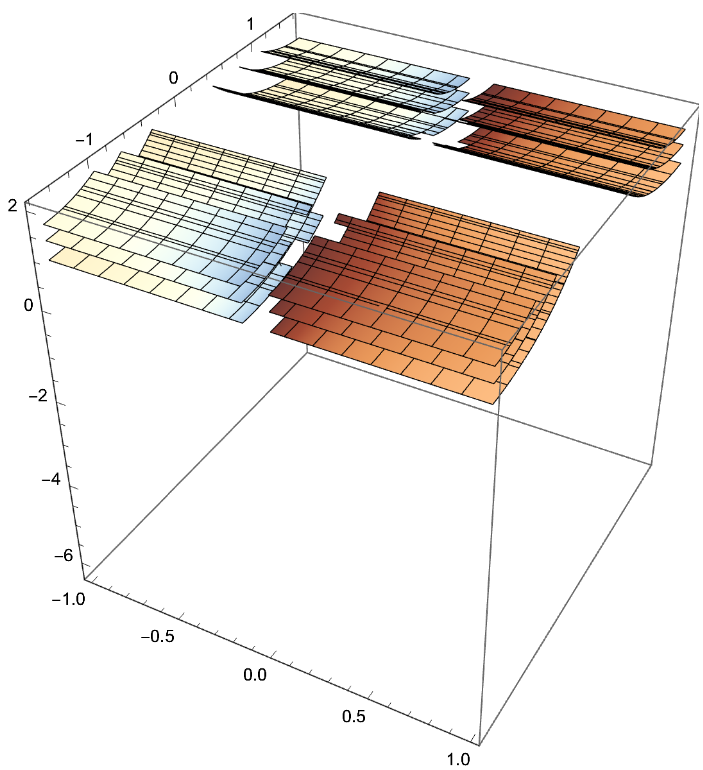
$$\frac{512\,\pi^{8}\,\theta^4\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^{7}\,\theta^5\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^{6}\,\theta^6\,\sqrt{\eta^4\,(2\pi-\theta)^2\,(4\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

{r, -1, 1}, {β, -π / 2, π / 2}, {θ, -2 π, 2}]



η := r Sin[β]

$$r := \frac{2\,\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\text{SphericalPlot3D}\left[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

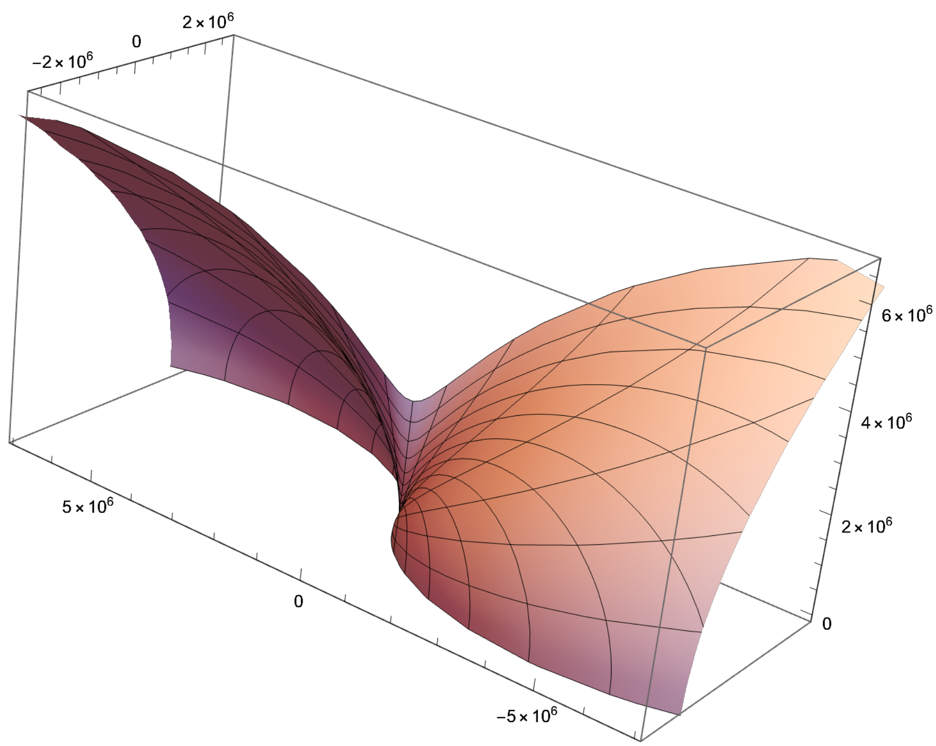
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

```
{β, -π / 2, π / 2}, {θ, -2 π, 2}]
```



SphericalPlot3D$\left[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

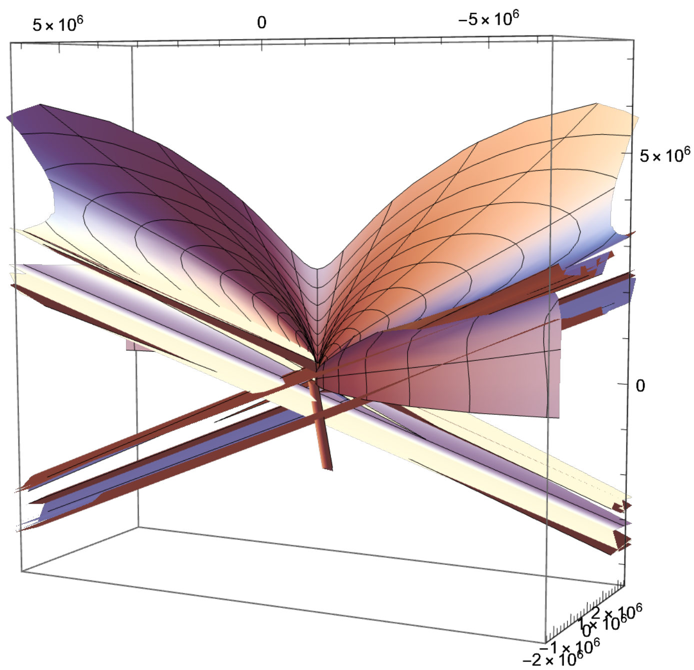
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left(128\,\pi^5\,\eta^2\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+\right.$$

$$\left.\left.r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^5\right)\right),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\}]$$



Composing 11th Dimensional Theta from A Geometric Pattern of Perception Theorems.

$$\theta^{11} == \left(\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\left(2\,\sqrt{2\,\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2+2\,\pi^2\,\sqrt{1-\mathrm{Sin}[\beta]^2}}\right)\right)$$

$$\left(2\left(2\pi-\frac{\pi^2\,\mathrm{Sin}[\beta]^2}{\pi+\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}\right)\right)\left(2\left(\pi+\frac{\sqrt{\pi^2\,\mathrm{Sin}[\beta]^2-\pi^2\,\mathrm{Sin}[\beta]^3\sqrt{\mathrm{Sin}[\beta]^2}}}{\sqrt{\mathrm{Sin}[\beta]^2}}\right)\right)\Bigg(\Bigg(\Bigg(0.5\text{`}$$

$$\left(6.916640561054567\text{`}*\text{^}33+\frac{1.5190901312653737\text{`}*\text{^}18}{\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}+\right.$$

$$2.3071429505590057\text{`}*\text{^}25\sqrt{\Bigg(8.987551787368176\text{`}*\text{^}16+}$$

$$\left.\left.\left.\frac{19.739208802178716\text{`}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}\right)\right)\right)\Big/$$

$$\left(5.504087674408674\text{`}*\text{^}32+\frac{1.2088535169650016\text{`}*\text{^}17}{\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}\right)\Bigg)\Bigg)$$

$$\left(-i\,\mathrm{ArcSinh}\left[e^{2 i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}-\mathrm{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(-i\,\mathrm{Log}\left[-e^{-i\sqrt{e^{-2i\beta}\left(1+e^{2i\beta}\right)^2}\,\pi}\right]\right)$$

$$\left(\mathrm{ArcCos}\left[\frac{1}{2}e^{-2i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}\left(1+e^{4i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}\right)\right]\right)$$

$$\left(-i\,\mathrm{Log}\left[\mathrm{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right]+i\,\mathrm{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\mathrm{ArcCos}\left[e^{2i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}-i\,\mathrm{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\mathrm{ArcCos}\left[\frac{1}{2}e^{-2i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}\left(1+e^{4i\pi\sqrt{1-\mathrm{Sin}[\beta]^2}}\right)\right]\right)==$$

$$\Bigg(-\frac{262144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{65536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)$$

$$\text{SphericalPlot3D}\Big[\Big(\Big(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big)\left(2\,\sqrt{2\,\pi^2-\pi^2\,\text{Sin}[\beta]^2+2\,\pi^2\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\Big)$$

$$\left(2\left(2\,\pi-\frac{\pi^2\,\text{Sin}[\beta]^2}{\pi+\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right)\left(2\left(\pi+\frac{\sqrt{\pi^2\,\text{Sin}[\beta]^2-\pi^2\,\text{Sin}[\beta]^3\,\sqrt{\text{Sin}[\beta]^2}}}{\sqrt{\text{Sin}[\beta]^2}}\right)\right)\Big(\Big(\Big(0.5\text{`}$$

$$\left(6.916640561054567\text{`}*\text{^}33+\frac{1.5190901312653737\text{`}*\text{^}18}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}+\right.$$

$$2.3071429505590057\text{`}*\text{^}25\,\sqrt{\left(8.987551787368176\text{`}*\text{^}16+\right.}$$

$$\left.\left.\left.\frac{19.739208802178716\text{`}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\right)\right)\Big/$$

$$\left(\left(5.504087674408674\text{`}*\text{^}32+\frac{1.2088535169650016\text{`}*\text{^}17}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\right)$$

$$\left(-i\,\text{ArcSinh}\left[e^{2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}-\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(-i\,\text{Log}\left[-e^{-i\,\sqrt{e^{-2\,i\,\beta}\,\left(1+e^{2\,i\,\beta}\right)^2}\,\pi}\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)$$

$$\left(-i\,\text{Log}\left[\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[e^{2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}-i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)-$$

$$\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

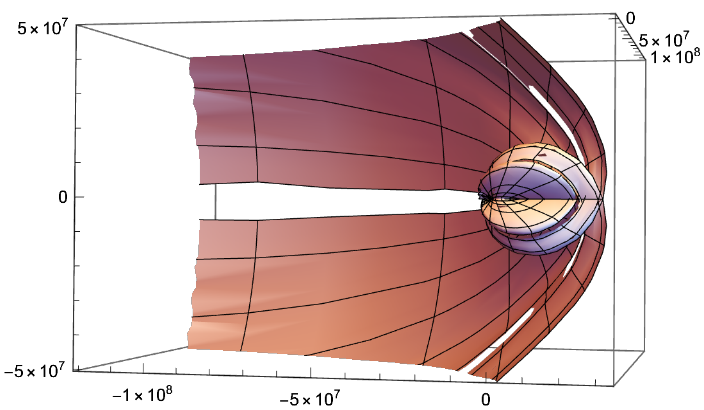
```
{θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫



D-Brane Mechanics

The D - Brane theta moves in the following manners :

```
Animate[
```

$$\texttt{ContourPlot3D}\left[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.$$

$$\frac{65536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{393216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{57344\,\pi^{9}\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{13312\,\pi^{9}\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{22528\,\pi^{8}\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{3328\,\pi^{8}\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{16384\,\pi^{7}\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{2048\,\pi^{7}\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{7232\,\pi^{6}\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{896\,\pi^{6}\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{304\,\pi^{4}\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{160\,\pi^{3}\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{56\,\pi^{2}\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

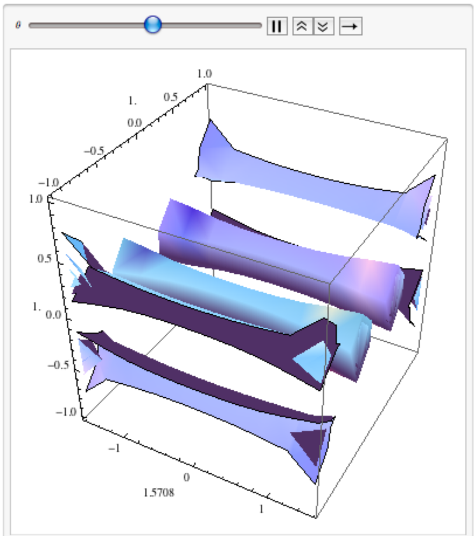
$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

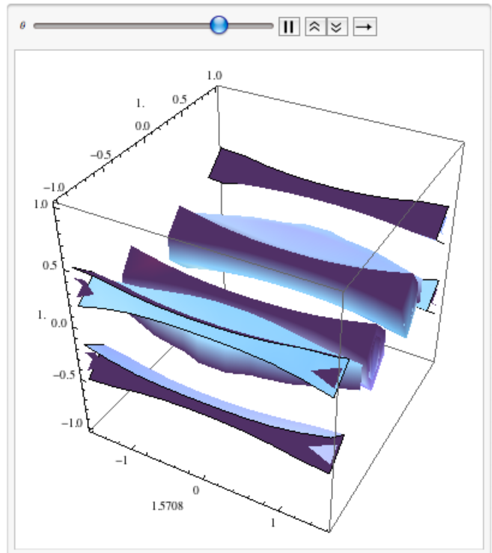
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

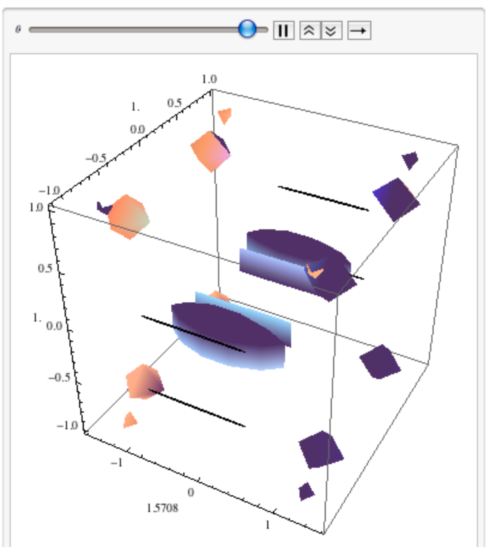
$$\left(128\,\pi^5\,\eta^2\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+\right.$$

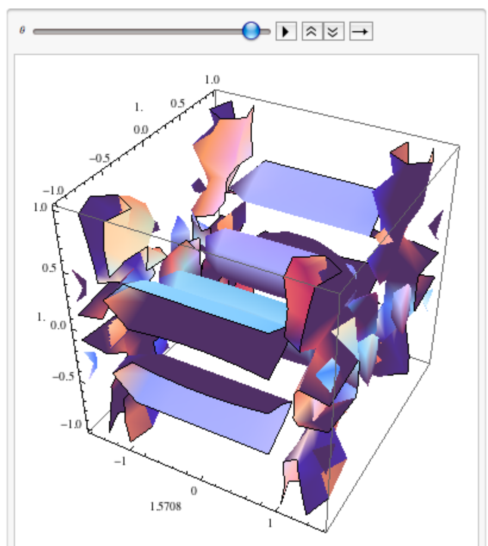
$$\left.\left.4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^5\right)\right),$$

$\{\beta, -\pi/2, \pi/2\}, \{\eta, -1, 1\}, \{r, -1, 1\}, \mathrm{AxesLabel} \to \mathrm{Automatic}], \{\theta,$
$-2\,\pi, 2\,\pi\}]$









```
Animate[
```

$$\text{ContourPlot3D}\Bigg[\Bigg(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{57344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{13312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{22528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{16384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{32768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

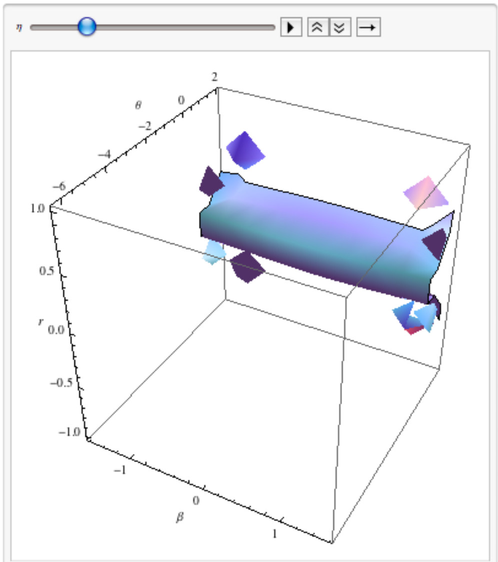
$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

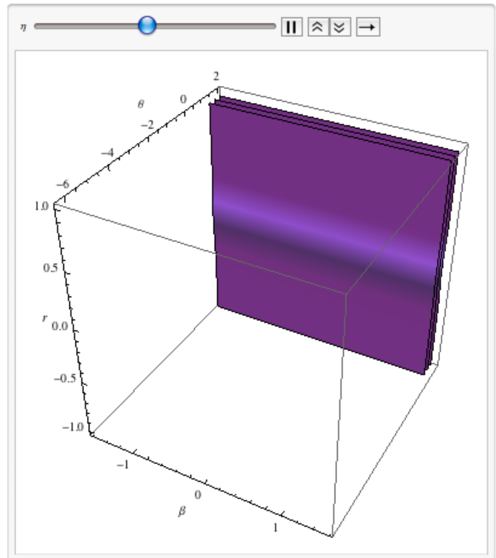
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

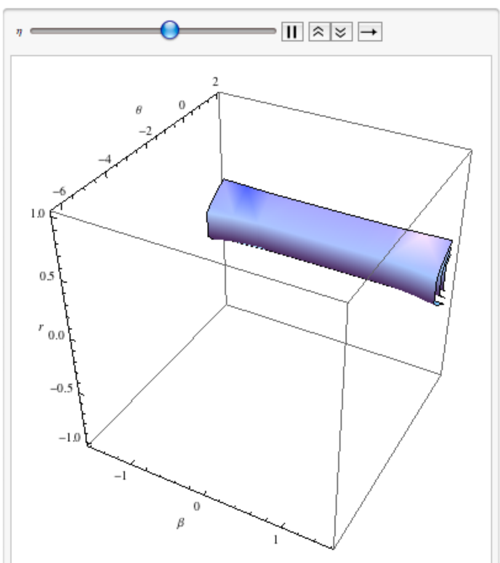
$$\left(128\,\pi^5\,\eta^2\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+\right.$$

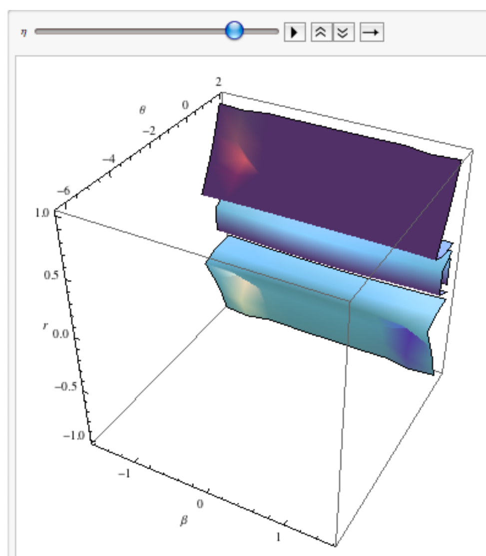
$$\left.\left.4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^5\right)\right),$$

```
{β, -π / 2, π / 2}, {θ, -2 π, 2}, {r, -1, 1}, AxesLabel → Automatic], {η,
-1, 1}]
```









Animate[

ContourPlot3D[$\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} + \right.$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} +$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5} -$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

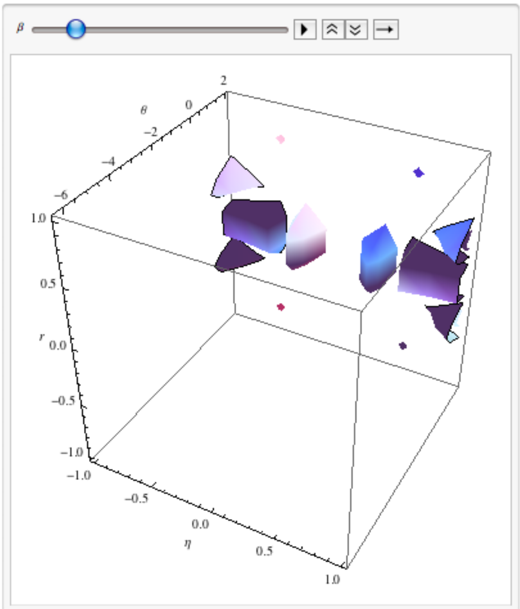
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

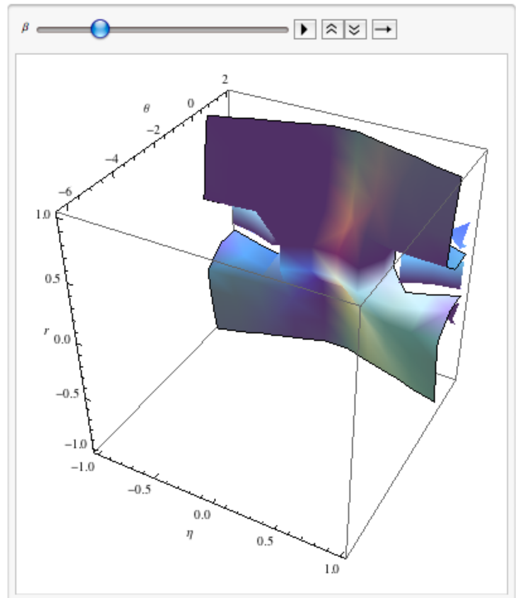
$$\left(128\,\pi^5\,\eta^2\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+\right.$$

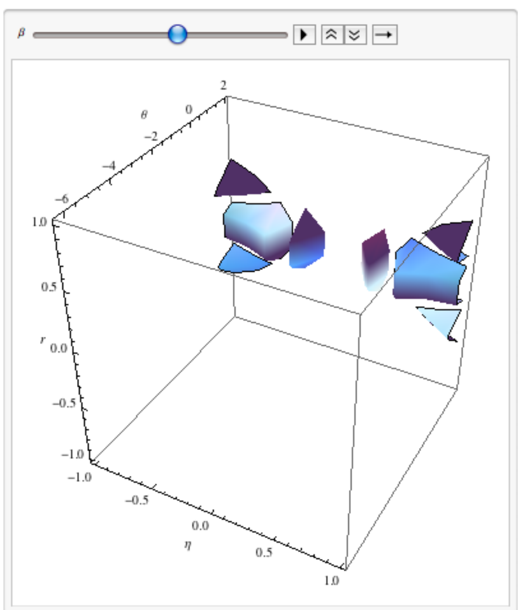
$$\left.\left.4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^5\right)\right),$$

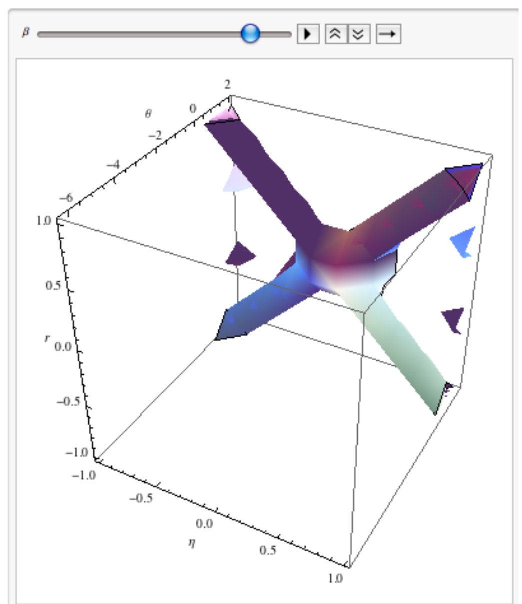
$\{\eta, -1, 1\}, \{\theta, -2\,\pi, 2\}, \{r, -1, 1\}, \mathrm{AxesLabel} \to \mathrm{Automatic}], \{\beta,$

$-\pi/2, \pi/2\}]$









Animate[

$$\text{ContourPlot3D}\Big[\Big(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

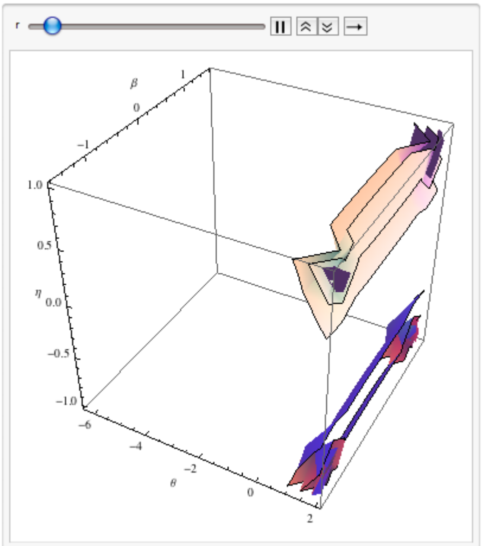
$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

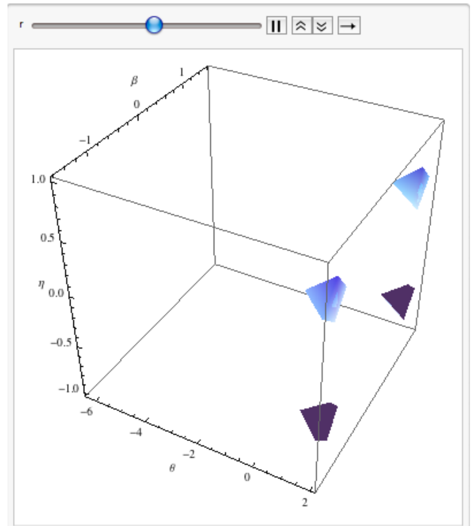
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

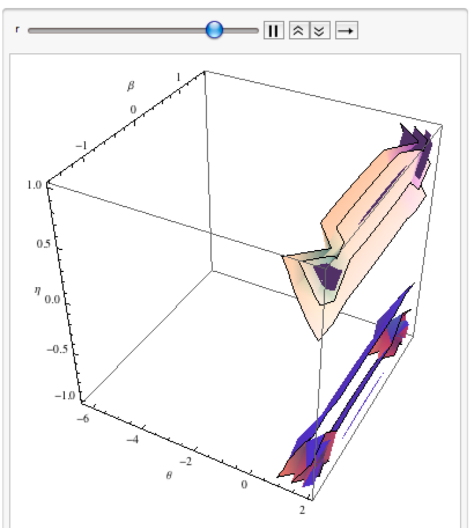
$$\left(128\,\pi^5\,\eta^2\right)\Big/\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+\right.$$

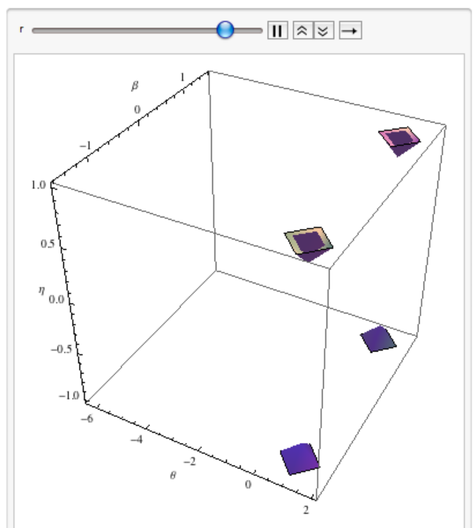
$$\left.\left.4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^5\right)\right),$$

$\{\theta, -2\,\pi, 2\}, \{\beta, -\pi/2, \pi/2\}, \{\eta, -1, 1\}, \text{AxesLabel} \rightarrow \text{Automatic}], \{r,$
$-1, 1\}]$









$$\theta^{11} = \left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2 + 64\,\pi^5\,\eta^2 + 64\,\pi^4\,r^2\,\theta - 16\,\pi^4\,\eta^2\,\theta + 4\,\pi^2\,r^2\,\theta^3 - 4\,\pi\,r^2\,\theta^4 + r^2\,\theta^5} + \right.$$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2 + 64\,\pi^5\,\eta^2 + 64\,\pi^4\,r^2\,\theta - 16\,\pi^4\,\eta^2\,\theta + 4\,\pi^2\,r^2\,\theta^3 - 4\,\pi\,r^2\,\theta^4 + r^2\,\theta^5} +$$

$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2 + 64\,\pi^5\,\eta^2 + 64\,\pi^4\,r^2\,\theta - 16\,\pi^4\,\eta^2\,\theta + 4\,\pi^2\,r^2\,\theta^3 - 4\,\pi\,r^2\,\theta^4 + r^2\,\theta^5} -$$

$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2 + 64\,\pi^5\,\eta^2 + 64\,\pi^4\,r^2\,\theta - 16\,\pi^4\,\eta^2\,\theta + 4\,\pi^2\,r^2\,\theta^3 - 4\,\pi\,r^2\,\theta^4 + r^2\,\theta^5} -$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$
$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)$$

$$\text{Manipulate}\Big[\text{Plot3D}\Big[\left(-\frac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$
$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

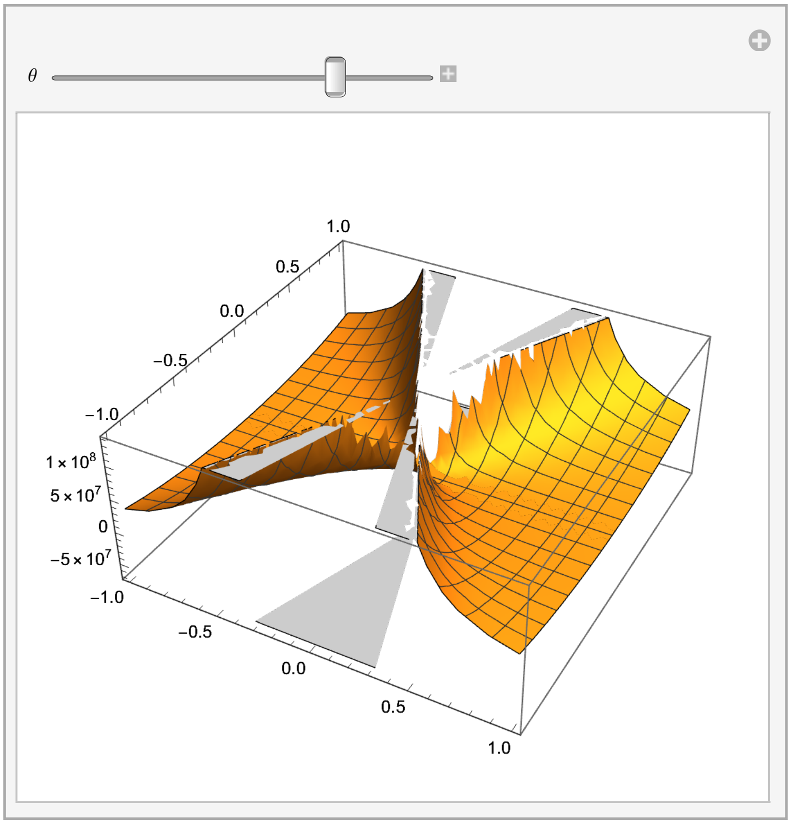
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

$$\{r,-1,1\},\{\eta,-1,1\}\Big],\{\theta,-2\,\pi,2\,\pi\}\Big]$$


θ
1.0
0.5
0.0
−0.5
−1.0
1 × 10^8
5 × 10^7
0
−5 × 10^7
−1.0
−0.5
0.0
0.5
1.0

$$\theta^{11} = \left(\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\left(2\sqrt{2\,\pi^2 - \pi^2\,\text{Sin}[\beta]^2 + 2\,\pi^2\,\sqrt{1 - \text{Sin}[\beta]^2}}\right)\right)$$

$$\left(2\left(2\,\pi - \frac{\pi^2\,\text{Sin}[\beta]^2}{\pi + \pi\,\sqrt{1 - \text{Sin}[\beta]^2}}\right)\right)\left(2\left(\pi + \frac{\sqrt{\pi^2\,\text{Sin}[\beta]^2 - \pi^2\,\text{Sin}[\beta]^3\,\sqrt{\text{Sin}[\beta]^2}}}{\sqrt{\text{Sin}[\beta]^2}}\right)\right)\left(\left(\left(0.5\grave{}\right.\right.\right.$$

$$\left(6.916640561054567\grave{}*\hat{}33 + \frac{1.5190901312653737\grave{}*\hat{}18}{\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)} +\right.$$

$$2.3071429505590057\grave{}*\hat{}25\,\sqrt{\left(8.987551787368176\grave{}*\hat{}16 + \right.}$$

$$\left.\left.\left.\frac{19.739208802178716\grave{}}{\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\right)\right)\Big/$$

$$\left.\left.\left(5.504087674408674\grave{}*\hat{}32 + \frac{1.2088535169650016\grave{}*\hat{}17}{\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\right)\right)$$

$$\left(-\mathbb{i}\,\text{ArcSinh}\left[\mathbb{e}^{2\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}} - \text{Cos}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

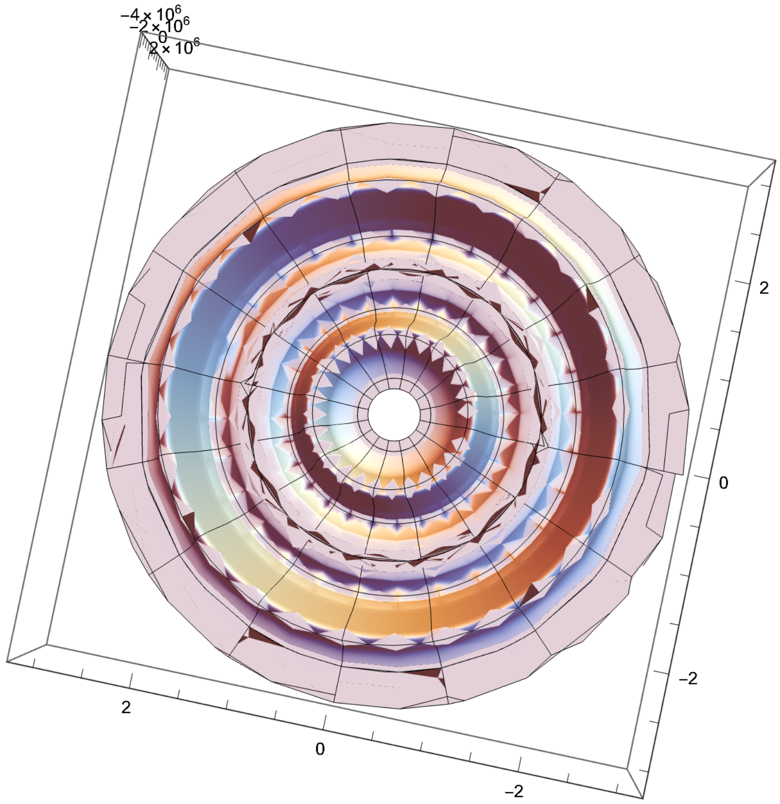
$$\left(-\mathbb{i}\,\text{Log}\left[-\mathbb{e}^{-\mathbb{i}\,\sqrt{\mathbb{e}^{-2\,\mathbb{i}\,\beta}\left(1+\mathbb{e}^{2\,\mathbb{i}\,\beta}\right)^2}\,\pi}\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,\mathbb{e}^{-2\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1 + \mathbb{e}^{4\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)$$

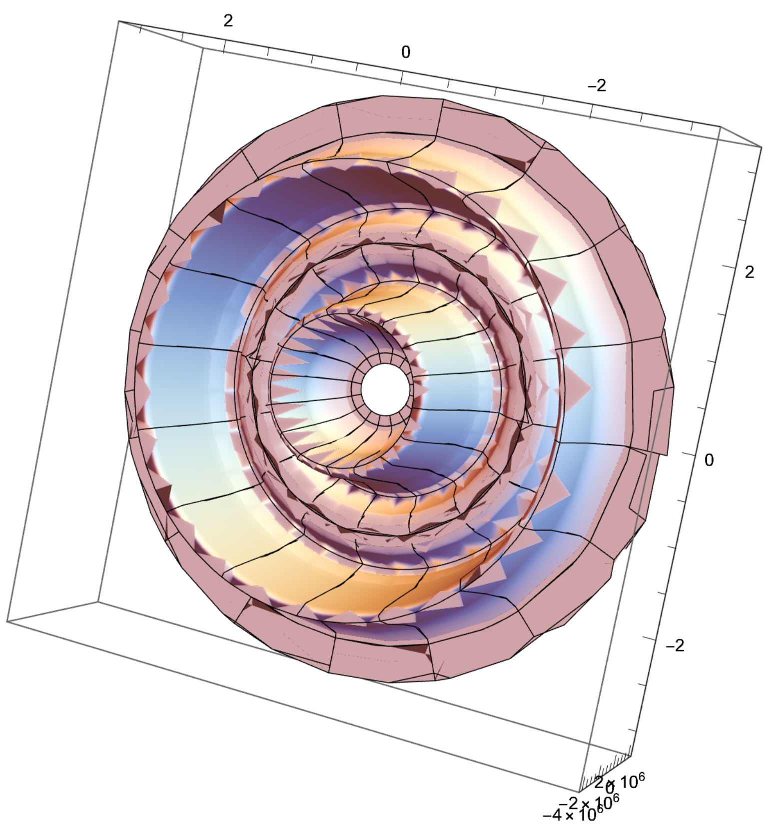
$$\left(-\mathbb{i}\,\text{Log}\left[\text{Cos}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right] + \mathbb{i}\,\text{Sin}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[\mathbb{e}^{2\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}} - \mathbb{i}\,\text{Sin}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,\mathbb{e}^{-2\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1 + \mathbb{e}^{4\,\mathbb{i}\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)$$

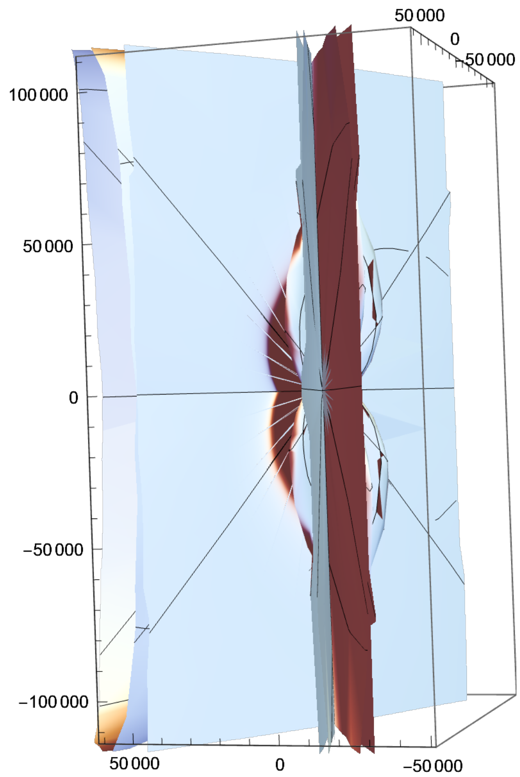


−4×10^6
−2×10^6
0
2×10^6
2
0
−2
2
0
−2



2
0
−2
2
0
−2
2×10^6
0
−2×10^6
−4×10^6

$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\theta\,(\theta)\,(\theta)\,\left(2\left(\pi+\frac{\sqrt{\pi^2\,\texttt{Sin}[\beta]^2-\pi^2\,\texttt{Sin}[\beta]^3\,\sqrt{\texttt{Sin}[\beta]^2}}}{\sqrt{\texttt{Sin}[\beta]^2}}\right)\right)\Bigg(\Bigg(\texttt{0.5`}\\
&\quad\left(\texttt{6.916640561054567`*^33}+\frac{\texttt{1.5190901312653737`*^18}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)}+\right.\\
&\qquad\texttt{2.3071429505590057`*^25}\sqrt{\left(\texttt{8.987551787368176`*^16}+\right.}\\
&\qquad\quad\left.\left.\left.\frac{\texttt{19.739208802178716`}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)}\right)\right)\right)\Big/\\
&\quad\left(\texttt{5.504087674408674`*^32}+\frac{\texttt{1.2088535169650016`*^17}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)}\right)\Bigg)\Bigg)\\
&\quad\left(-i\,\texttt{ArcSinh}\left[e^{2\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}-\texttt{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]\right]\right)\\
&\quad\left(-i\,\texttt{Log}\left[-e^{-i\,\sqrt{e^{-2\,i\,\beta}\left(1+e^{2\,i\,\beta}\right)^2}\,\pi}\right]\right)\\
&\quad\left(\texttt{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}\right)\right]\right)\\
&\quad\left(-i\,\texttt{Log}\left[\texttt{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]+i\,\texttt{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]\right]\right)\\
&\quad\left(\texttt{ArcCos}\left[e^{2\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}-i\,\texttt{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]\right]\right)\\
&\quad\left(\texttt{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\texttt{Sin}[\beta]^2}}\right)\right]\right),\\
&\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]
\end{aligned}
$$

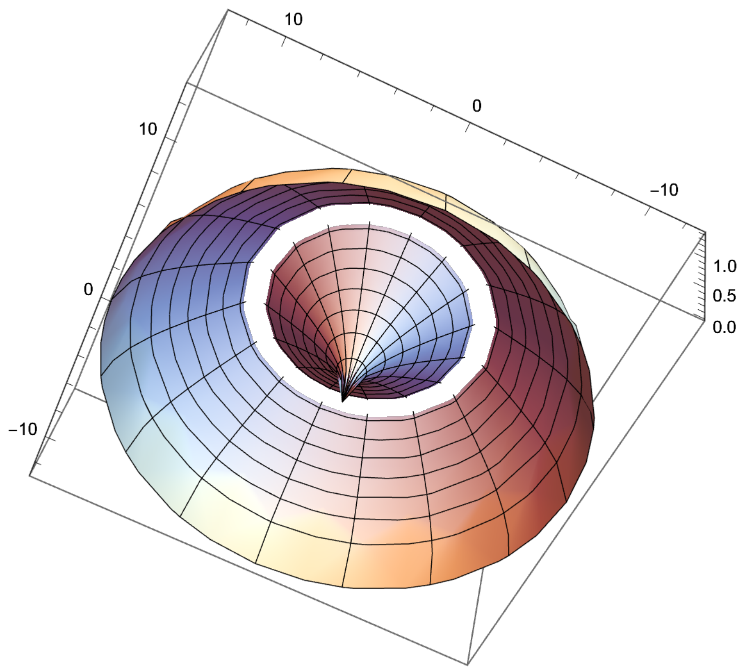


Fire Diamond

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]\right\}\right\}$$

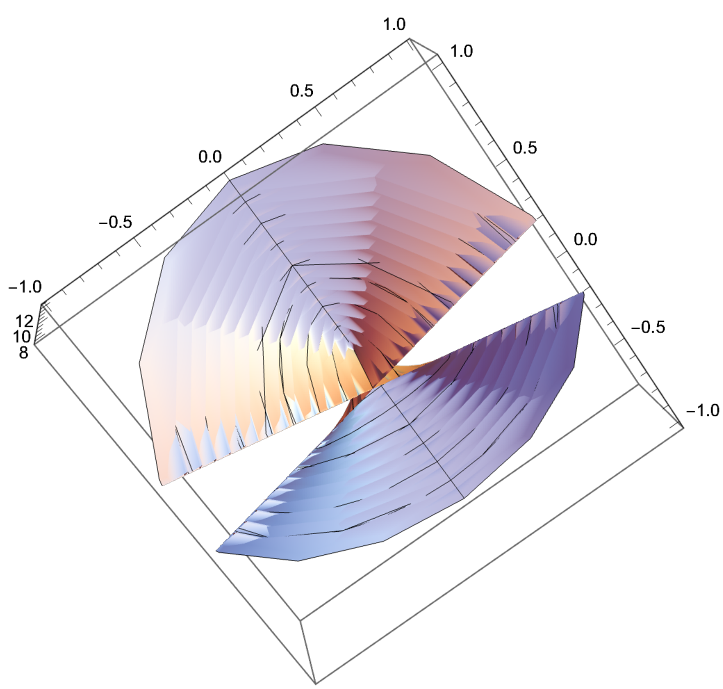
```
RevolutionPlot3D[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)], {θ, -4 π, 4 π}]
```

$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$

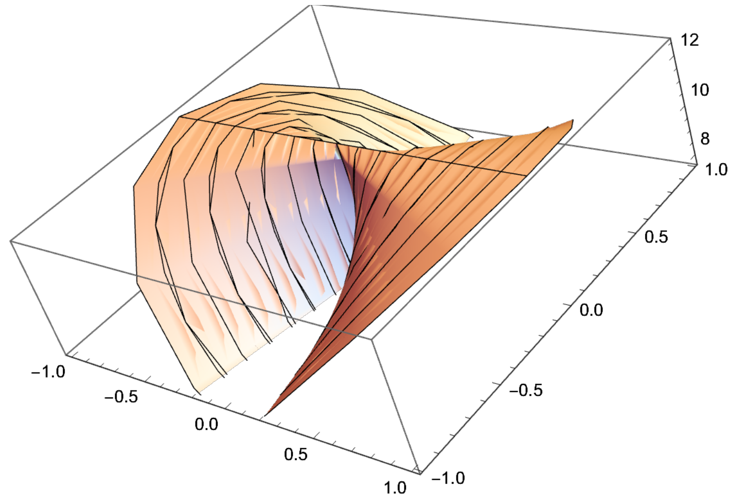


$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\} \tag{3}$$

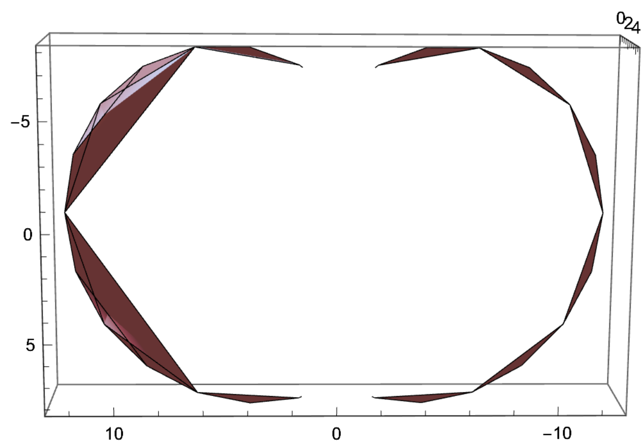
$$\text{RevolutionPlot3D}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right),\ \{r,\ -1,\ 1\},\ \{\beta,\ -4\,\pi,\ 4\,\pi\}\right]$$



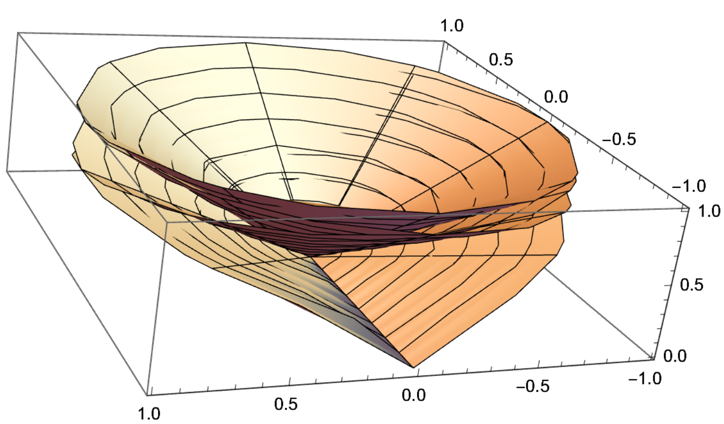
$$\texttt{RevolutionPlot3D}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right),\ \{r,-1,1\},\ \{\beta,-4\pi,4\pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\left\{2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right),\ 2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right\},\ \{r,-1,1\},\ \{\beta,-4\pi,4\pi\}\right]$$

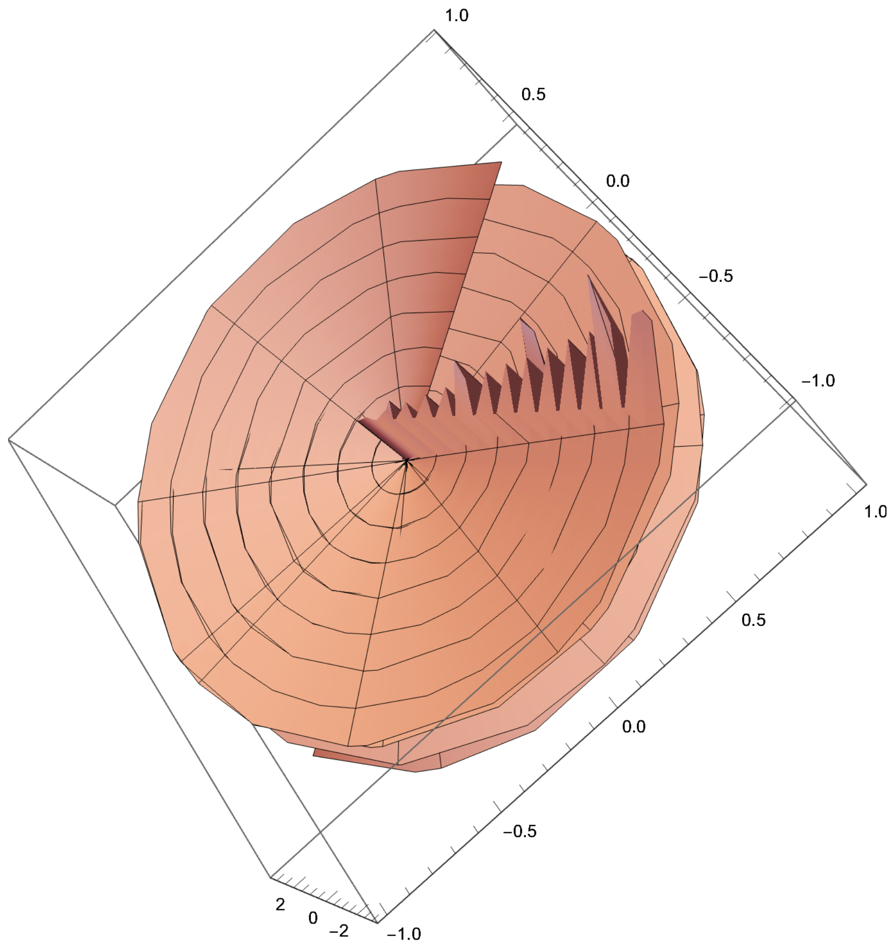


$$\eta\to\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$



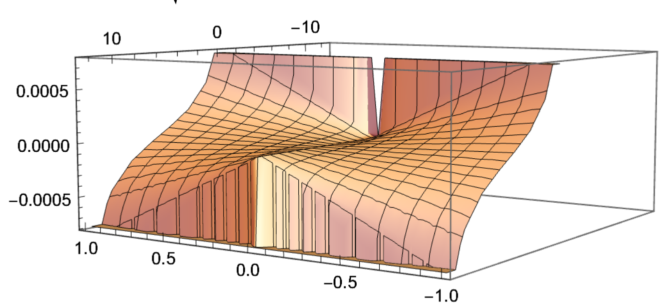
$$r = \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}$$

```
RevolutionPlot3D[2 π η/Sqrt[4 π θ - θ^2], {η, -1, 1}, {θ, -4 π, 4 π}]
```



$$\text{Velocity when r is constant} = \frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

```
Plot3D[(4 π r^2 - 2 r^2 θ)/(4320 Sqrt[4 π r^2 θ - r^2 θ^2]), {r, -1, 1}, {θ, -4 π, 4 π}]
```



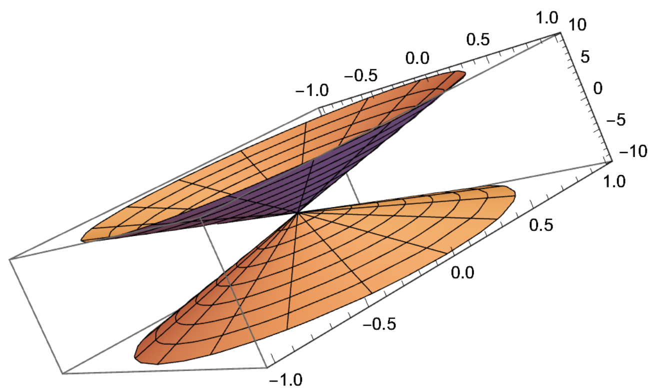
$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==r\,(1/((1080/\pi)\,\theta)),\,\theta\right]$$

$$\left\{\left\{\theta\to\frac{2}{3}\left(2\,\pi-\frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}}+\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right)\right\},\right.$$

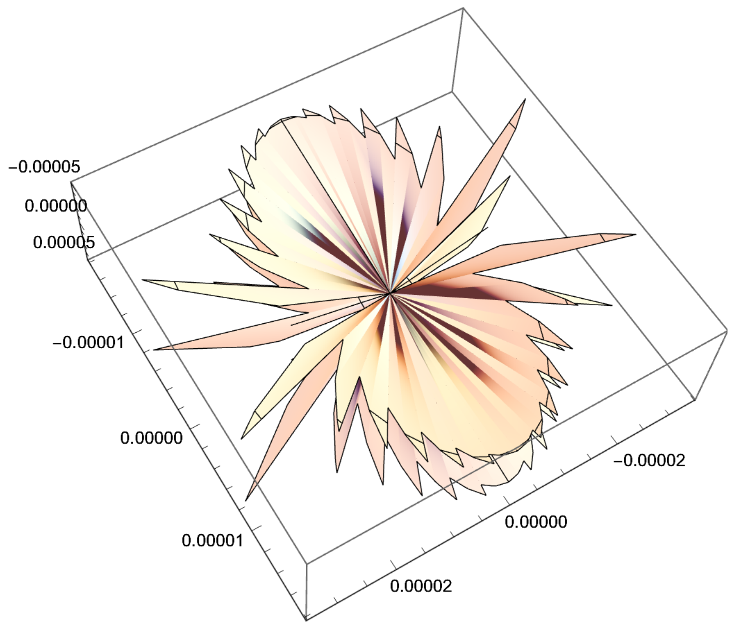
$$\left\{\theta\to\frac{4\,\pi}{3}+\frac{2\,\left(1+\mathrm{i}\,\sqrt{3}\right)\,\pi}{3\,\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\,\left(1-\mathrm{i}\,\sqrt{3}\right)\,\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right\},$$

$$\left.\left\{\theta\to\frac{4\,\pi}{3}+\frac{2\,\left(1-\mathrm{i}\,\sqrt{3}\right)\,\pi}{3\,\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\,\left(1+\mathrm{i}\,\sqrt{3}\right)\,\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right\}\right\}$$

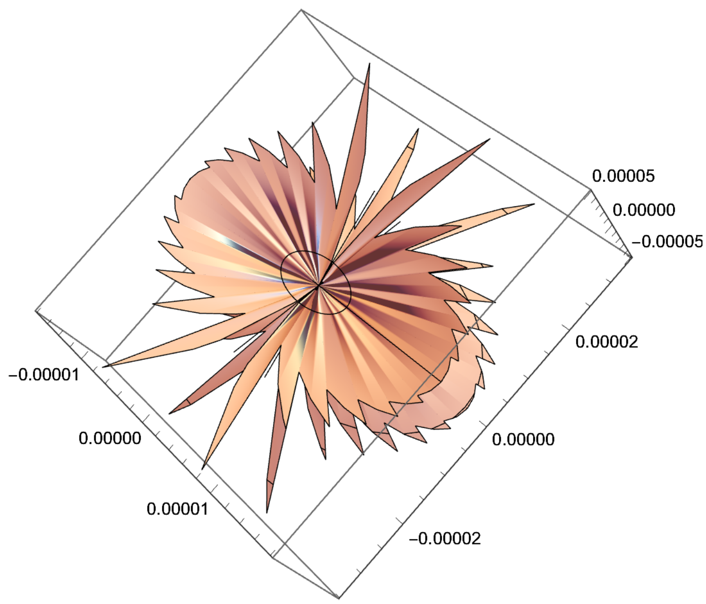
$$\text{RevolutionPlot3D}\left[r\,\frac{2}{3}\left(2\,\pi-\frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}}+\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right),\,\{r,\,-1,\,1\}\right]$$



$$\texttt{RevolutionPlot3D}\left[r\left(\frac{4\pi}{3}+\frac{2\left(1+\mathbb{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathbb{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right),\ \{r,-1,1\}\right]$$

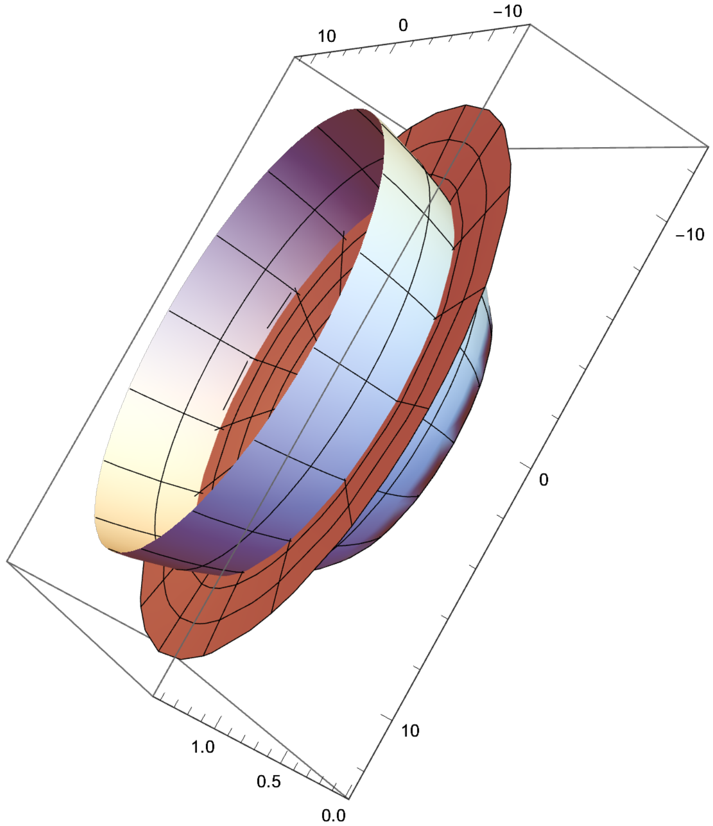


$$\texttt{RevolutionPlot3D}\left[r\left(\frac{4\,\pi}{3}+\frac{2\left(1-\mathrm{i}\,\sqrt{3}\right)\pi}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathrm{i}\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right),\ \{r,\,-1,\,1\}\right]$$

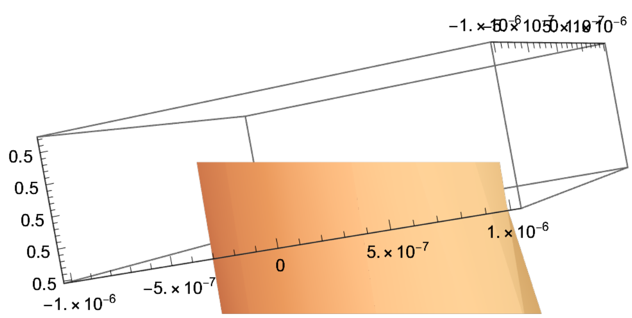


$$\left\{\left\{r\to-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\Theta)^2}-\frac{4\,\pi}{4\,\pi-\Theta}}\right\},\ \left\{r\to\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\Theta)^2}-\frac{4\,\pi}{4\,\pi-\Theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$

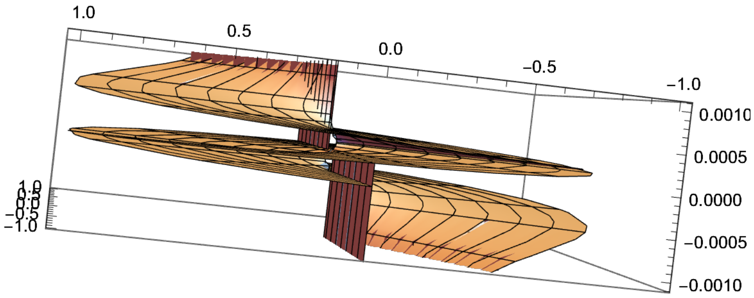


$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -.000001,\ .0000001\}\right]$$

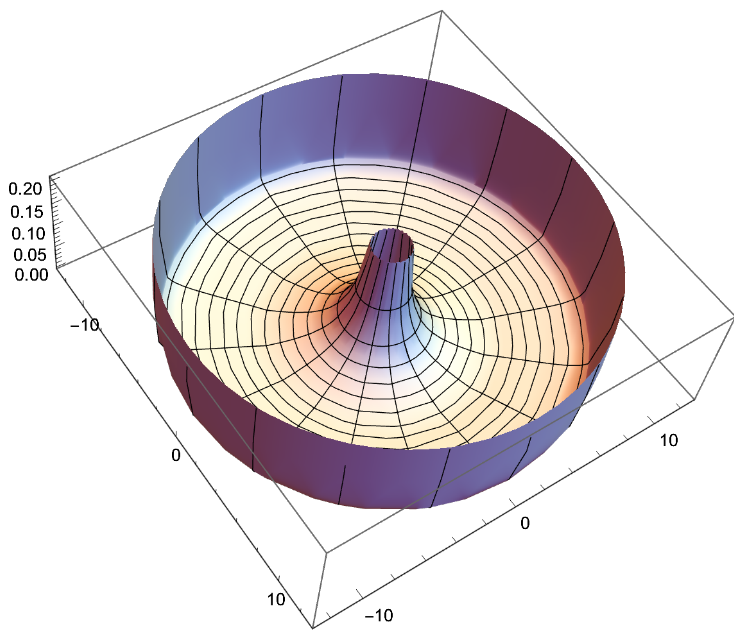


$$\text{velocity with changing wavelength} = \frac{\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}{1080}$$

$$\text{RevolutionPlot3D}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)\,(8\pi r\theta-2r\theta^2)}{8\pi\,(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080},\ \{r,-1,1\},\ \{\theta,-3\pi,3\pi\}\right]$$



$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-13,13\}\right]$$

$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)\,(8\pi r\theta-2r\theta^2)}{8\pi\,(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==r\,(1/(1080/\pi)\,\theta),\ \theta\right]$$

```
RevolutionPlot3D[
```

$$\Bigg\{\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Bigg\},$$

$$\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

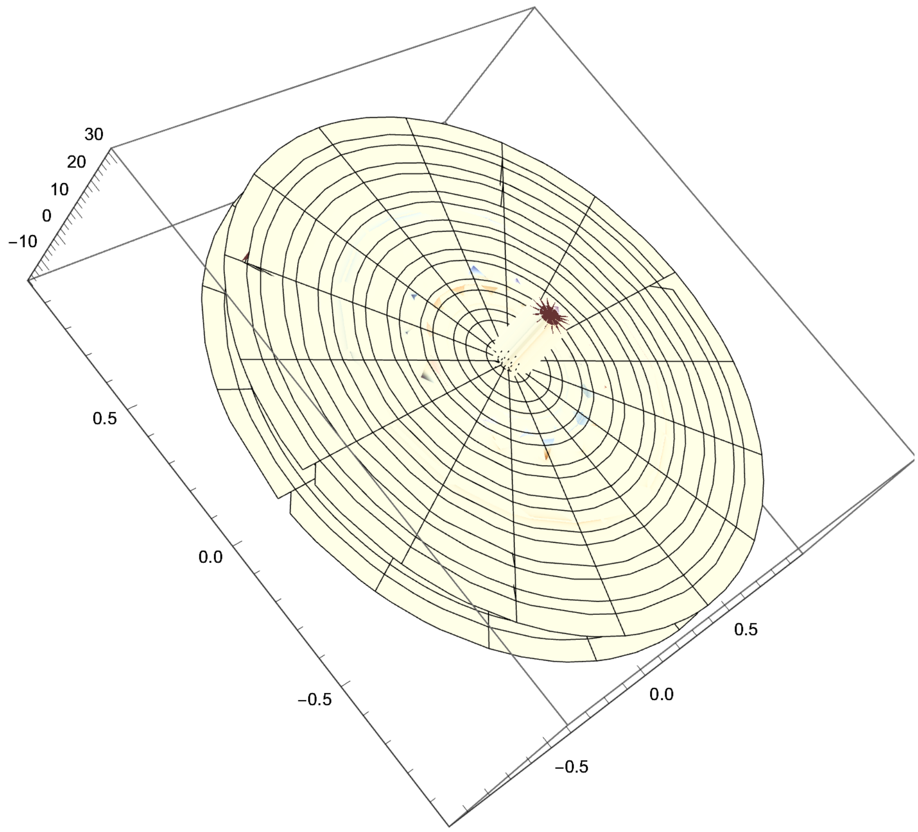
$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Bigg\},$$

$$\left\{\pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} - \frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} + \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\right\},$$

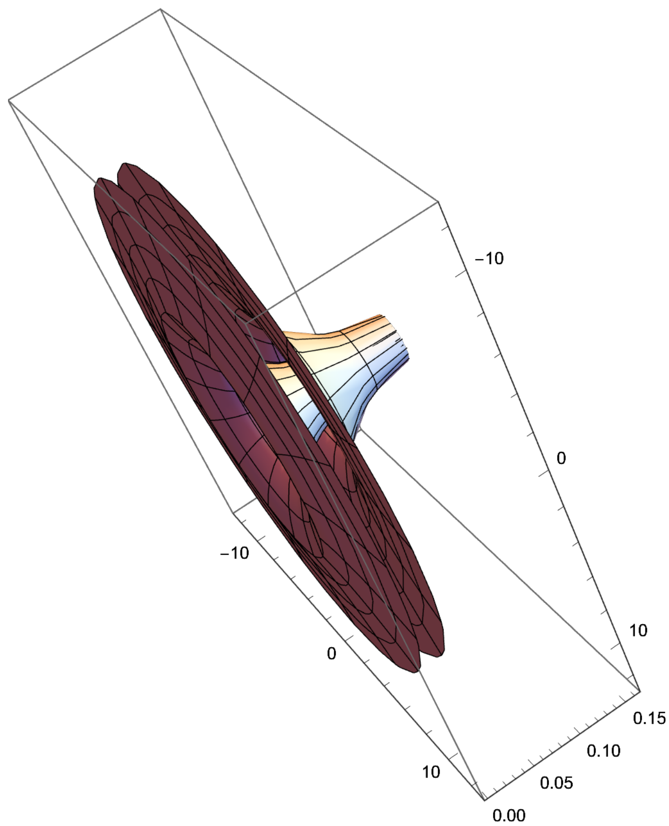
$$\left\{\pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} + \frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} + \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 - 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\right\}\right\},$$

$$\{r, -1, 1\}]$$



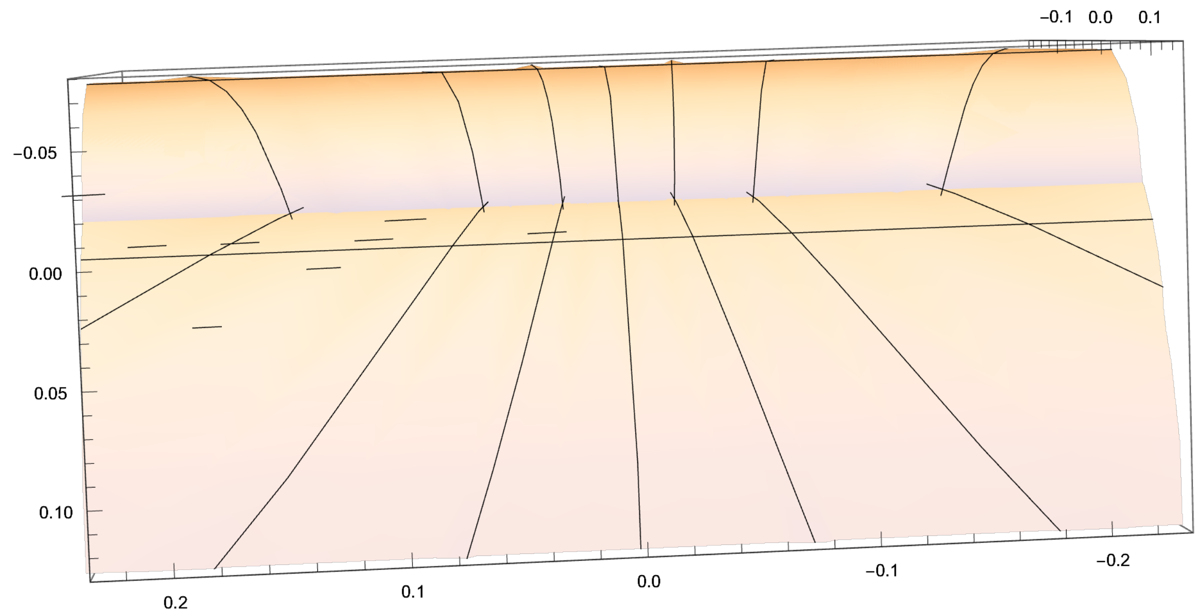
$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\,\pi-\Theta}+\frac{4\,\pi}{\Theta^2}-\frac{3}{\Theta}}\ \sqrt{4\,\pi\,\Theta-\Theta^2}}{8\,\pi^2\ \sqrt{\Theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}},\ \{\theta,\ -4\pi,\ 4\pi\}\right]$$



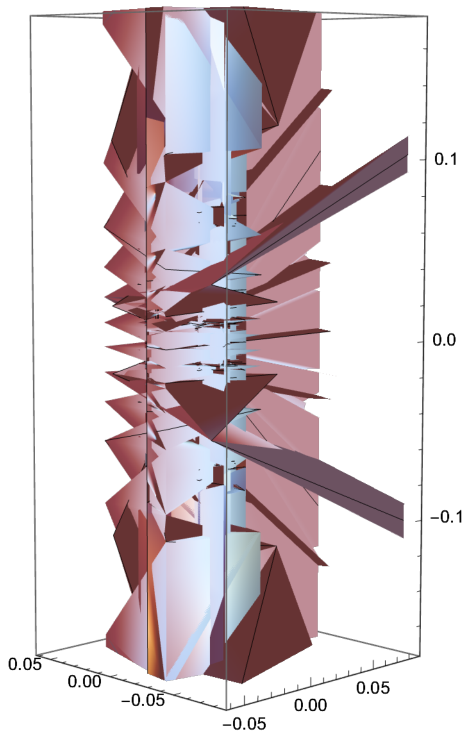
$$\left\{\left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\ \sqrt{\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}}, \{\beta, -\pi, \pi\}, \{\theta, -4\pi, 4\pi\}\right]$$

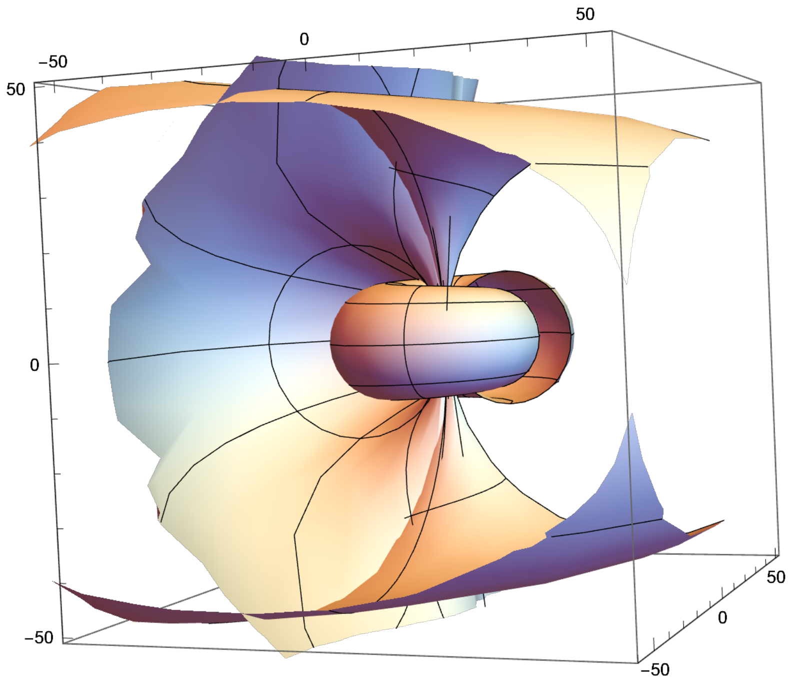


$8\pi^2\sqrt{\theta}$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}}, \{\beta, -\pi, \pi\}, \{\theta, -40\pi, 40\pi\}\right]$$

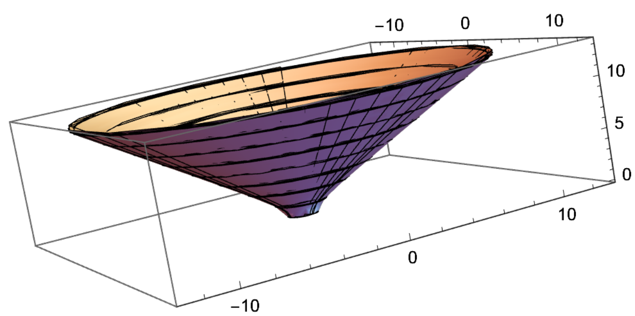


$$\texttt{SphericalPlot3D}\left[\frac{8\,\pi^2\,\sqrt{\theta}}{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\texttt{Csc}[\beta]},\ \{\beta,-\pi,\pi\},\ \{\theta,-4\,\pi,4\,\pi\}\right]$$

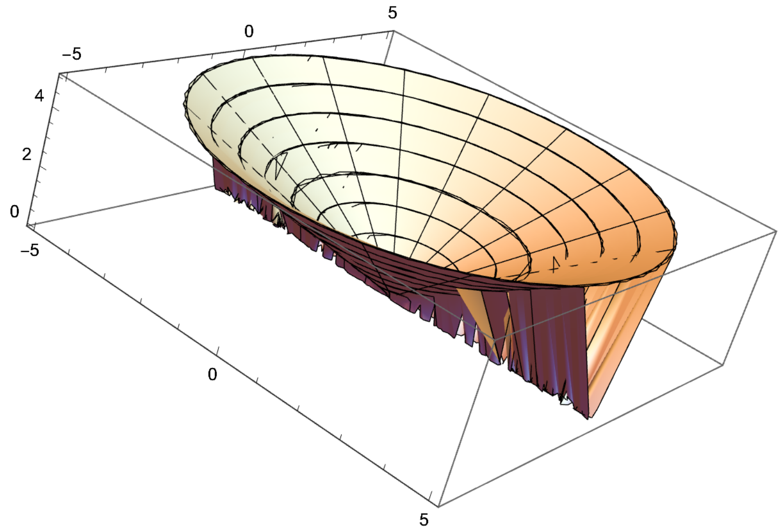


$$r_1 = \sqrt{r^2-\eta^2}$$

$$\texttt{RevolutionPlot3D}\left[\sqrt{(r)^2-\left(\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right)^2},\ \{r,-13,13\},\ \{\theta,-13,13\}\right]$$

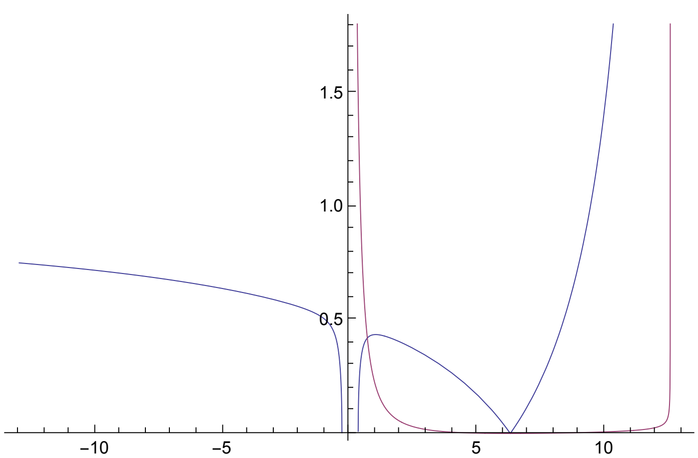


$$\text{RevolutionPlot3D}\left[\sqrt{(r)^2 - \left(\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\pi\theta - \theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}, \{r, -5, 5\}, \{\theta, -3\pi, 3\pi\}\right]$$

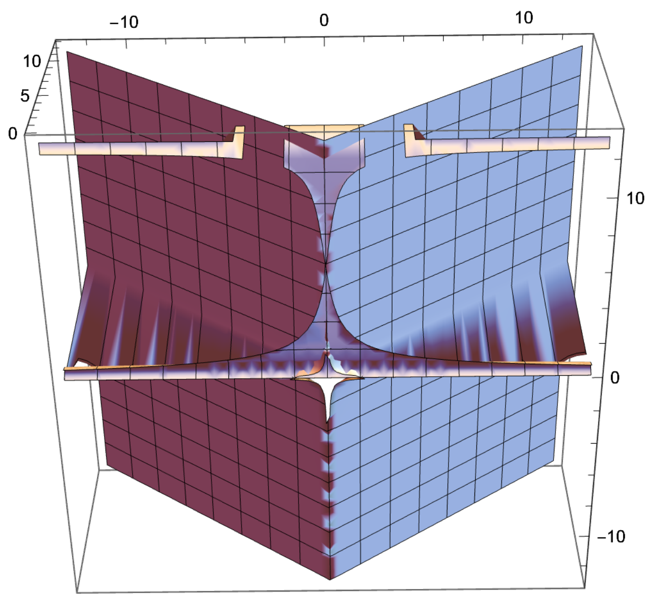


$$\text{Plot}\left[\left\{\sqrt{\sqrt{1 + \frac{4\pi^2}{(4\pi-\theta)^2} - \frac{4\pi}{4\pi-\theta}}^{\,2} - \left(\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\pi\theta - \theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2 - \left(\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\pi\theta - \theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right\}, \{\theta, -13, 13\}\right]$$



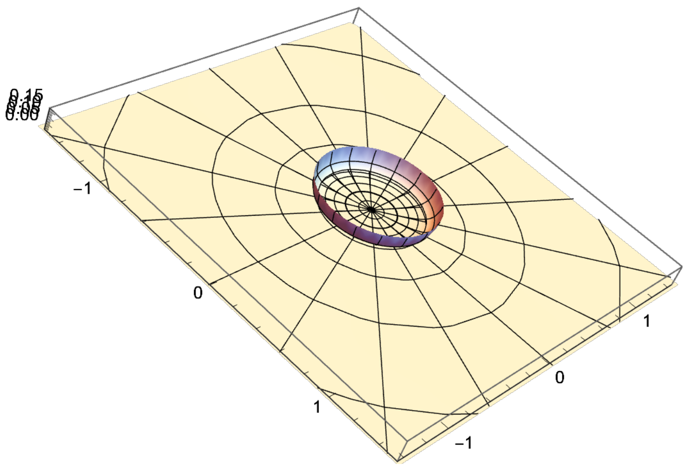
$$\text{Plot3D}\left[\left\{\sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{r\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right\},\right.$$
$$\left.\{\theta,-13,13\},\{r,-13,13\}\right]$$



$$\text{Plot3D}\left[\left\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{r\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\right.\right.$$
$$\left.\left.\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right\},\{\theta,-13,13\},\{r,-1,1\}\right]$$

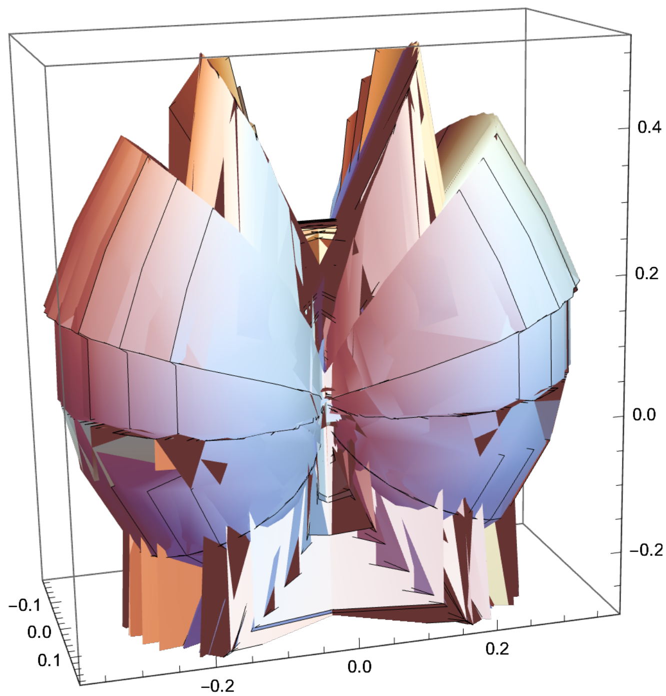
$$\text{RevolutionPlot3D}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2}\right\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



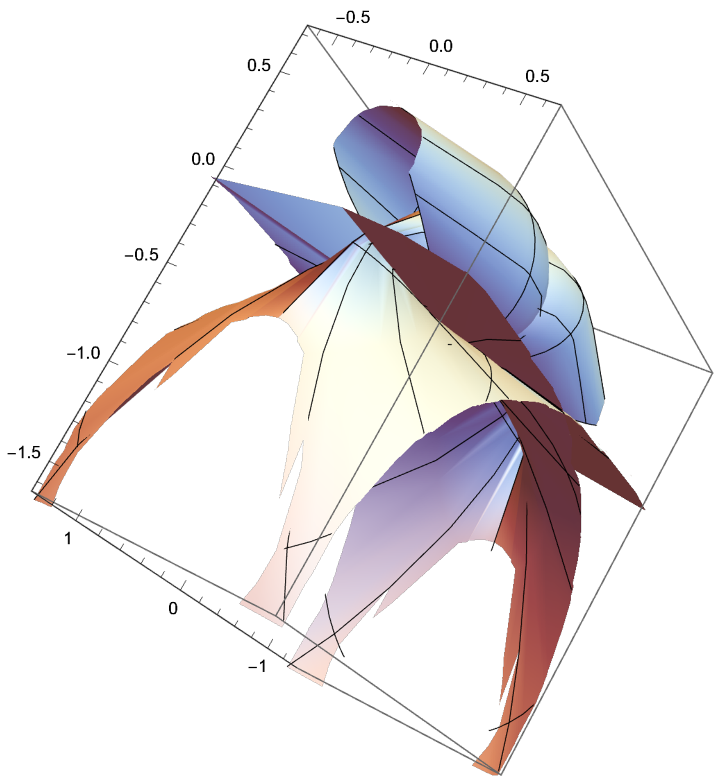
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,\,-360,\,360\},\,\{\beta,\,-360,\,360\}\right]$$



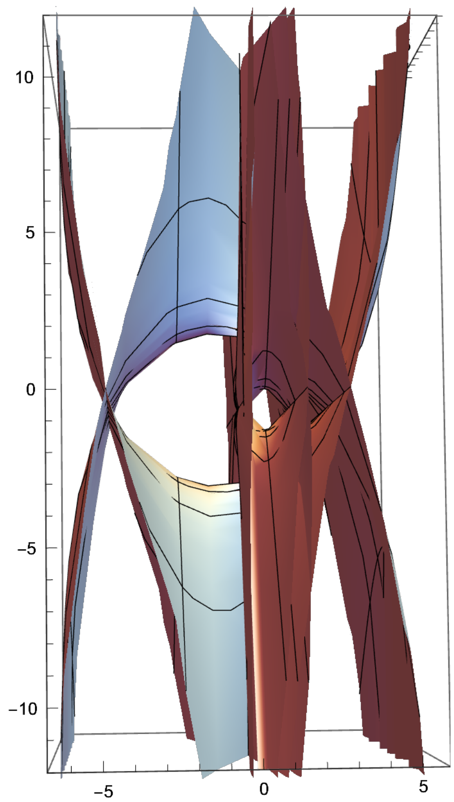
$$r\to\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\,\{\theta,\,-4\,\pi,\,4\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$



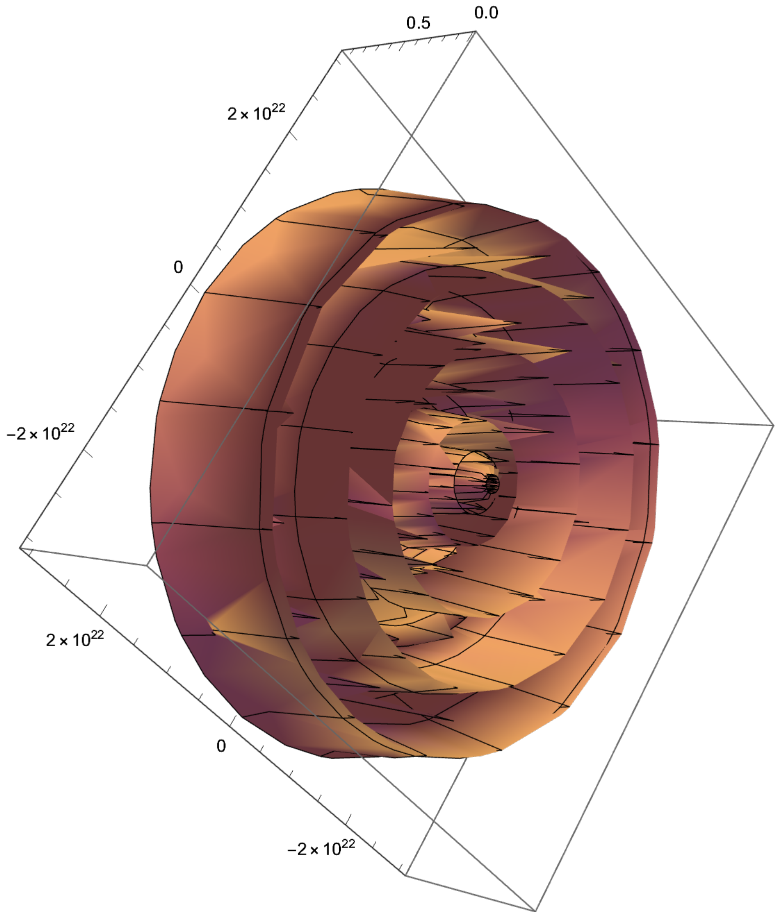
$$\sqrt{4\,\pi\,\theta-\theta^2}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\,\theta-\theta^2}}{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}\,\text{Sin}[\beta]}},\,\{\theta,\,-4\,\pi,\,4\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$

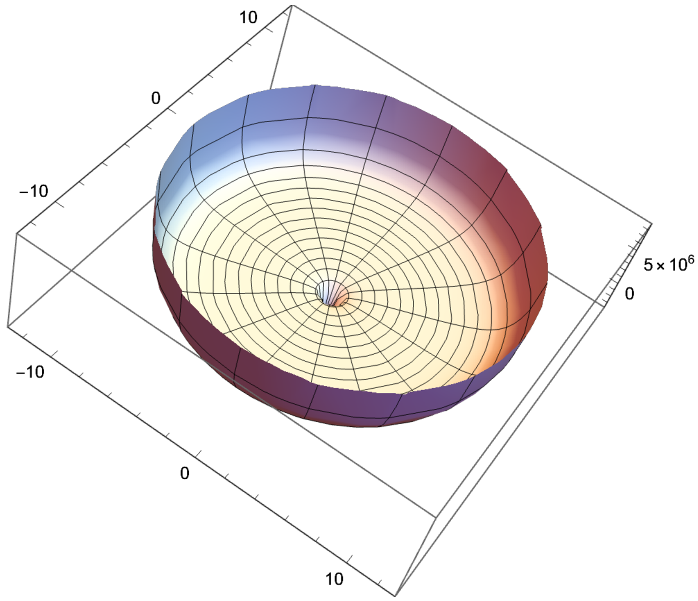


$$\texttt{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\texttt{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\texttt{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

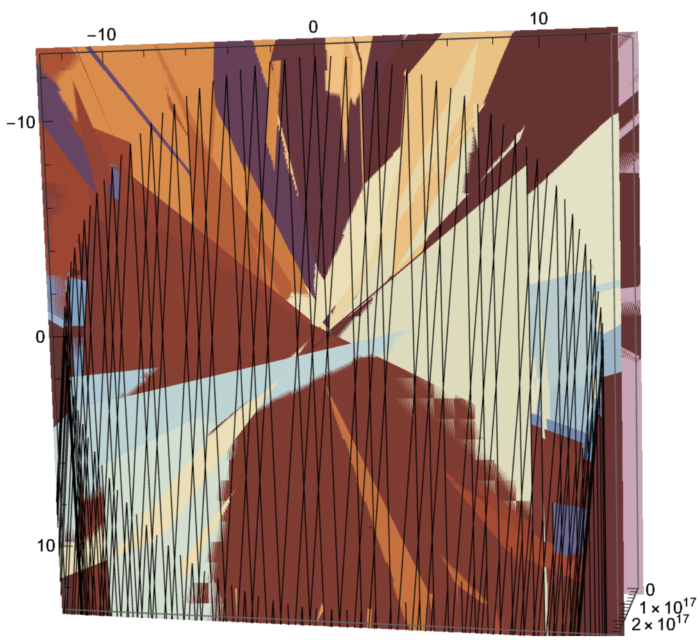
$$\left.\{\theta,\,-30\,000\,000\,000\,000\,000\,000\,000,\,3\,000\,000\,000\,000\,000\,000\,000\}\right]$$



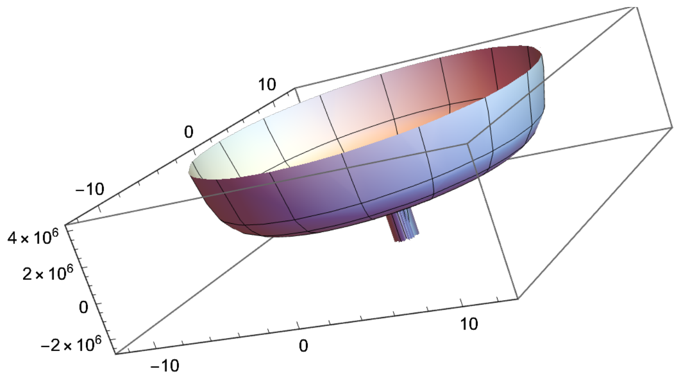
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



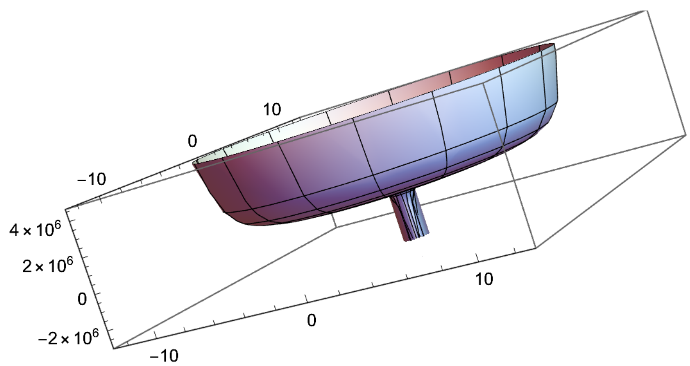
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -12.8,\ 12.8\}\right]$$



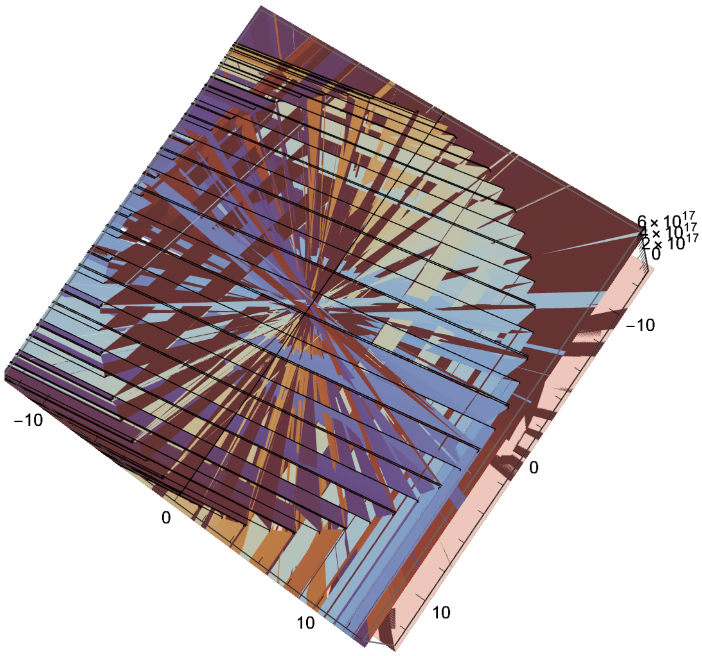
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -12.9,\ 12.9\}\right]$$



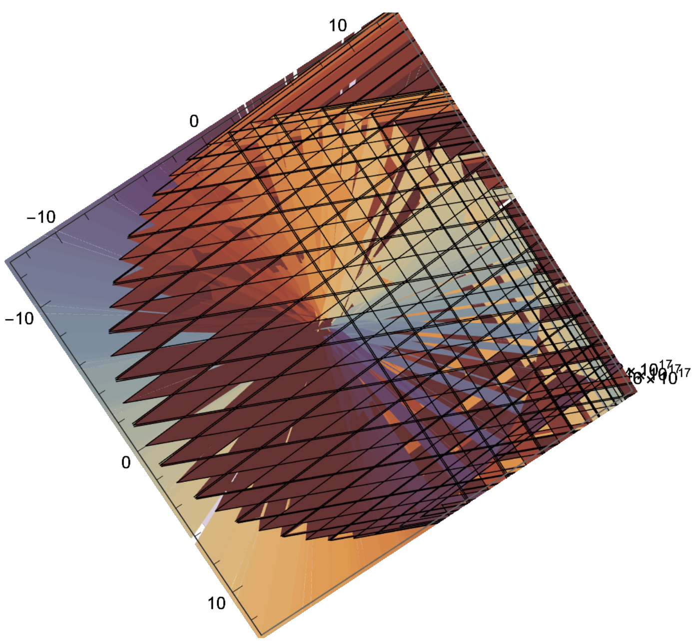
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -12.99,\ 12.99\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\right.$$
$$\left.\{\theta, -12.999999999, 12.999999999\}\right]$$



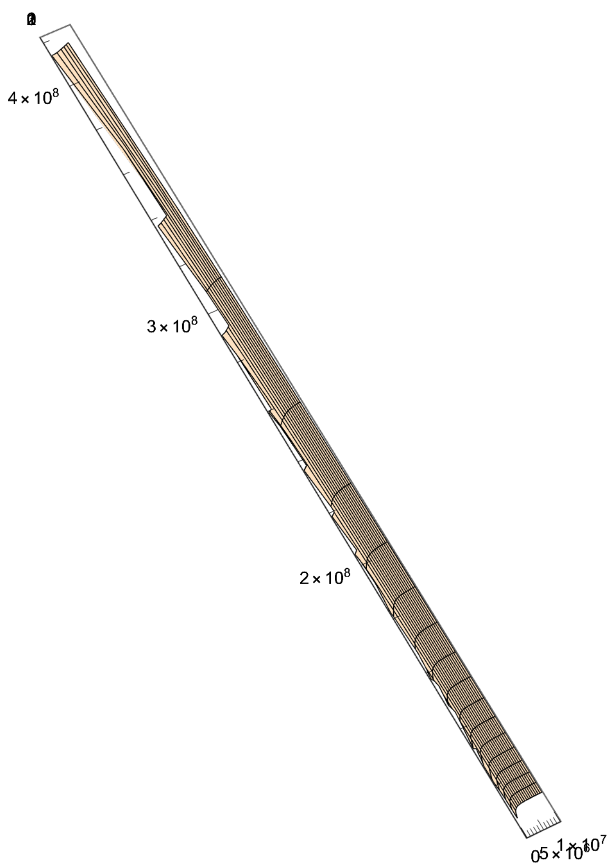
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400}, \{\theta, -13, 13\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\left\{\sqrt{(\mathrm{r})^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}\right)^2},\right.\right.$$

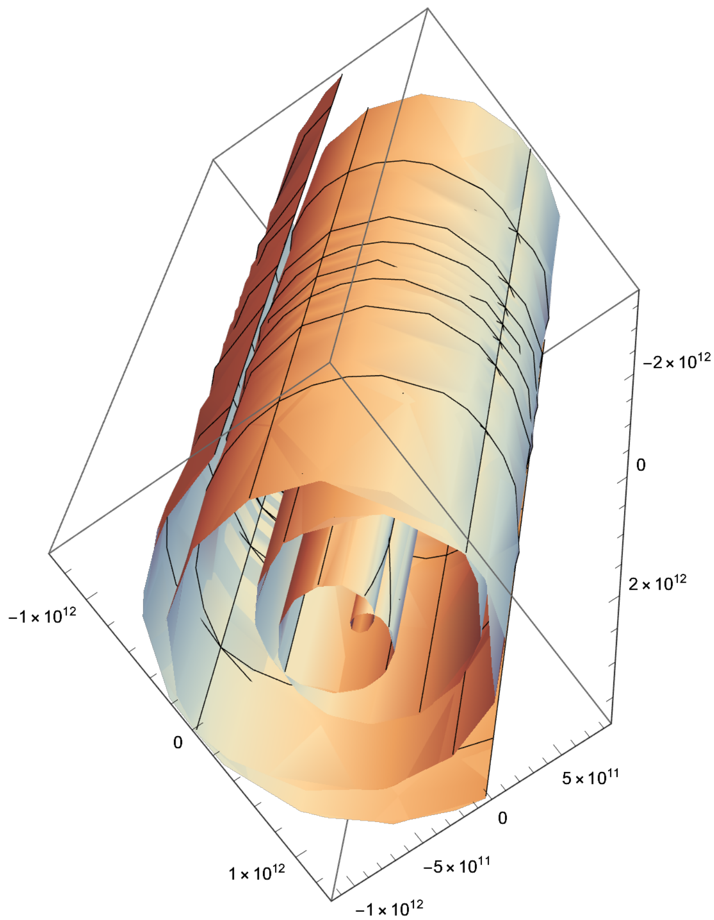
$$\left.\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-(\theta)}\ (r\,\theta)^{3/2}}+\frac{1080\,c}{(4\pi-(\theta))^{3/2}\ \sqrt{(\theta)}}+\frac{1620\,c\ \sqrt{(\theta)}}{(4\pi-(\theta))^{5/2}}\right)}{1\,166\,400}\right\},$$

$$\left.\{r,-10\,000\,000,10\,000\,000\},\{\theta,-.0000003,.0000003\}\right]$$

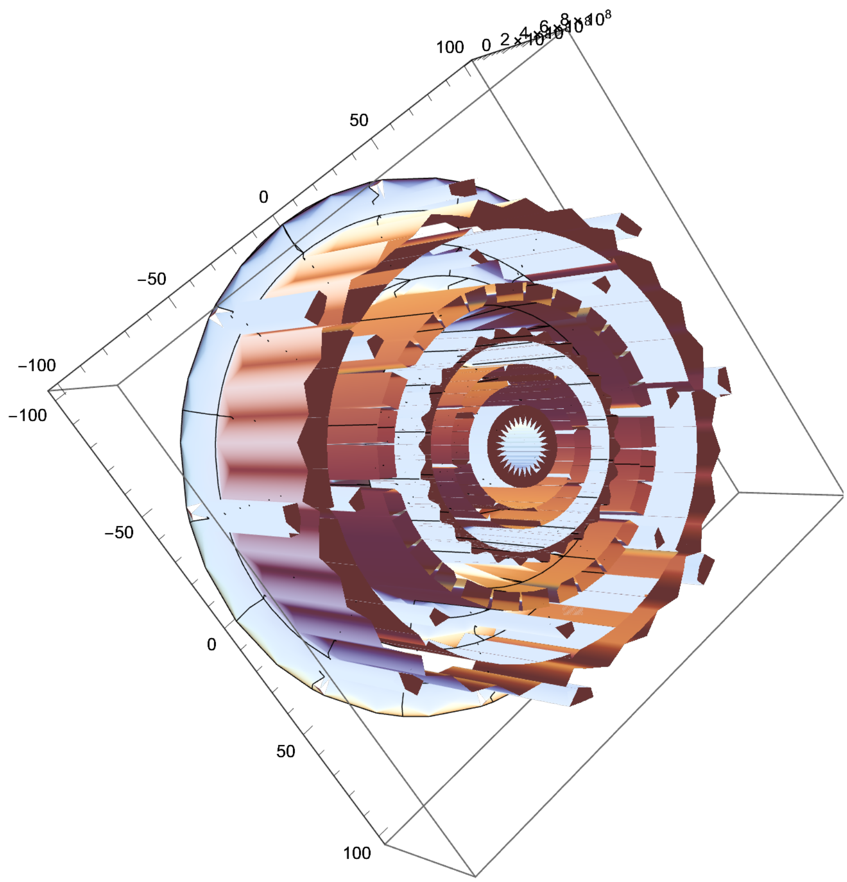


```
SphericalPlot3D[(1080 c Sqrt[θ] Sqrt[(4 π - θ) θ] Csc[β])/(π Sqrt[4 π - θ]), {β, -π, π}, {θ, -4 π, 4 π}]
```

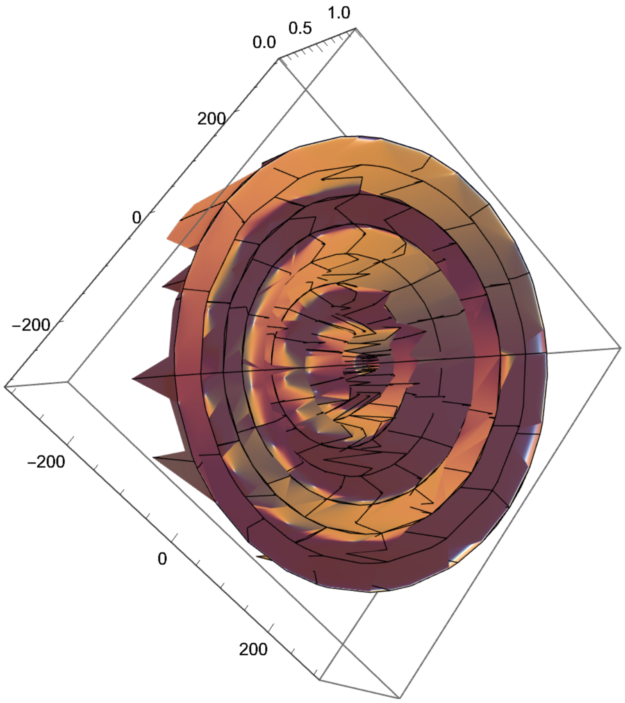
$$\text{SphericalPlot3D}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\beta]}{\pi\,\sqrt{4\pi-\theta}},\ \{\beta,-\pi,\pi\},\ \{\theta,-4\pi,4\pi\}\right]$$



$$\text{RevolutionPlot3D}\Big[\frac{1}{1166400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}+\frac{1620\,c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\ \{\beta,\,-100,\,100\}\Big]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -300,\ 300\}\right]$$



Eulerian

A Paper on Leonard Euler' s Formula in Natural Scientific Thought

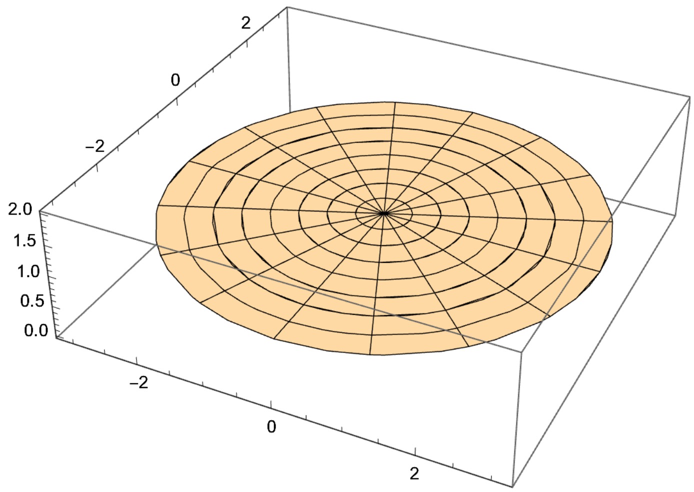
To show that the ideas presented through the ontological cone (an analogy to the gestalt of perception through the sense of being), are applicable to the Euler equation is the purpose of this section.

$$e\hat{}(i\,\beta) = \text{Cos}[\beta] + i\,\text{Sin}[\beta]$$

$$e\hat{}(i\,\theta) = \text{Cos}[\theta] + i\,\text{Sin}[\theta]$$

$$\text{RevolutionPlot3D}\left[e\hat{}\left(i\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right),\ \{\beta,\ -\pi,\ \pi\}\right]$$

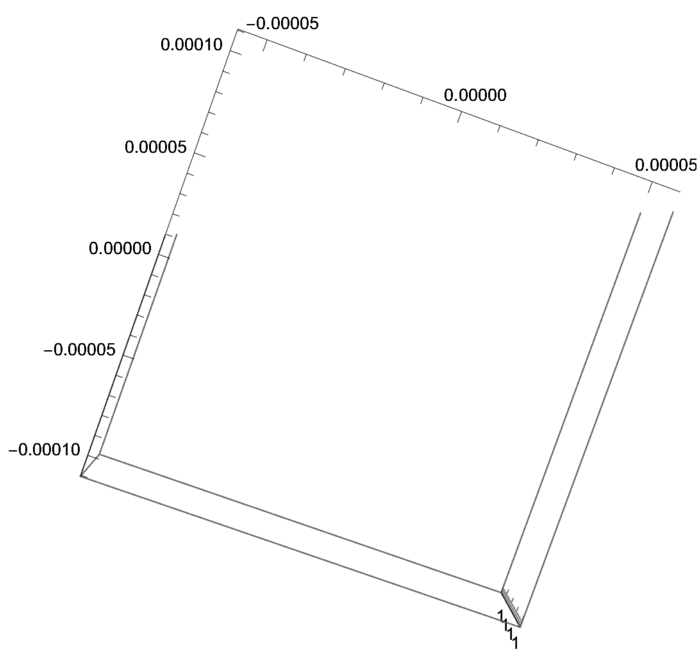
```
RevolutionPlot3D[
 ⅇ^(ⅈ (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))) ⅇ^(ⅈ (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))), {β, -π, π}]
```



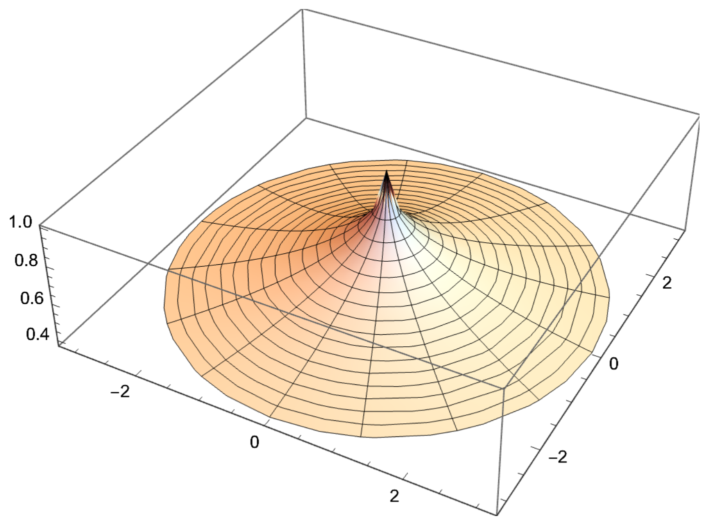

```
ⅇ^(ⅈ θ) = Cos[θ] + ⅈ Sin[θ]

RevolutionPlot3D[Cos[θ] + ⅈ Sin[θ], {β, -π, π}]
```

$$\beta = \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]$$

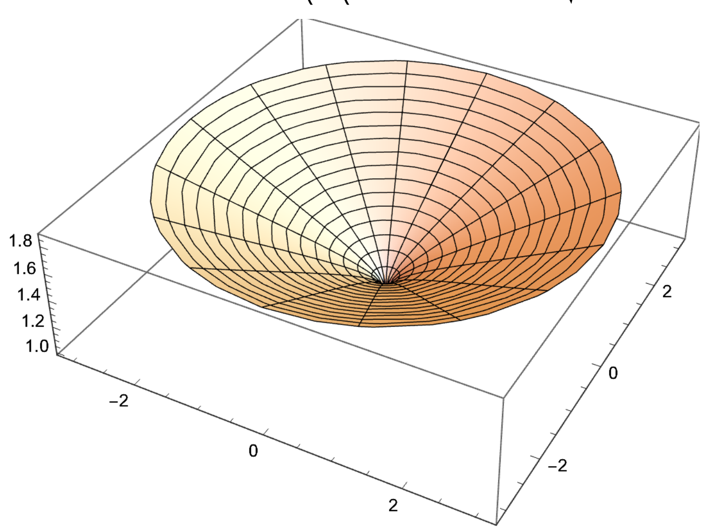
```
RevolutionPlot3D[Cos[β] + ⅈ Sin[β], {β, -π, π}]
```



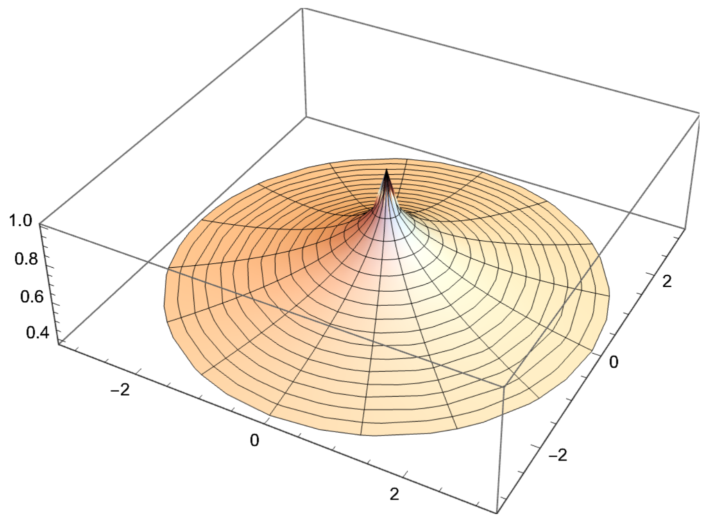
```
RevolutionPlot3D[Cos[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]] + ⅈ Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]], {θ, -π, π}]
```



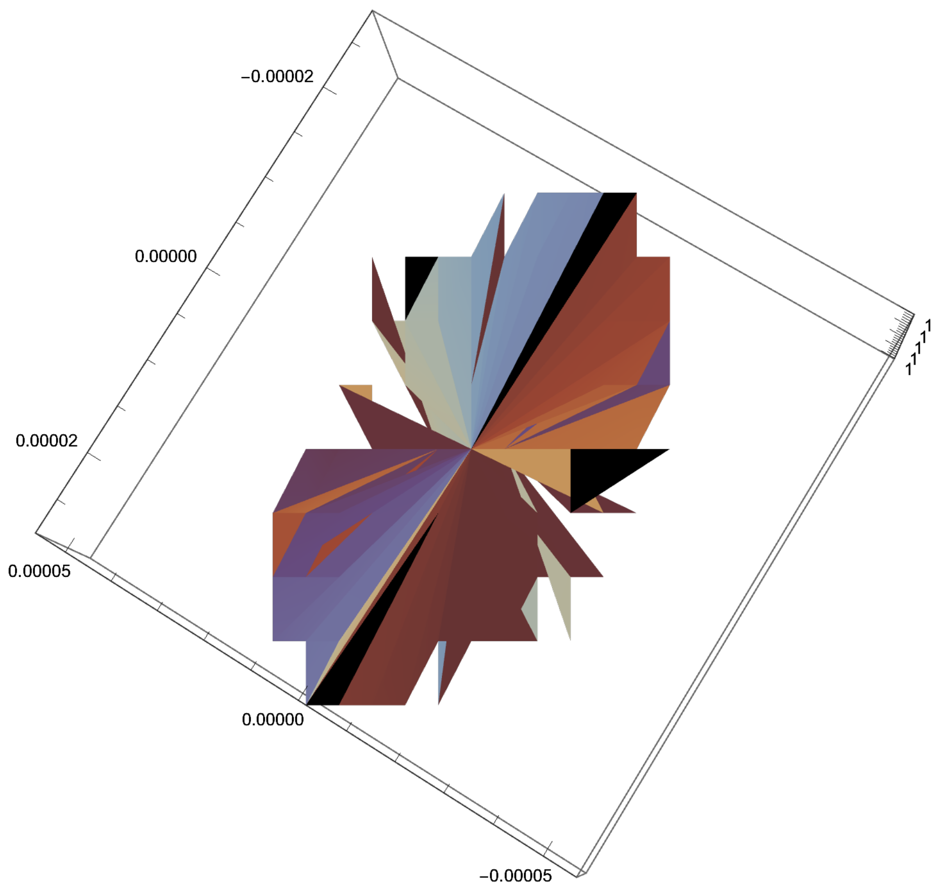

```
SphericalPlot3D[Cos[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]] + ⅈ Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]], {θ, -π, π}]

RevolutionPlot3D[ⅇ^(ⅈ (ArcSin[Sqrt[-4 π^2 θ + 4 π θ^2 - θ^3]/(2 π Sqrt[-4 π + θ])])), {θ, -π, π}]
```



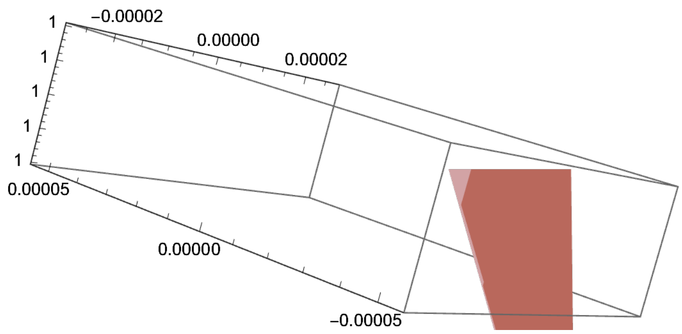
$$\text{RevolutionPlot3D}\left[e^{\wedge}\left(i\left(\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right),\ \{\theta,-\pi,\pi\}\right]$$



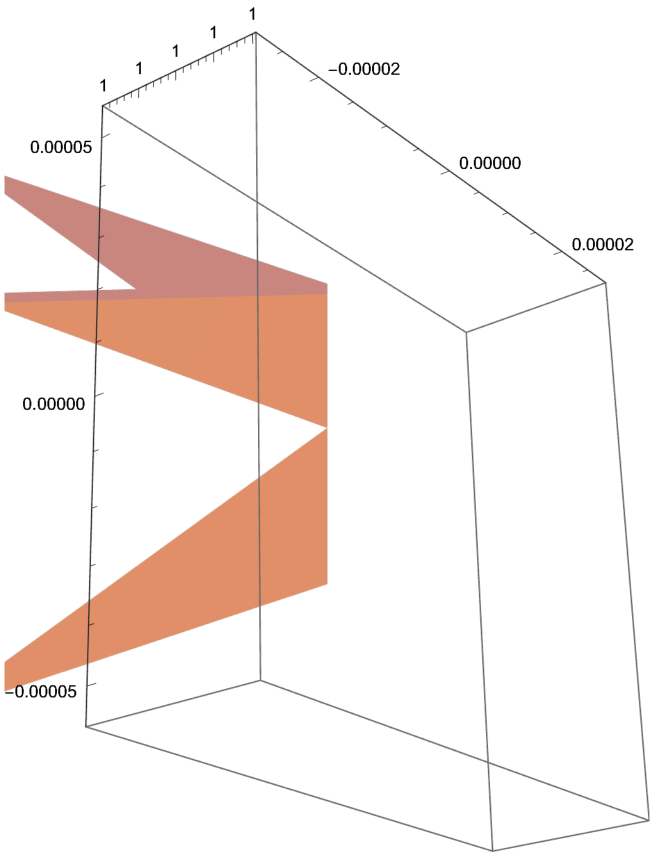
```
RevolutionPlot3D[ⅇ^(ⅈ (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
     (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
     (-π^3 + 18 π^3 Sin[β]^2 +
        3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))), {β, -π, π}]
```



```
RevolutionPlot3D[ⅇ^(ⅈ (4 π/3 + ((1 - ⅈ √3) (-4 π^2 + 12 π^2 Sin[β]^2))/
    (12 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
   1/3 (1 + ⅈ √3) (-π^3 + 18 π^3 Sin[β]^2 +
      3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))), {β, -π, π}]
```

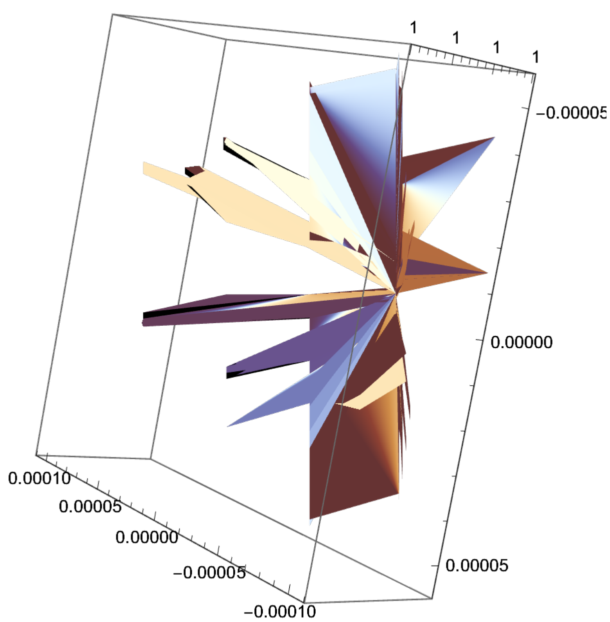


$$\text{RevolutionPlot3D}\Big[e\,\hat{}\,\Big(i\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big),\ \{\beta,-\pi,\pi\}\Big]$$

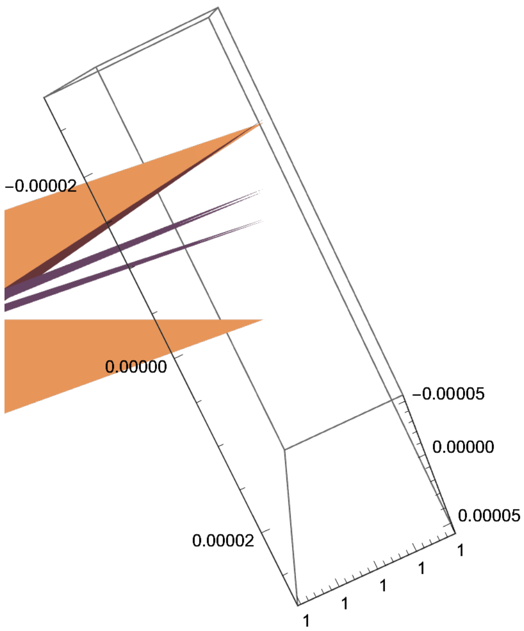


$$\text{RevolutionPlot3D}\Big[\left(e^\wedge\left(i\left(\frac{4\pi}{3}+\left(\left(1-i\sqrt{3}\right)\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\right)\Big/\left(12\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\right)\left(e^\wedge\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right),\ \{\beta,-\pi,\pi\}\Big]$$

```
RevolutionPlot3D[
 e^(i (4 π/3 + ((1 + i √3) (-4 π^2 + 12 π^2 Sin[β]^2))/(12 (-π^3 + 18 π^3 Sin[β]^2 +
          3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) - 1/3 (1 - i √3)
      (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)))
  e^(i (4 π/3 + ((1 - i √3) (-4 π^2 + 12 π^2 Sin[β]^2))/
      (12 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
      1/3 (1 + i √3) (-π^3 + 18 π^3 Sin[β]^2 +
         3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))), {β, -π, π}]
```



$$\text{RevolutionPlot3D}\left[e^\wedge\left(i\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right),\{\beta,-\pi,\pi\}\right]$$



$$e^\wedge(i\,\beta)==(\text{Cos}[\beta]+i\,\text{Sin}[\beta])$$

$$e^{i\beta}==\text{Cos}[\beta]+i\,\text{Sin}[\beta]$$

If matter is composed of a geometric element in the shape of a cone, it may be purely geometrically stated that:

$$e^\wedge\left(i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)==\left(\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]+i\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]}==\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}}$$

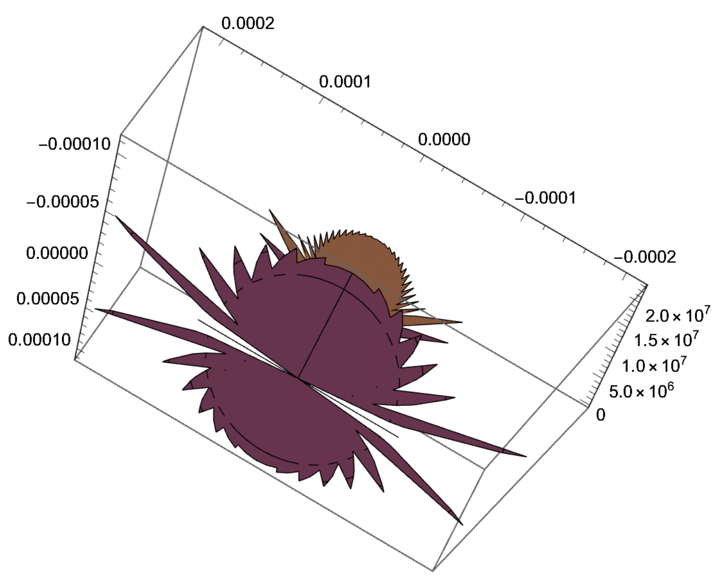
if it is within the region of $\theta=\pi$, $\beta=\frac{\pi}{2}$.

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]}==\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}}=\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{u^2}{c^2}}$$

$$\text{Solve}\left[\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}} == \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{u^2}{c^2}},\ u\right]$$

$$\left\{\left\{u\to -0.000494236\sqrt{\left(2.34235\times10^{23}\,\theta-1.86399\times10^{22}\,\theta^2+(0.+1.86399\times10^{22}\,i)\sqrt{12.5664\,\theta-1.\,\theta^2}\sqrt{39.4784-12.5664\,\theta+1.\,\theta^2}\right)}\right\},\right.$$
$$\left.\left\{u\to 0.000494236\sqrt{\left(2.34235\times10^{23}\,\theta-1.86399\times10^{22}\,\theta^2+(0.+1.86399\times10^{22}\,i)\sqrt{12.5664\,\theta-1.\,\theta^2}\sqrt{39.4784-12.5664\,\theta+1.\,\theta^2}\right)}\right\}\right\}$$

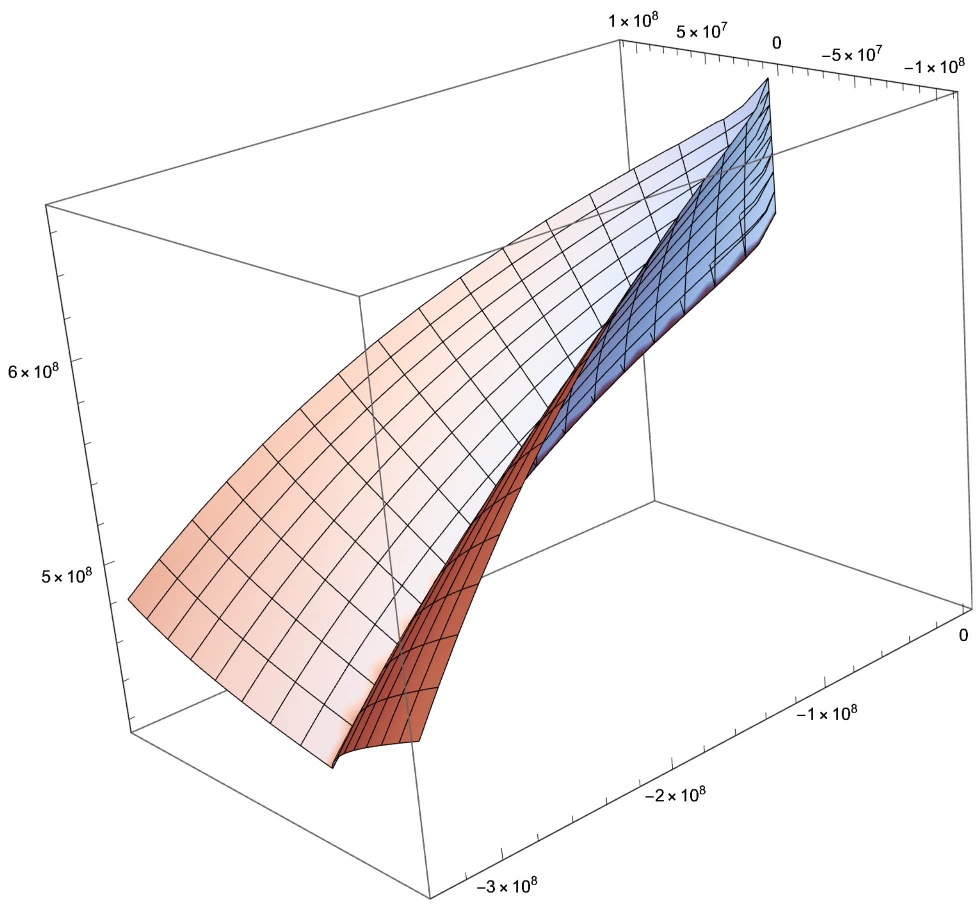
```
RevolutionPlot3D[
 0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22 θ^2 +
    (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
     √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)), {θ, -2 π, 2 π}]
```



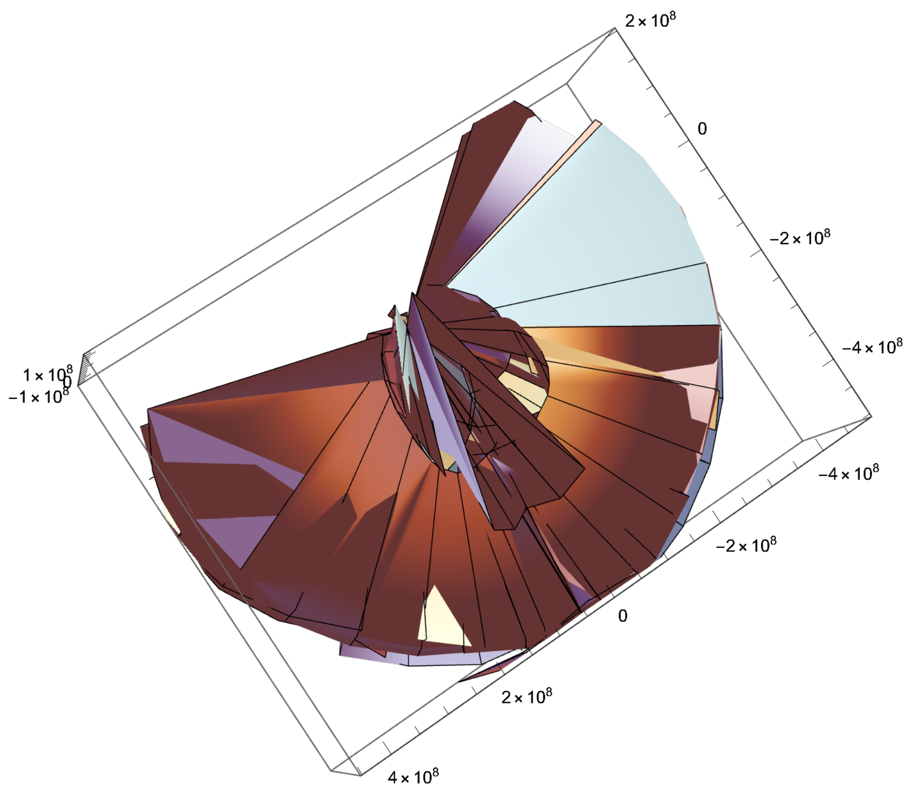
$$\theta = 2\left(\pi \pm \sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right) == \frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$
$$\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$
$$\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\text{SphericalPlot3D}\Bigg[\text{0.000494236036686326`}\ \sqrt{\left(\text{2.3423549790780066`*^23}\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-\text{1.863986866980889`*^22}\,(\theta)^2+\left(\text{0.`}+\text{1.863986866980889`*^22}\,i\right)\sqrt{\text{12.566370614359172`}\,\theta-\text{1.`}\,\theta^2}\,\sqrt{\text{39.47841760435743`}-\text{12.566370614359172`}\,\theta+\text{1.`}\,\theta^2}\right)},$$

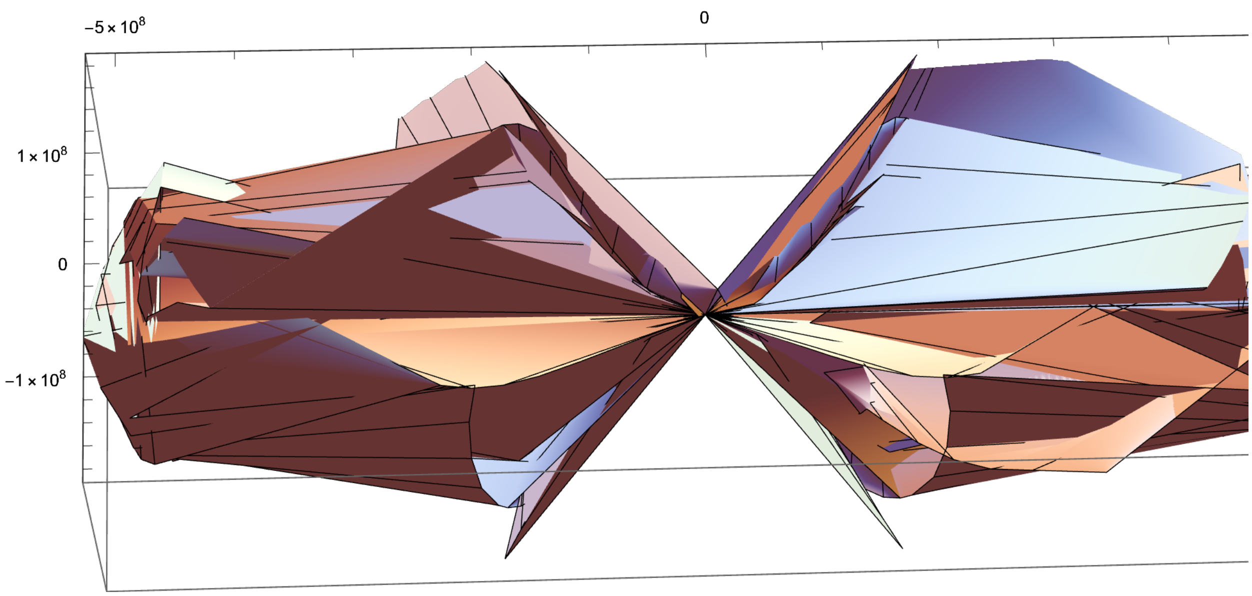
$$\{\theta,\ -.2\,\pi,\ .2\,\pi\},\ \{\beta,\ -.1\,\pi,\ .1\,\pi\}\Bigg]$$



```
SphericalPlot3D[
 0.000494236036686326` √(2.3423549790780066`*^23 (θ) - 1.863986866980889`*^22 (θ)^2 +
    (0.`+1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
     √(39.47841760435743` - 12.566370614359172` θ +
        1.` (4π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
                    3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3 (-π^3 + 18
                π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2)),
 {θ, -20 π, 20 π}, {β, -10 π, 10 π}]
```



$$\texttt{SphericalPlot3D}\Big[0.000494236036686326`\sqrt{\Big(2.3423549790780066`*\wedge 23\,(\theta) - 1.863986866980889`*\wedge 22\,(\theta)^2 + (0.`+1.863986866980889`*\wedge 22\,\mathbb{i})\sqrt{12.566370614359172`\,\theta - 1.`\,\theta^2}\sqrt{\Big(39.47841760435743` - 12.566370614359172`\,\theta + 1.`\Big(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3 + 18\pi^3\,\texttt{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\texttt{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Big)^2\Big)}\Big)},\ \{\beta, -10\pi, 10\pi\},\ \{\theta, -20\pi, 20\pi\}\Big]$$



$$\texttt{Solve}\left[\sqrt{1 - \frac{(4\pi-\theta)\,\theta}{4\pi^2}} == \frac{\mathbb{i}\sqrt{(4\pi-\theta)\,\theta}}{2\pi} + \sqrt{1 - \frac{u^2}{c^2}},\ \theta\right]$$

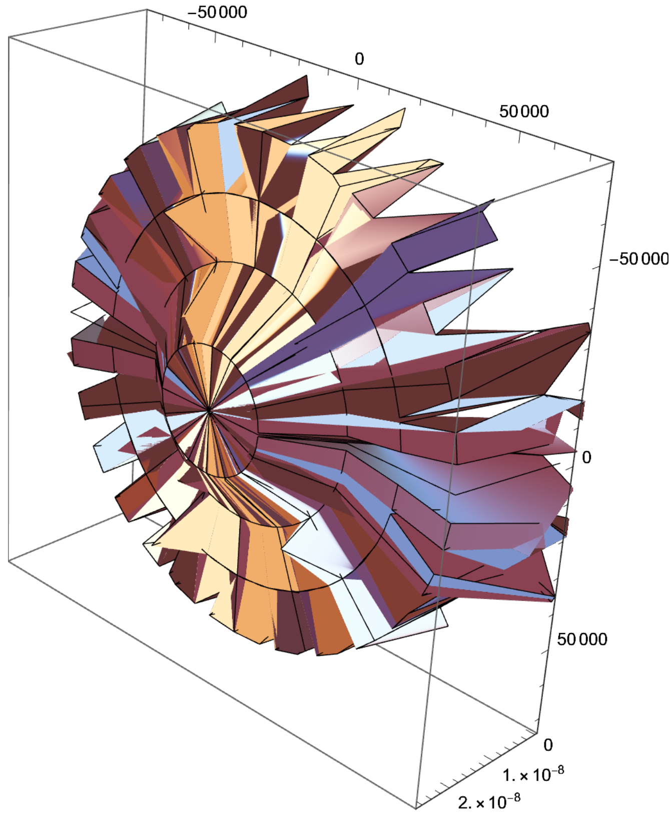
$$\left\{\left\{\theta \to \frac{\pi\left(2c^4 - 2c^2u^2 - \sqrt{4c^8 - 8c^6u^2 + 5c^4u^4 - c^2u^6}\right)}{c^4 - c^2u^2}\right\},\ \left\{\theta \to \frac{\pi\left(2c^4 - 2c^2u^2 + \sqrt{4c^8 - 8c^6u^2 + 5c^4u^4 - c^2u^6}\right)}{c^4 - c^2u^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\,\beta\right]$$

$$\Big\{\Big\{\beta\to-1.\,\text{ArcSin}\Big[0.31831\sqrt{\Big(-\frac{1.28794\times10^{69}}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{2.86605\times10^{52}\,u^2}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}-\frac{1.79376\times10^{35}\,u^4}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{2.21759\times10^{17}\,u^6}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{1.59446\times10^{35}}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}-\frac{1.77407\times10^{18}\,u^2}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}+\Big(2.39003\times10^{43}\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2-\Big(2.65927\times10^{26}\,u^2\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2-\Big(2.95883\times10^{9}\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)\Big)}\Big]\Big\},$$

$$\Big\{\beta\to\text{ArcSin}\Big[0.31831\sqrt{\Big(-\frac{1.28794\times10^{69}}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{2.86605\times10^{52}\,u^2}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}-\frac{1.79376\times10^{35}\,u^4}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{2.21759\times10^{17}\,u^6}{(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2}+\frac{1.59446\times10^{35}}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}-\frac{1.77407\times10^{18}\,u^2}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}+\Big(2.39003\times10^{43}\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2-\Big(2.65927\times10^{26}\,u^2\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)^2-\Big(2.95883\times10^{9}\sqrt{(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6)}\Big)\Big/(8.07761\times10^{33}-8.98755\times10^{16}\,u^2)\Big)}\Big]\Big\}\Big\}$$

```
RevolutionPlot3D[ArcSin[
  0.3183098861837907` √( (- 1.2879392082837613`*^69 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
     2.86605126458116`*^52 u^2 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
     1.793763056356184`*^35 u^4 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
     2.217589516890687`*^17 u^6 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
     1.594456050094386`*^35 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2) -
     1.7740716135125496`*^18 u^2 / (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2) +
     (2.3900294921538355`*^43 √(2.903917065069822`*^51 +
          2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
          1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)) /
      (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
     (2.6592664484147662`*^26 u^2 √(2.903917065069822`*^51 +
          2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
          1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)) /
      (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
     (2.958832962890196`*^9 √(2.903917065069822`*^51 +
          2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
          1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)) /
      (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2))], {u, -c, c}]
```

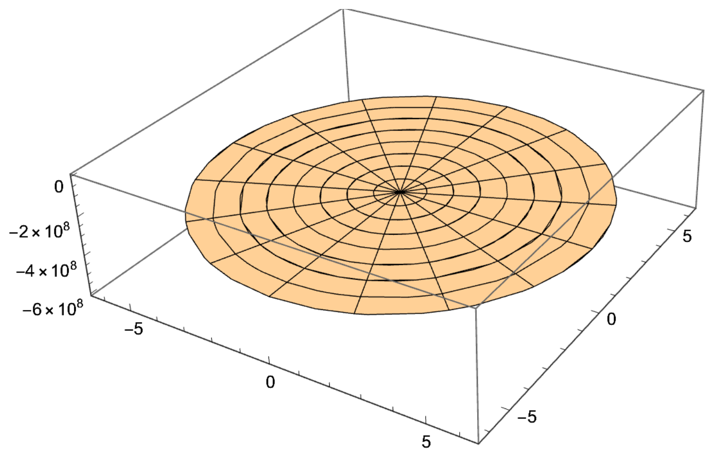


$$\text{Solve}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ u\right]$$

$$\begin{aligned}
\{\{u\to \text{Root}[&4.05322581048364325423687462743 52\times 10^{67}-\\
&1.70796126159785836693688622943 92\times 10^{83}\,\text{Sin}[\beta]^2+\\
&1.45620800036830440180417061056 27\times 10^{59}\,\sharp 1+\\
&(-5.41114018814494640882106646706 13\times 10^{50}+\\
&\quad 3.80072638690853170468521833047 42\times 10^{66}\,\text{Sin}[\beta]^2)\,\sharp 1^2-\\
&2.02089456331531247796375135106 59\times 10^{42}\,\sharp 1^3+\\
&(-5.28609803429781214312119064236 98\times 10^{48}-\\
&\quad 2.11443921371912210201017195426 00\times 10^{49}\,\text{Sin}[\beta]^2)\,\sharp 1^4-\\
&3.50569324145697052898902500000 00\times 10^{24}\,\sharp 1^5+\\
&5.88157727416637492704831340544 00\times 10^{31}\,\sharp 1^6\ \&,\ 1]\},\\
\{u\to \text{Root}[&4.05322581048364325423687462743 52\times 10^{67}-\\
&1.70796126159785836693688622943 92\times 10^{83}\,\text{Sin}[\beta]^2+\\
&1.45620800036830440180417061056 27\times 10^{59}\,\sharp 1+\\
&(-5.41114018814494640882106646706 13\times 10^{50}+\\
&\quad 3.80072638690853170468521833047 42\times 10^{66}\,\text{Sin}[\beta]^2)\,\sharp 1^2-\\
&2.02089456331531247796375135106 59\times 10^{42}\,\sharp 1^3+\\
&(-5.28609803429781214312119064236 98\times 10^{48}-\\
&\quad 2.11443921371912210201017195426 00\times 10^{49}\,\text{Sin}[\beta]^2)\,\sharp 1^4-
\end{aligned}$$

```
        3.5056932414569705289890250000000 × 10^24 #1^5 +
        5.8815772741663749270483134054400 × 10^31 #1^6 &, 2]},
   {u → Root[4.0532258104836432542368746274352 × 10^67 -
        1.7079612615978583669368862294392 × 10^83 Sin[β]^2 +
        1.4562080003683044018041706105627 × 10^59 #1 +
        (-5.4111401881449464088210664670613 × 10^50 +
           3.8007263869085317046852183304742 × 10^66 Sin[β]^2) #1^2 -
        2.0208945633153124779637513510659 × 10^42 #1^3 +
        (-5.2860980342978121431211906423698 × 10^48 -
           2.1144392137191221020101719542600 × 10^49 Sin[β]^2) #1^4 -
        3.5056932414569705289890250000000 × 10^24 #1^5 +
        5.8815772741663749270483134054400 × 10^31 #1^6 &, 3]},
   {u → Root[4.0532258104836432542368746274352 × 10^67 -
        1.7079612615978583669368862294392 × 10^83 Sin[β]^2 +
        1.4562080003683044018041706105627 × 10^59 #1 +
        (-5.4111401881449464088210664670613 × 10^50 +
           3.8007263869085317046852183304742 × 10^66 Sin[β]^2) #1^2 -
        2.0208945633153124779637513510659 × 10^42 #1^3 +
        (-5.2860980342978121431211906423698 × 10^48 -
           2.1144392137191221020101719542600 × 10^49 Sin[β]^2) #1^4 -
        3.5056932414569705289890250000000 × 10^24 #1^5 +
        5.8815772741663749270483134054400 × 10^31 #1^6 &, 4]},
   {u → Root[4.0532258104836432542368746274352 × 10^67 -
        1.7079612615978583669368862294392 × 10^83 Sin[β]^2 +
        1.4562080003683044018041706105627 × 10^59 #1 +
        (-5.4111401881449464088210664670613 × 10^50 +
           3.8007263869085317046852183304742 × 10^66 Sin[β]^2) #1^2 -
        2.0208945633153124779637513510659 × 10^42 #1^3 +
        (-5.2860980342978121431211906423698 × 10^48 -
           2.1144392137191221020101719542600 × 10^49 Sin[β]^2) #1^4 -
        3.5056932414569705289890250000000 × 10^24 #1^5 +
        5.8815772741663749270483134054400 × 10^31 #1^6 &, 5]},
   {u → Root[4.0532258104836432542368746274352 × 10^67 -
        1.7079612615978583669368862294392 × 10^83 Sin[β]^2 +
        1.4562080003683044018041706105627 × 10^59 #1 +
        (-5.4111401881449464088210664670613 × 10^50 +
           3.8007263869085317046852183304742 × 10^66 Sin[β]^2) #1^2 -
        2.0208945633153124779637513510659 × 10^42 #1^3 +
        (-5.2860980342978121431211906423698 × 10^48 -
           2.1144392137191221020101719542600 × 10^49 Sin[β]^2) #1^4 -
        3.5056932414569705289890250000000 × 10^24 #1^5 +
        5.8815772741663749270483134054400 × 10^31 #1^6 &, 6]}}
```

```
RevolutionPlot3D[Root[
  4.05322581048364325423687462743520493848299965498688735009410761359 36`31.909179⋱
     540382016*^67 -
    1.70796126159785836693688622943918677198203093873521607568176709 17`31.9091795⋱
      4038201*^83 Sin[β]^2 +
    1.45620800036830440180417061056265424124354233834700747 5712`31.90917954038201⋱
      *^59 #1 +
    (-5.41114018814494640882106646706128560033702885720064`31.90917954038201*^50 +
       3.80072638690853170468521833047421011941570039548412374873209726 5664`31.9⋱
         0917954038201*^66 Sin[β]^2) #1^2 -
    2.02089456331531247796375135106585507921 92`31.909179540382*^42 #1^3 +
    (-5.28609803429781214312119064236975938831438682 5216`31.90917954038201*^48 -
       2.11443921371912210201017195425997575678077005 98784`31.90917954038201*^49
        Sin[β]^2) #1^4 - 3.5056932414569705289 89025`31.90917954038201*^24 #1^5 +
    5.88157727416637492704831340544`31.90917954038201*^31 #1^6 &, 1], {β, -2 π, 2 π}]
```



$$\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}==$$

$$\left\{\left\{\theta\to\frac{4\,\pi}{3}+\frac{-4\,\pi^2\,r^4+12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}-\frac{2\,\pi\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\right\},\right.$$

$$\left\{\theta\to\frac{4\,\pi}{3}-\frac{\left(1+i\,\sqrt{3}\right)\left(-4\,\pi^2\,r^4+12\,\pi^2\,r^2\,\eta^2\right)}{12\,\pi\,r^2\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}+\frac{\left(1-i\,\sqrt{3}\right)\pi\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\right\},$$

$$\left.\left\{\theta\to\frac{4\,\pi}{3}-\frac{\left(1-i\,\sqrt{3}\right)\left(-4\,\pi^2\,r^4+12\,\pi^2\,r^2\,\eta^2\right)}{12\,\pi\,r^2\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}+\frac{\left(1+i\,\sqrt{3}\right)\pi\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\right\}\right\}$$

$$\left\{\left\{\theta\to\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right\},\right.$$

$$\left\{\theta\to\frac{4\,\pi}{3}+\left(\left(1+i\,\sqrt{3}\right)\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(12\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)-\frac{1}{3}\left(1-i\,\sqrt{3}\right)\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right\},$$

$$\left.\left\{\theta\to\frac{4\,\pi}{3}+\left(\left(1-i\,\sqrt{3}\right)\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(12\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)-\frac{1}{3}\left(1+i\,\sqrt{3}\right)\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right\}\right\}$$

θ = Those other three long ones (1 real 2 imaginary)

from Solve

$$\frac{1}{2\pi}\left(\sqrt{\left(4\pi r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)-r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)^2\right)}\right) ==$$

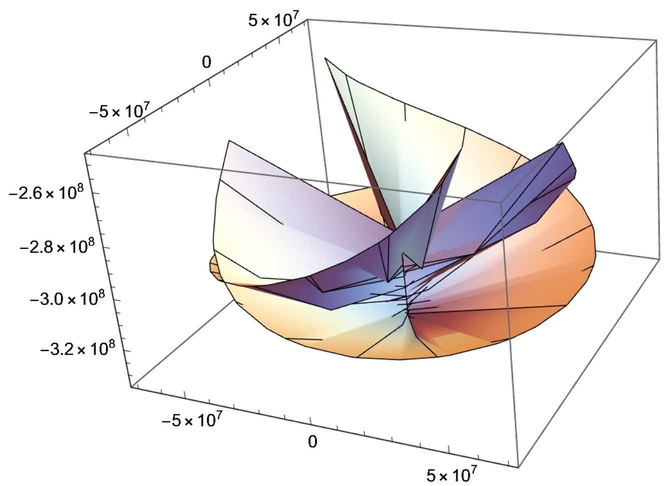
$$r\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right],\ \theta\Big]$$

c := (2.99792458 * 10 ^ 8)

θ = A set of three potential threes of solutions solvable with ease.

SphericalPlot3D[Root[

4.0532258104836432542368746274352049384829996549868873500941076135936`31.909179540382016*^67 -
1.70796126159785836693688622943918677198203093873521607568176709 17`31.90917954038201*^83 Sin$\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right]^2$ +
1.456208000368304401804170610562654241243542338347007475712`31.90917954038201*^59 #1 +
(-5.411140188144946408821066467061285600337028857 20064`31.90917954038201*^50 +
3.800726386908531704685218330474210119415700395484123748732097265664`31.90917954038201*^66 Sin[β]^2) #1^2 -
2.020894563315312477963751351065855079 2192`31.909179540382*^42 #1^3 +
(-5.286098034297812143121190642369759388314386825216`31.90917954038201*^48 -
2.114439213719122102010171954259975756780770059 8784`31.90917954038201*^49 Sin[β]$^2$) #1$^4$ - 3.5056932414569705289890 25`31.90917954038201*^24 #1^5 +
5.8815772741663749270483134054 4`31.90917954038201*^31 #1^6 &,
1], {β, -2 π, 2 π}, {θ, -2 π, 2 π}]



$\beta = \text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]$

v = u = Relativistic sorts

$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{}\left(3.5481432270250993\grave{}*\hat{}18\,\eta^2 - 1.1294090667581471\grave{}*\hat{}18\,r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\,r^2\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\grave{}\ \eta^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18\,\eta^2 - 1.1294090667581471\grave{}*\hat{}18\,r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\,r^2\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\grave{}\ \eta^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2}\right)\right\}\right\}$$

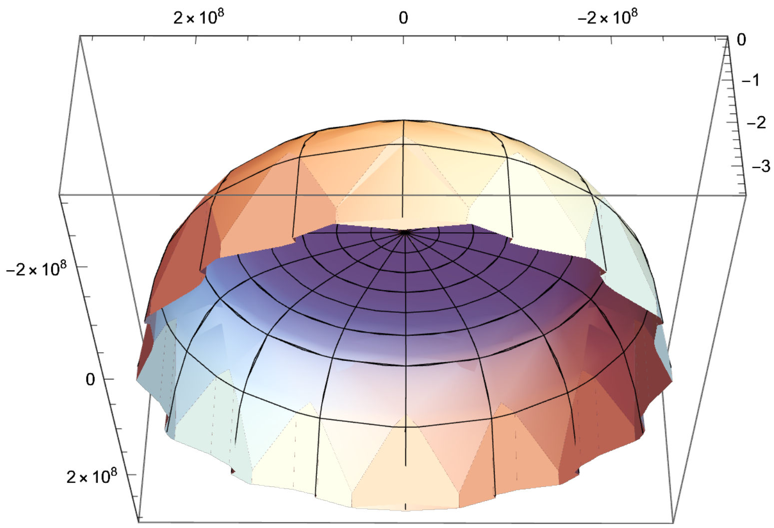
$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{}\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \text{Sin}[\beta]^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{}\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\left\{\left\{v \to -\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},\right.$$
$$\left\{v \to \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},$$
$$\left\{v \to -\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta - c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},$$
$$\left.\left\{v \to \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta - c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\}\right\}$$

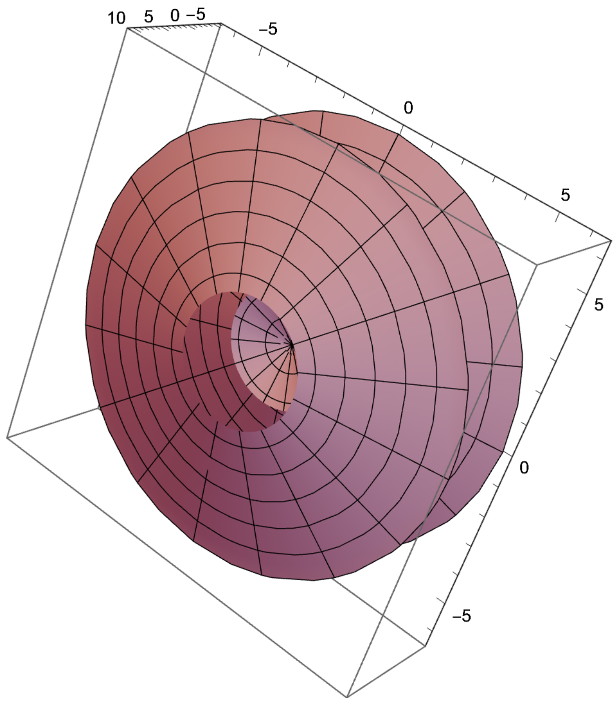
$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{}\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\right)\right\}\right\}$$

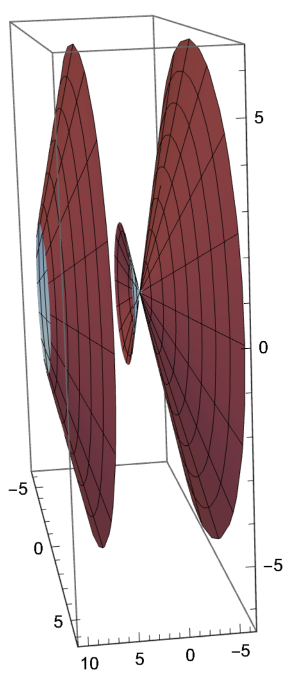
$$u = v = 0.000494236036686326\text{`}\sqrt{\left(2.3423549790780066\text{`}*\hat{}23\,\theta - 1.863986866980889\text{`}*\hat{}22\,\theta^2 + (0.\text{`} + 1.863986866980889\text{`}*\hat{}22\,i)\sqrt{12.566370614359172\text{`}\,\theta - 1.\text{`}\,\theta^2}\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + 1.\text{`}\,\theta^2}\right)}$$

$$\text{RevolutionPlot3D}\left[\frac{\pi\left(2\,c^4 - 2\,c^2\,u^2 - \sqrt{4\,c^8 - 8\,c^6\,u^2 + 5\,c^4\,u^4 - c^2\,u^6}\right)}{c^4 - c^2\,u^2},\ \{u, -2.99792458 * 10\hat{}8, (2.99792458 * 10\hat{}8)\}\right]$$



```
RevolutionPlot3D[1/ (c^4 - c^2
      (-0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22
            θ^2 + (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
            √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)))^2)
  π (2 c^4 - 2 c^2 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
              1.863986866980889`*^22 θ^2 +
              (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
              √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)))^2 -
      √(4 c^8 - 8 c^6 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                  1.863986866980889`*^22 θ^2 +
                  (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                  √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)))^2 +
          5 c^4 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                  1.863986866980889`*^22 θ^2 +
                  (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                  √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)))^4 -
          c^2 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                  1.863986866980889`*^22 θ^2 +
                  (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                  √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)))^6)),
 {θ, -2 π, 2 π}]
```

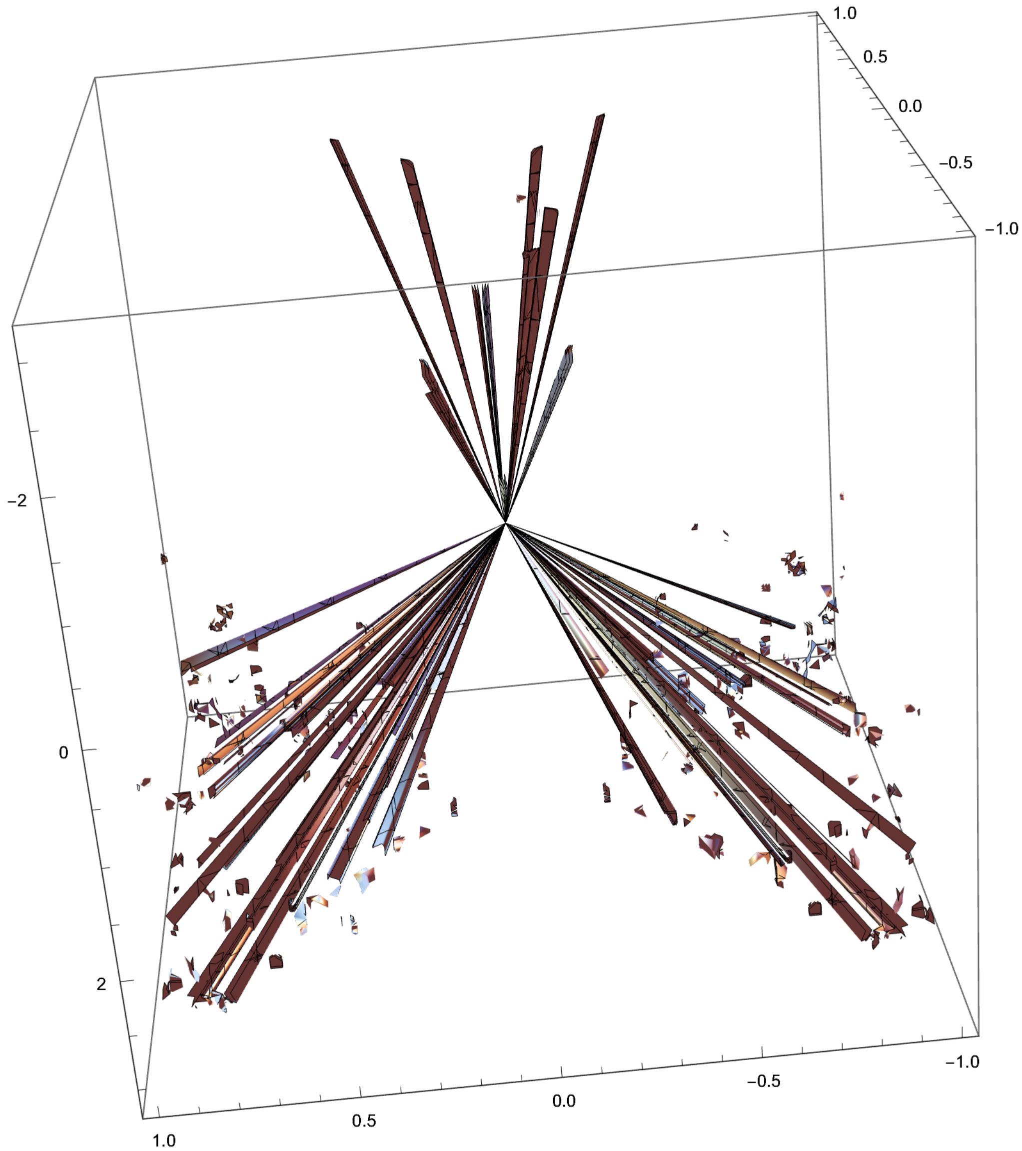




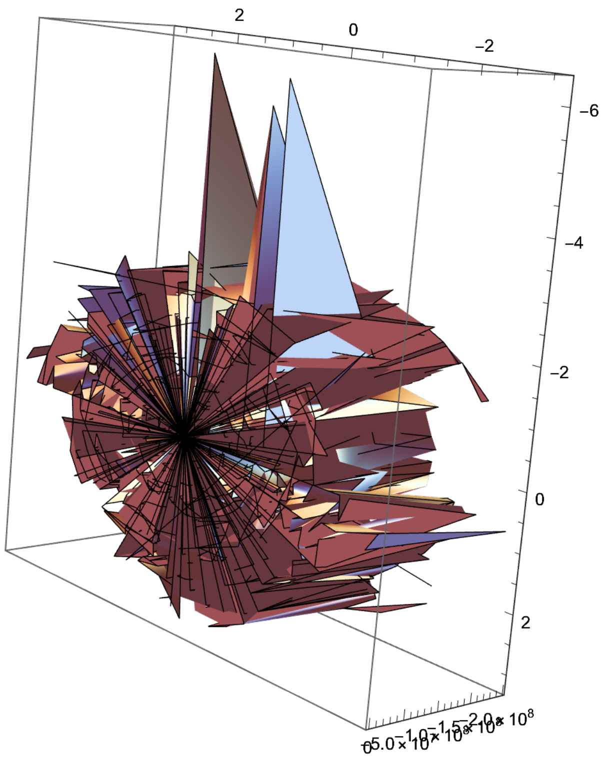
$$\texttt{RevolutionPlot3D}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2},\right.$$

```
{u, -2.99792458 * 10^8, (2.99792458 * 10^8)}]
```

```
ContourPlot3D[
 1/ (c^4 - c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
            8.987551787368176`*^16 r^2 θ^2)) /
         (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2) π
   (2 c^4 - 2 c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
            r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
         (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2 -
     √(4 c^8 - 8 c^6 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
               r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
            (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2 +
        5 c^4 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
               r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
            (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^4 -
        c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
               r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
            (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ +
               r^2 θ^2)))^6)), {r, -1, 1}, {η, -1, 1}, {θ, -π, π}]
```


1.0
0.5
0.0
−0.5
−1.0
−2
0
2
1.0
0.5
0.0
−0.5
−1.0

```
RevolutionPlot3D[
 1/ (c^4 - c^2 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
  π (2 c^4 - 2 c^2 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2 -
    √(4 c^8 - 8 c^6 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
             3.5481432270250993`*^18 Sin[β]^2)) /
           (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2 +
       5 c^4 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
             3.5481432270250993`*^18 Sin[β]^2)) /
           (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^4 -
       c^2 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
             3.5481432270250993`*^18 Sin[β]^2)) / (√(-12.566370614359172` θ +
             θ^2 + 39.47841760435743` Sin[β]^2)))^6)), {β, -π, π}, {θ, -2 π, 2 π}]
```



$$\text{RevolutionPlot3D}\left[\frac{1}{c^4-c^2\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^2}\right.$$

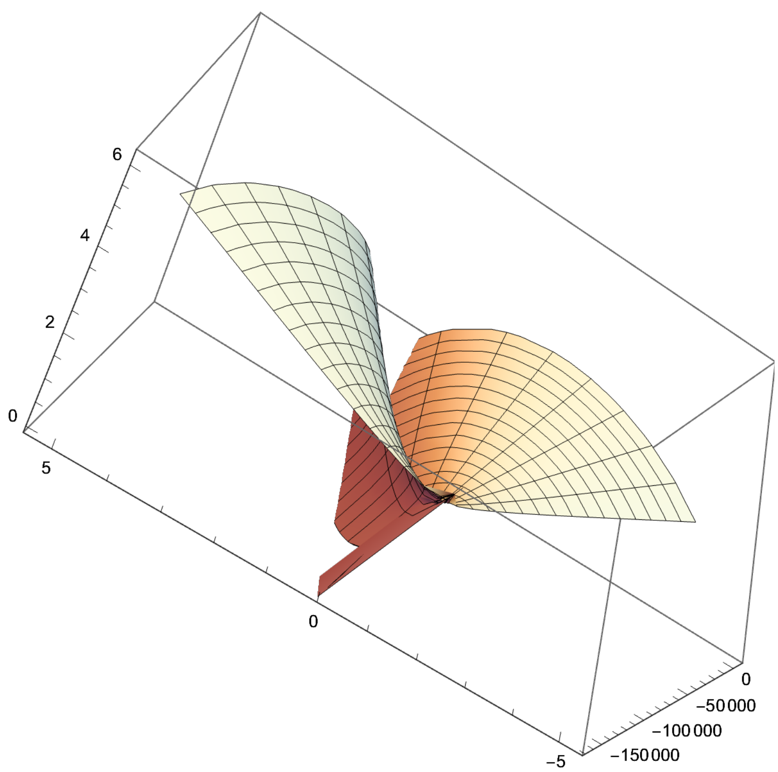
$$\pi\left(2\,c^4-2\,c^2\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^2-\right.$$

$$\sqrt{\left(4\,c^8-8\,c^6\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^2+\right.}$$

$$5\,c^4\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^4-$$

$$\left.\left.c^2\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^6\right)\right),$$

$$\left.\{\theta,-2\,\pi,2\,\pi\},\{r,-1,1\}\right]$$



$$\Big\{\Big\{u\to$$

$$-0.000494236036686326\grave{}\ \sqrt{\Big(2.3423549790780066\grave{}*\hat{}23\,\theta-1.863986866980889\grave{}*\hat{}22\,\theta^2+}$$

$$(0.`+1.863986866980889`*^22\,i)\ \sqrt{12.566370614359172`\,\theta-1.`\,\theta^2}\ \sqrt{39.47841760435743`-12.566370614359172`\,\theta+1.`\,\theta^2}\Big)\Big\},$$

$$\Big\{u\to 0.000494236036686326`\ \sqrt{}\Big(2.3423549790780066`*^23\,\theta-1.863986866980889`*^22\,\theta^2+(0.`+1.863986866980889`*^22\,i)\ \sqrt{12.566370614359172`\,\theta-1.`\,\theta^2}\ \sqrt{39.47841760435743`-12.566370614359172`\,\theta+1.`\,\theta^2}\Big)\Big\}\Big\}==$$

$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\big(3.5481432270250993`*^18\,\eta^2-1.1294090667581471`*^18\,r^2\,\theta+8.987551787368176`*^16\,r^2\,\theta^2\big)\Big)\Big/\Big(\sqrt{39.47841760435743`\,\eta^2-12.566370614359172`\,r^2\,\theta+r^2\,\theta^2}\Big)\Big\},$$
$$\Big\{v\to\Big(\sqrt{}\big(3.5481432270250993`*^18\,\eta^2-1.1294090667581471`*^18\,r^2\,\theta+8.987551787368176`*^16\,r^2\,\theta^2\big)\Big)\Big/\Big(\sqrt{39.47841760435743`\,\eta^2-12.566370614359172`\,r^2\,\theta+r^2\,\theta^2}\Big)\Big\}\Big\}$$

$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/\Big(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\Big)\Big\},$$
$$\Big\{v\to\Big(\sqrt{}\big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/\Big(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\Big)\Big\}\Big\}$$

$$\Big\{\Big\{v\to-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\}\Big\}$$

$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\big(3.5481432270250993`*^18-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2\big)\Big)\Big/\Big(\sqrt{39.47841760435743`-12.566370614359172`\,\theta+\theta^2}\Big)\Big\},$$

```
{v → (√ (3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2)) /
    (√(39.47841760435743` - 12.566370614359172` θ + θ^2))}}
```

```
Solve[0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22 θ^2 +
      (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
       √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)) ==
   (√ (3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
        8.987551787368176`*^16 r^2 θ^2)) /
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)), r]
```

```
{{Solve`Auxiliary[θ][θ] → -376 964. - 652 931. ⅈ},
 {Solve`Auxiliary[θ][θ] → -376 964. + 652 931. ⅈ}, {Solve`Auxiliary[θ][θ] → 753 946.}}
```

```
Solve[0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22 θ^2 +
      (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
       √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)) ==
   (√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), β]
```

```
{{Solve`Auxiliary[θ][θ] → -376 964. - 652 931. ⅈ},
 {Solve`Auxiliary[θ][θ] → -376 964. + 652 931. ⅈ}, {Solve`Auxiliary[θ][θ] → 753 946.}}
```

```
Solve[0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22 θ^2 +
      (0.` + 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
       √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2)) ==
   (√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ]
```

```
{{θ → -245 215. - 424 732. ⅈ}, {θ → -245 215. + 424 732. ⅈ}, {θ → 490 443.}}
```

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{}\Big(2.3423549790780066\grave{}*\wedge 23\,\theta - 1.863986866980889\grave{}*\wedge 22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\wedge 22\,i)\ \sqrt{12.566370614359172\grave{}\ \theta - 1.\grave{}\ \theta^2}\ \sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + 1.\grave{}\ \theta^2}\Big) == \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}},\ \theta\Big]$$

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{}\Big(2.3423549790780066\grave{}*\wedge 23\,\theta - 1.863986866980889\grave{}*\wedge 22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\wedge 22\,i)\ \sqrt{12.566370614359172\grave{}\ \theta - 1.\grave{}\ \theta^2}\ \sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + 1.\grave{}\ \theta^2}\Big) == \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}},\ r\Big]$$

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{}\Big(2.3423549790780066\grave{}*\wedge 23\,\theta - 1.863986866980889\grave{}*\wedge 22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\wedge 22\,i)\ \sqrt{12.566370614359172\grave{}\ \theta - 1.\grave{}\ \theta^2}\ \sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + 1.\grave{}\ \theta^2}\Big) == \Big(\sqrt{}\Big(3.5481432270250993\grave{}*\wedge 18 - 1.1294090667581471\grave{}*\wedge 18\,\theta + 8.987551787368176\grave{}*\wedge 16\,\theta^2\Big)\Big) \Big/ \Big(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\Big),\ \theta\Big]$$

$$\{\{\theta \to -245\,215. - 424\,732.\, i\}\}$$

$$c := (2.99792458 * 10 \wedge 8)$$

$$e \wedge (i\,\beta) = \text{Cos}[\beta] + i\,\text{Sin}[\beta]$$

$$\beta = \text{ArcSin}\Big[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\Big]$$

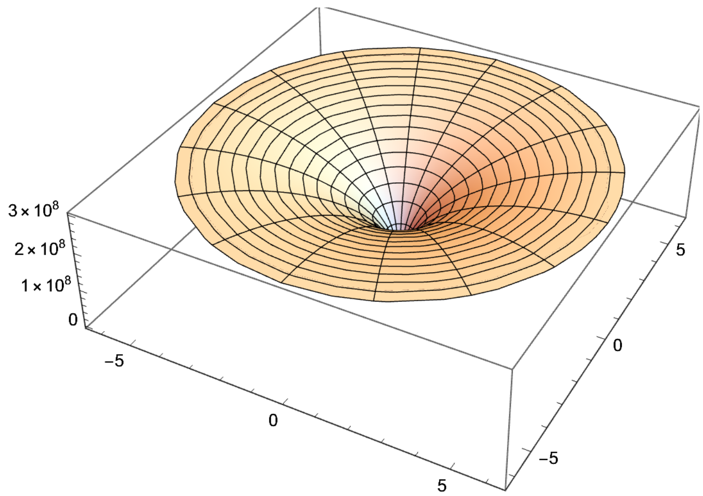
$$e \wedge \Big(i\,\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\Big]\Big) == \Big(\text{Cos}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\Big]\Big] + i\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\Big]\Big]\Big)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]} == \frac{i\,\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi} + \sqrt{1 - \frac{(4\,\pi - \theta)\,\theta}{4\,\pi^2}}$$

$$\text{Solve}\Big[\sqrt{1 - \frac{(4\,\pi - \theta)\,\theta}{4\,\pi^2}} == \sqrt{1 - \frac{u \wedge 2}{c \wedge 2}},\ u\Big]$$

$$\Big\{\Big\{u \to -\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi}\Big\},\ \Big\{u \to \frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi}\Big\}\Big\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,(2.99792458*10\wedge 8)^2\,\pi\,\theta-(2.99792458*10\wedge 8)^2\,\theta^2}}{2\,\pi},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



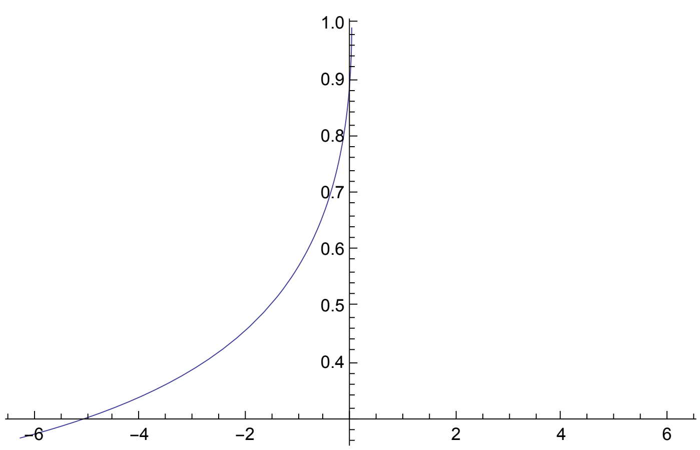
$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta-c^2\,\theta^2}}{2\,\pi}==\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ r\right]$$

{{r → −c}, {r → c}}

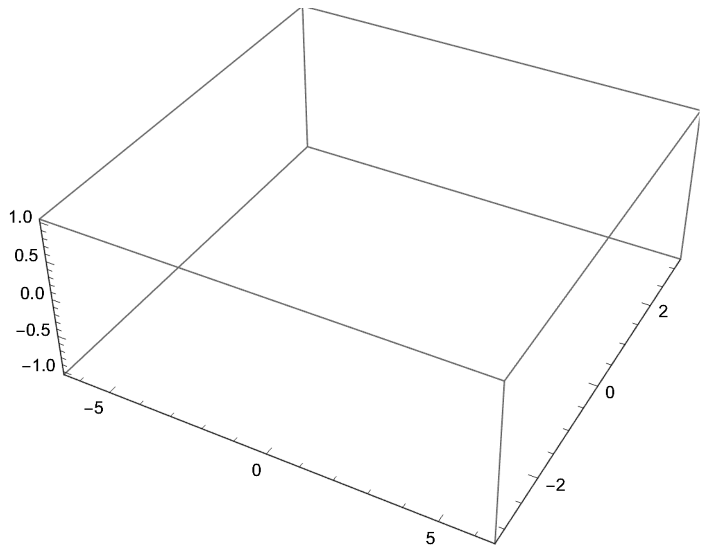
$$e\wedge\left(i\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)==\left(\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]+i\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\right)$$

$$\theta=2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{Plot}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

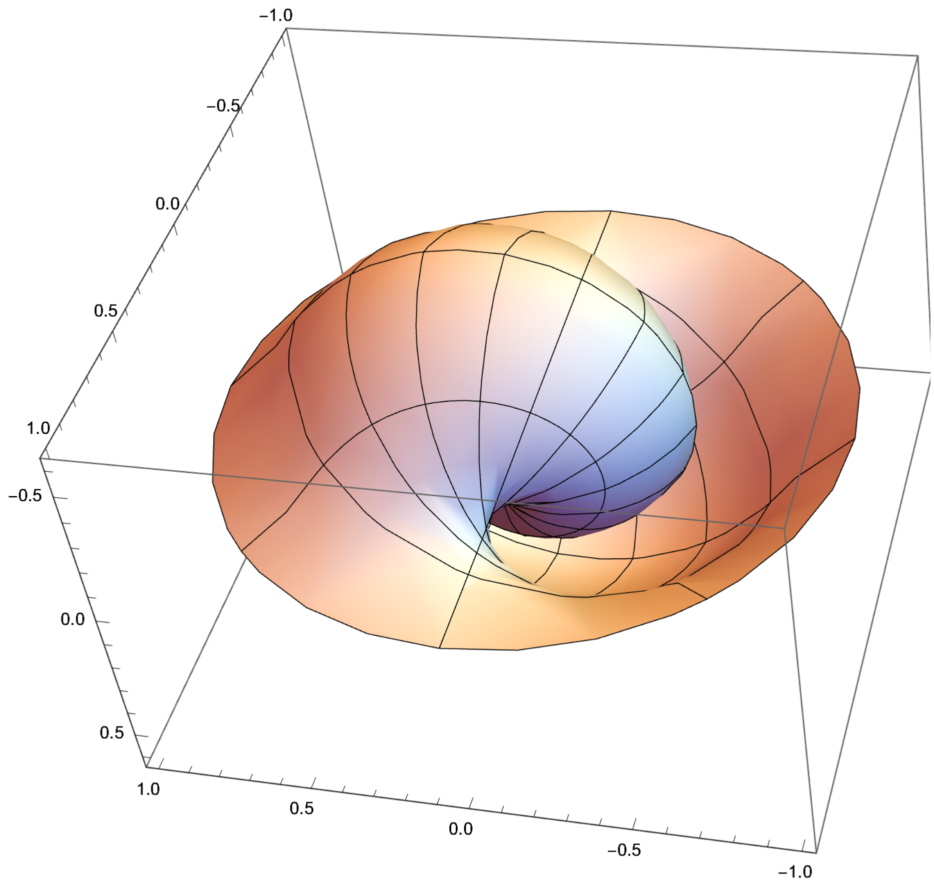


$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{2\pi}\right]},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$

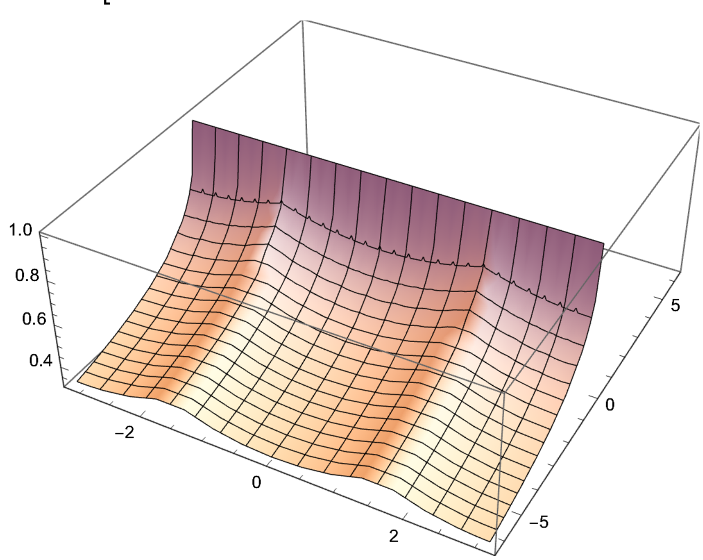


$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]} = e^{i\,\beta}$$

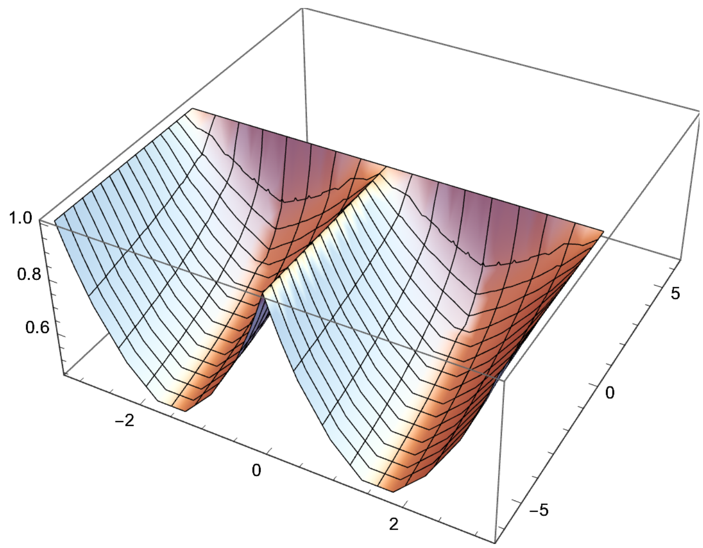
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,\ -(2)\,\pi,\ (2)\,\pi\},\ \{\theta,\ -(2)\,\pi,\ (2)\,\pi\}\right]$$



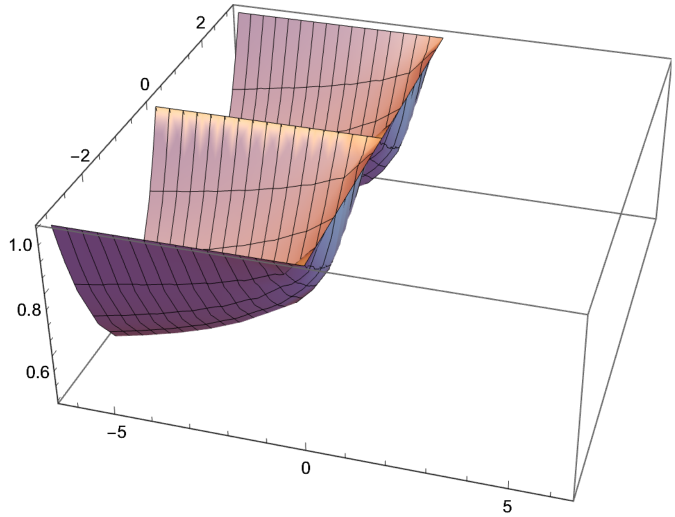
$$\texttt{Plot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



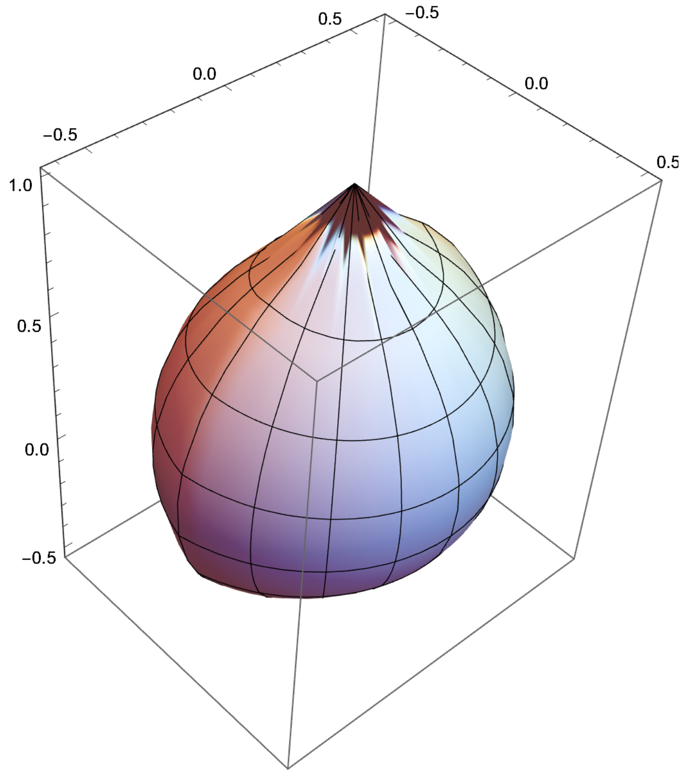
$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



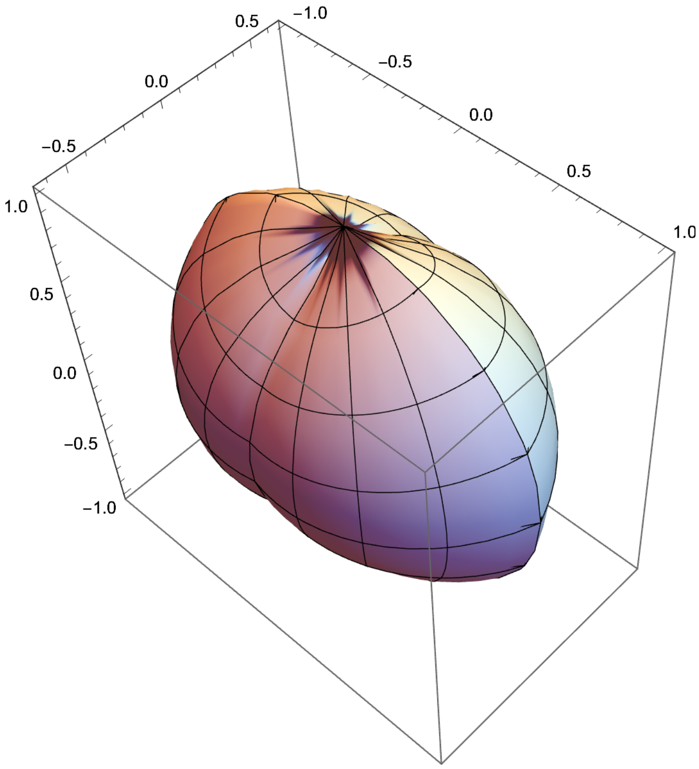
$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$



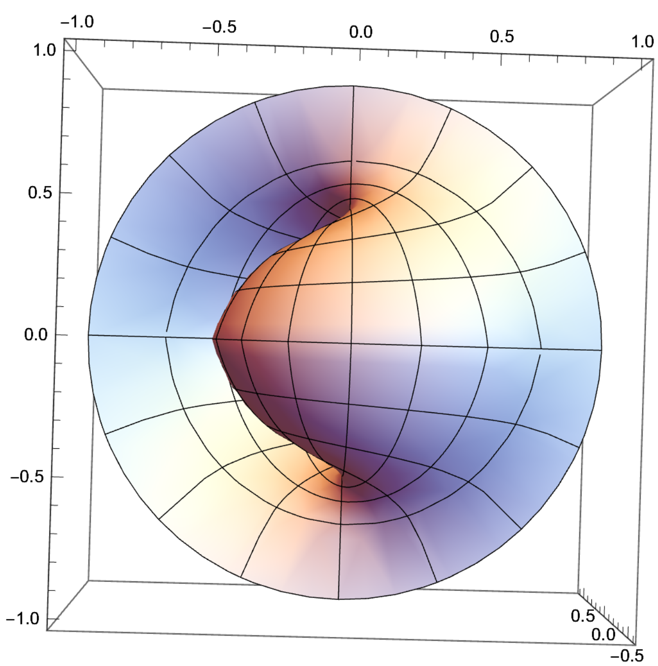
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$



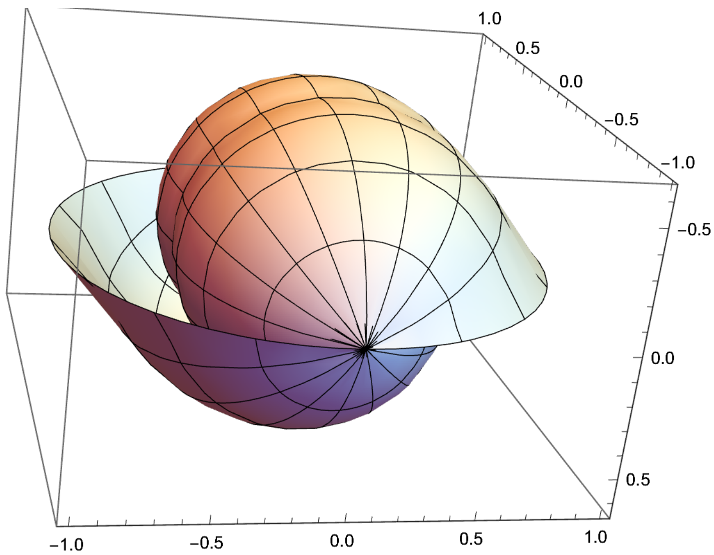
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



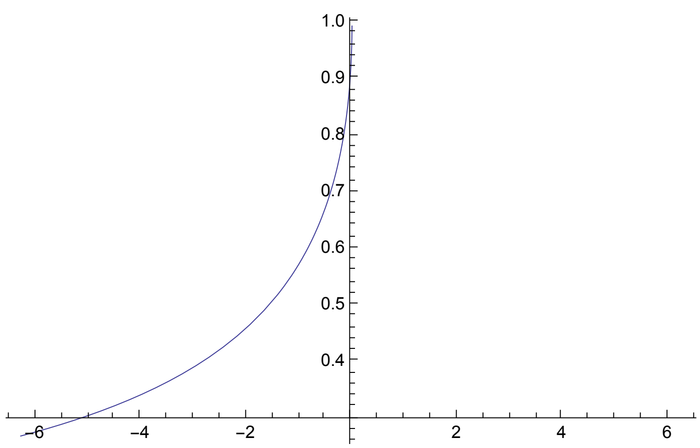
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\pi,\ 2\pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$

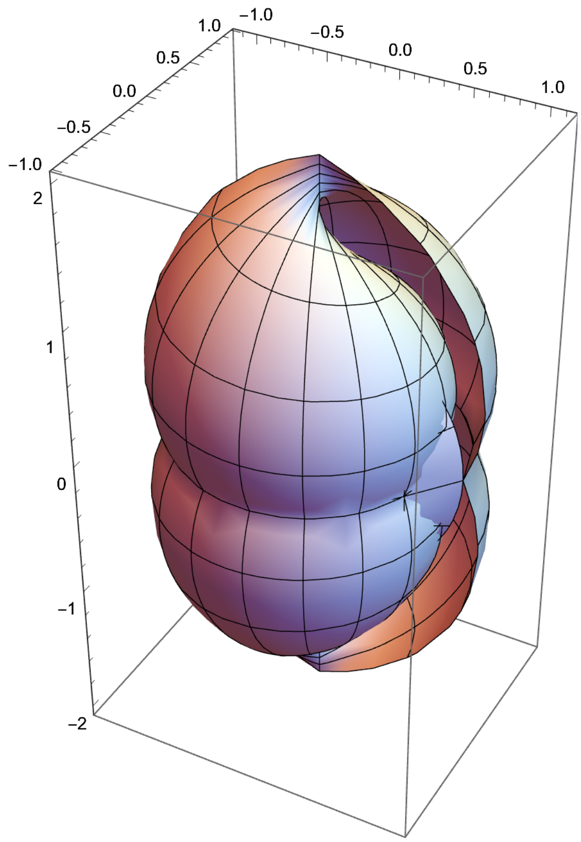


$$\texttt{Plot}\left[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\theta,-2\pi,2\pi\}\right]$$

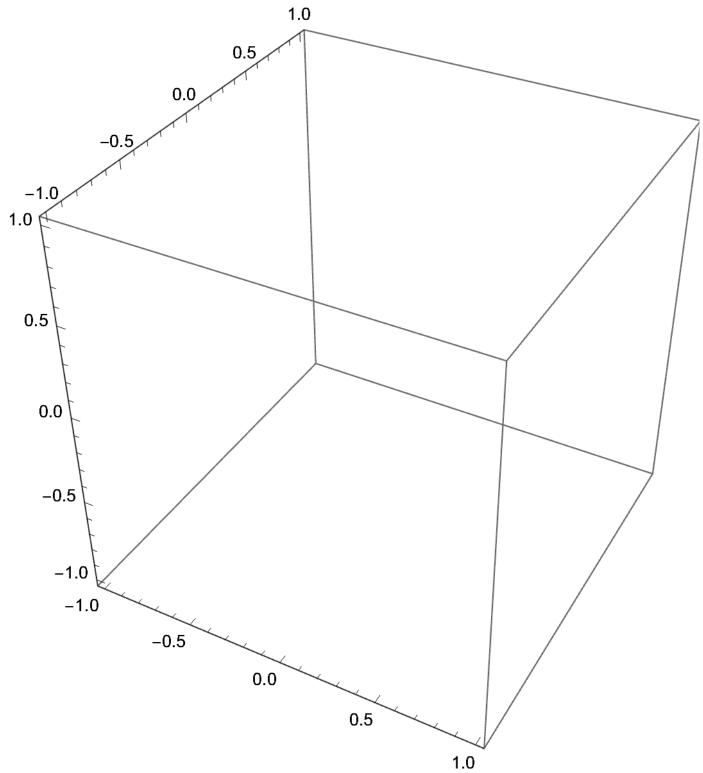


$$\text{SphericalPlot3D}\left[\frac{i\sqrt{\left(4\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi} + \sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}},\right.$$

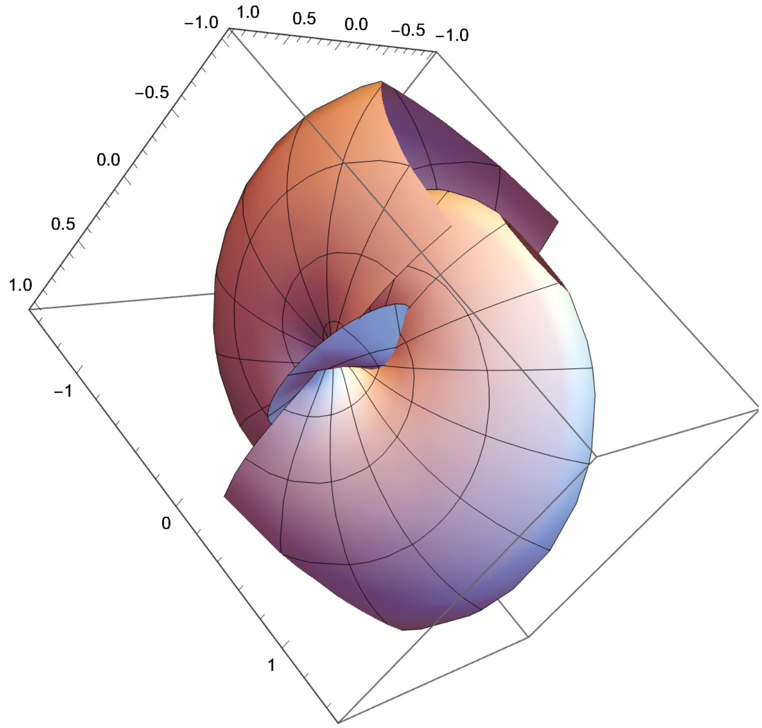
$$\left.\{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



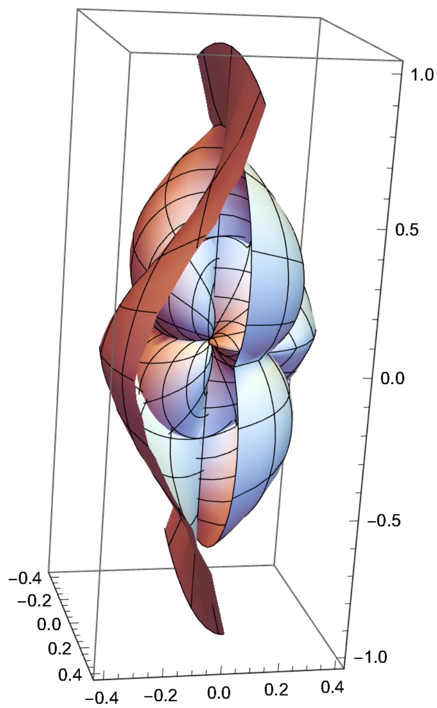
$$\text{SphericalPlot3D}\left[\frac{i\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



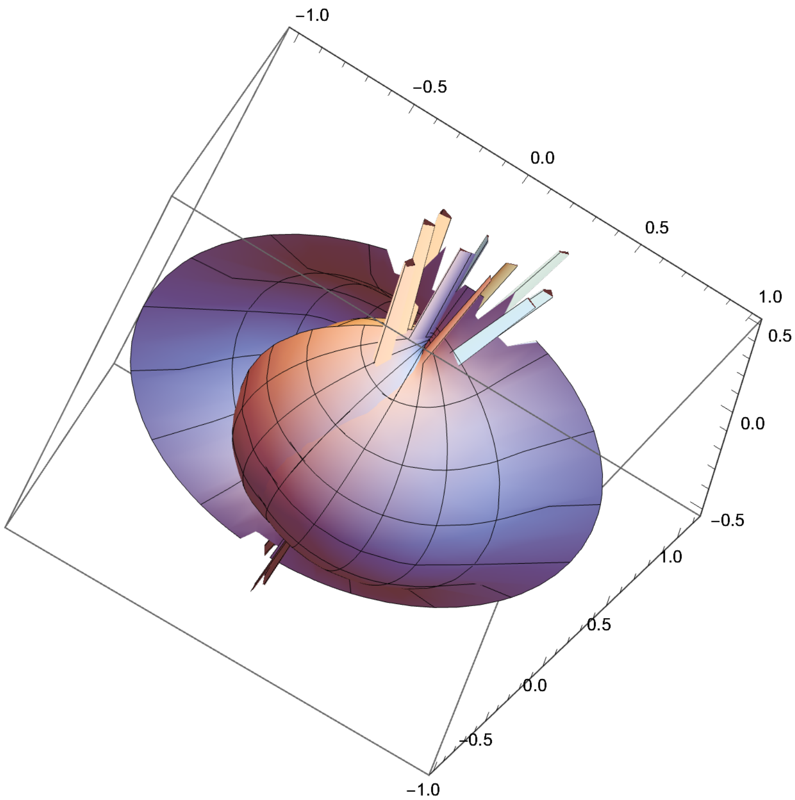
$$\text{SphericalPlot3D}\Big[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\pi^2}},\ \{\beta,-\pi,\pi\},\{\theta,-2\pi,2\pi\}\Big]$$



$$\text{SphericalPlot3D}\left[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{1}{2\pi}\, i \sqrt{\left(\left(4\pi - \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\, \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}\right)\theta\right) + \sqrt{1 - \frac{(4\pi-\theta)\,\theta}{4\pi^2}}}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{1}{2\pi}\, i \sqrt{\left(\left(4\pi - \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\, \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}\right)\theta\right) + \sqrt{1 - \frac{(4\pi-\theta)\,\theta}{4\pi^2}}}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$

$$\beta=\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]$$

$$e\,\hat{}\,\left(i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right)==$$

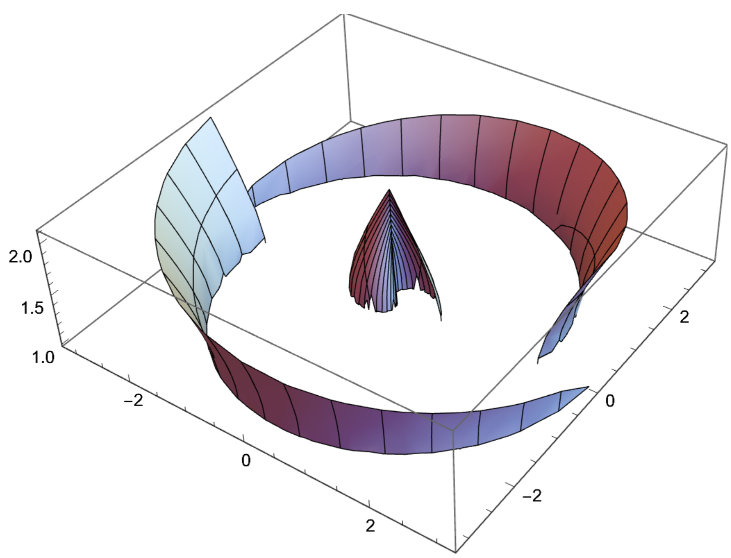
$$\left(\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right]+i\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right]\right)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]}==\frac{i\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}+\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}}$$

$$\text{RevolutionPlot3D}\Bigg[$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}\right)^3}}{2\pi\sqrt{-4\pi+\theta}}\right]},$$

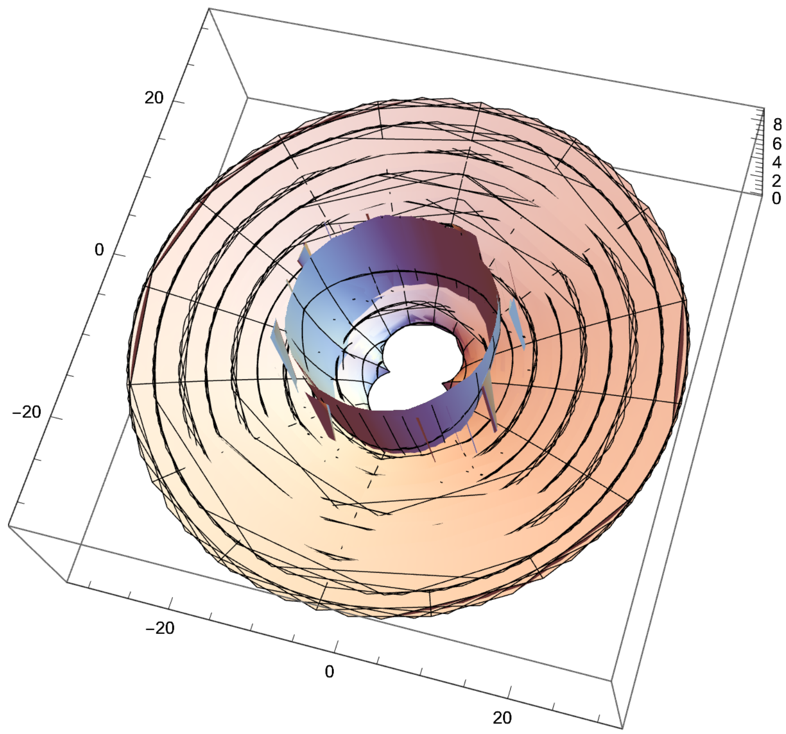
$$\{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Bigg]$$



RevolutionPlot3D[

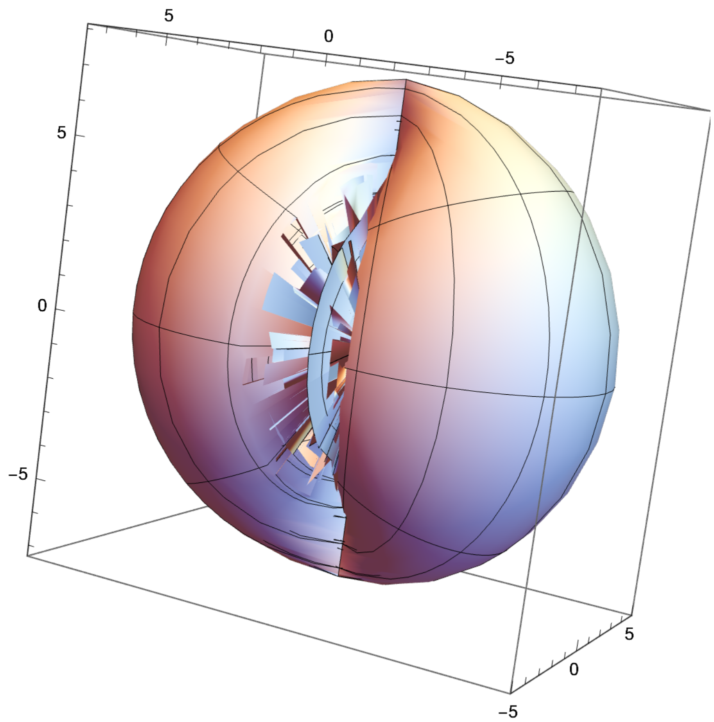
$$e^{\mathrm{i}\,\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)^3}}{2\pi\sqrt{-4\pi+\theta}}\right]},$$

$\{\theta, -10\pi, 10\pi\}, \{\beta, -5\pi, 5\pi\}$]



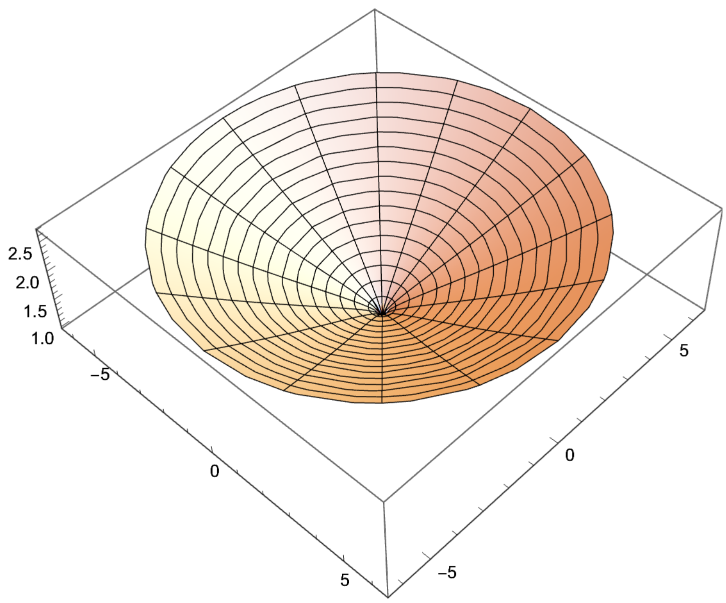
$$\text{SphericalPlot3D}\Big[e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2-\theta^3}}{2\pi\sqrt{-4\pi+\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)}}\right]},$$

$$\{\theta, -2\pi, 2\pi\}, \{\beta, -\pi, \pi\}\Big]$$

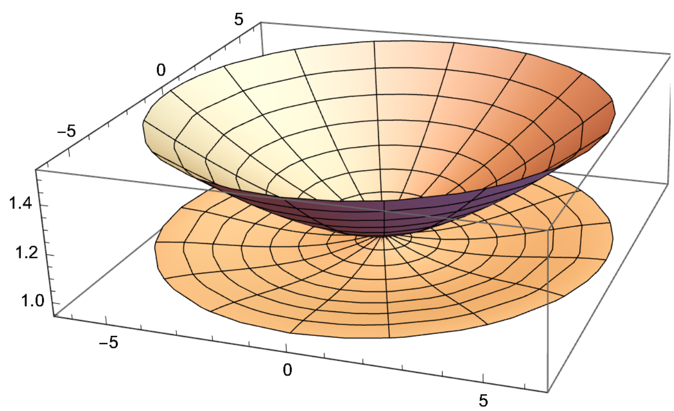


$$\text{RevolutionPlot3D}\left[\frac{i\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}+\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}}, \{\theta, -2\pi, 2\pi\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{i\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}+\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}},\{\theta,-2\pi,2\pi\}\right]$$

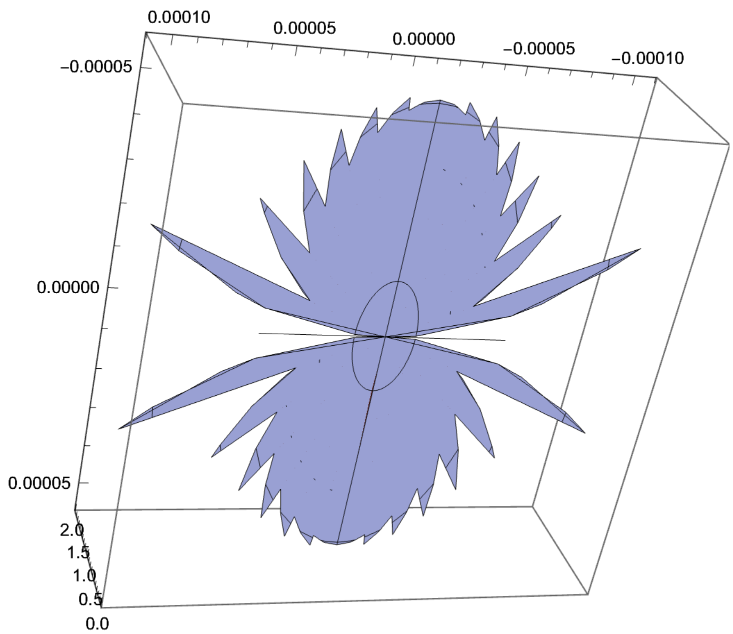


$$e^{\wedge}(i\theta)=\text{Cos}[\theta]+i\,\text{Sin}[\theta]$$

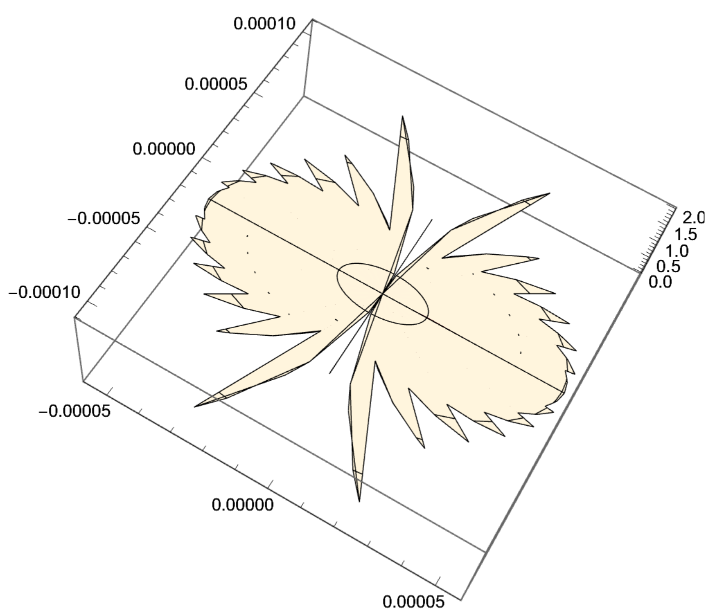
$$\theta\to\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\theta=2\left(\pi\pm\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

```
RevolutionPlot3D[e^(i (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))), {β, -π, π}]
```




```
RevolutionPlot3D[e^(i (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))), {β, -π, π}]
```



A Unifying Theory

Parker Emmerson and Andrew Berisha

c = 3.0 * 10 ^ 8 m / s

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle,
the base of the cone, of radius r_1

$r^2 = r_1^2 + h^2$

This is the initial radius squared expressed as the slant of
the cone in terms of the height of the cone, h, and the radius
of the base of the cone, r_1

$$r = \sqrt{(r_1^2 + h^2)} \quad (4)$$

$t = \theta r$

$t / \theta = r$

The arc length taken out of a circle at a given time is =

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r$ → Equation 7

$r_1^2 == r^2 - h^2$

$r_1 = \sqrt{(r^2 - h^2)}$

$h \le r$

τ = time

1 second = 6 degrees

πr^2 = Area = h^2

To construct a square of the same area as a given circle, we will begin with the postulates above regarding the geometry of a cone.

When, "relationship is added to non relational stimuli" (Perception, MacLeod and Pick for Gibson, 24), illusion is able to be understood through phenomenology. We can use mathematics like a language for disussing its structural elements.

The derivative of zero is equal to the derivative of an equation that is equal to 0.

```
Solve[r₁^2 + h^2 == r^2, h]
```

$$\left\{\left\{h \to -\sqrt{r^2 - r_1^2}\right\}, \left\{h \to \sqrt{r^2 - r_1^2}\right\}\right\} \quad (5)$$

$(t / \theta) = r$

$t = C - C_2 = 2\pi r - 2\pi r_1 = 2\pi\ (t / \theta) - 2\pi \sqrt{((t / \theta)^2 - h^2)}$

$t == 2\pi\ (t / \theta) - 2\pi \sqrt{((t / \theta)^2 - h^2)}$

Add $2\pi\sqrt{((r)^2 - h^2)}$ to both sides

$t + 2\pi\sqrt{((t/\theta)^2 - h^2)} = 2\pi\,(t/\theta)$

Subtract t from both sides and remember that $(t/\theta) = r$

$2\pi\sqrt{((t/\theta)^2 - (h^2))} = 2\pi\,(t/\theta) - t = 2\pi r - t$

Divide by 2π on both sides.

$(t/\theta) - t/(2\pi) = (r) - t/(2\pi) = \sqrt{((t/\theta)^2 - (h^2))} = \sqrt{((r)^2 - (h^2))} = r_1$

Square both sides. Substitute : $(t/\theta) = r$

$((t/\theta) - (t/(2\pi)))^2 = ((r) - (t/(2\pi)))^2 = ((t/\theta)^2 - (h^2)) = (r_1^2)$

$((r) - (t/(2\pi)))^2 = ((r)^2 - (h^2))$

Add h^2 to both sides.

$((r) - (t/(2\pi)))^2 + (h^2) = (r)^2$

Substitute : $\theta r = t$

$((t/\theta) - (t/(2\pi)))^2 = ((r) - (\theta * r/(2\pi)))^2$

$((r) - (\theta * r/(2\pi)))^2$

$$\left(r - \frac{r\theta}{2\pi}\right)^2$$

$$\text{Expand}\left[\left(r - \frac{r\theta}{2\pi}\right)^2\right]$$

$$r^2 - \frac{r^2\theta}{\pi} + \frac{r^2\theta^2}{4\pi^2}$$

$$r^2 - \frac{r^2\theta}{\pi} + \frac{r^2\theta^2}{4\pi^2} + h^2 = ((r) - (t/2\pi))^2 + (h^2) = r^2$$

$$(r^2) - \left(r^2 - \frac{r^2\theta}{\pi} + \frac{r^2\theta^2}{4\pi^2}\right) = h^2$$

$$\text{Simplify}\left[(r^2) - \left(r^2 - \frac{r^2\theta}{\pi} + \frac{r^2\theta^2}{4\pi^2}\right)\right]$$

$$\frac{r^2\,(4\pi - \theta)\,\theta}{4\pi^2} = h^2 \tag{6}$$

$$\frac{2h\pi}{\sqrt{4\pi\theta - \theta^2}} = r \tag{7}$$

$$\frac{2\,(r/6\theta)\,(6\theta))\,\pi}{\sqrt{4\pi\theta - \theta^2}} = r = \frac{2r\pi}{\sqrt{4\pi\theta - \theta^2}} \tag{8}$$

$$1 = \frac{2\pi}{\sqrt{4\pi\theta - \theta^2}}$$

This is the equation for r_1 in terms of the geometric parameters of the cone described above.

$\pi\,(r\text{^}2 - h\text{^}2) == \pi\, r_1\text{^}2$

Then, we substitute for the solved height in terms of purely theta and radius.

Done just with

$$\text{Solve}\left[\pi\left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\right) == \pi\left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2,\ r\right]$$

$$\left\{\{r \to 0\},\ \{r \to 0\},\ \left\{r \to -\frac{2\,\pi\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\},\ \left\{r \to \frac{2\,\pi\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\}\right\} \tag{9}$$

Remember when we said that $\pi\,(r\text{^}2 - h\text{^}2) == \pi\, r_1\text{^}2$.

When is the area of $h\text{^}2$ equal to the area of the circle of r_1?

Well, what if $h\text{^}2 = \pi\, r_1\text{^}2 = \pi\left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)$

$$\pi\, r_1\text{^}2 = \pi\left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2 = \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)$$

$$\text{Solve}\left[\pi\left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2 == \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right),\ r\right]$$

$$\left\{\{r \to 0\},\ \{r \to 0\},\ \left\{r \to -\frac{2\,\sqrt{\pi}\,\sqrt{4\,\pi\,\theta - \theta^2}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\},\ \left\{r \to \frac{2\,\sqrt{\pi}\,\sqrt{4\,\pi\,\theta - \theta^2}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\}\right\} \tag{10}$$

We will now elaborate on the nature of r_1 in terms of constant rate, and then come back to the equations for r that we have found through the realization of its parameters and solve them for theta.

$$r_1\text{^}2 = \left(r\text{^}2 - \left(\frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}\right)\text{^}2\right) = r\text{^}2 - h\text{^}2$$

$$r_1 = \sqrt{(r^\wedge 2 - h^\wedge 2)} = \sqrt{\left(\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^\wedge 2 - \left(\frac{r^2\ (4\pi-\theta)\ \theta}{4\pi^2}\right)\right)} =$$

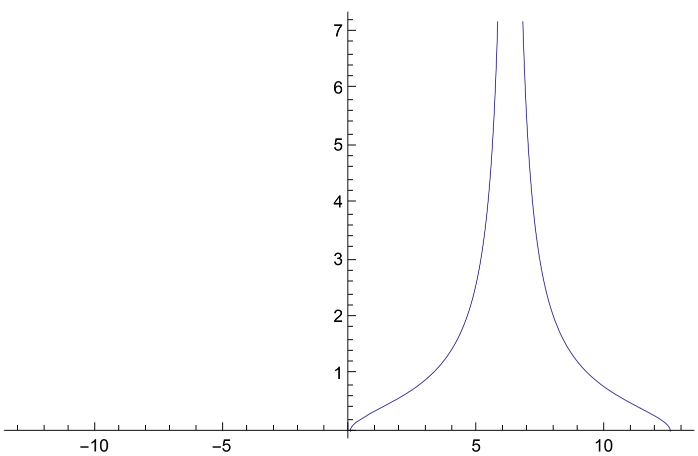
$$\sqrt{\left(\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^\wedge 2 - \left(\frac{\left(-\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^2 (4\pi-\theta)\ \theta}{4\pi^2}\right)\right)} =$$

$$\sqrt{\left(\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^\wedge 2 - \left(\frac{\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^2 (4\pi-\theta)\ \theta}{4\pi^2}\right)\right)}$$

Plot[

$$\sqrt{\left(\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^\wedge 2 - \left(\frac{\left(-\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)^2 (4\pi-\theta)\ \theta}{4\pi^2}\right)\right)},$$

{θ, -13, 13}]



We will briefly show what the graph looks like when the speed of light is the constant rate at which h is traveling, not h = c6θ = (r / 6 θ) (6 θ). In that case, r would equal h, but what about the fact that h changes through r_1 (the base of the cone)? We

will instead propose to say that h travels not at any rate, but at the speed of light. Of course, it's also possible to theorize and propose that the cone travels up into the third dimension, h, at a rate equal to the first derivative of the equation for r in terms of theta with respect to theta. However, we will now briefly discuss what happens to r_1 when the cone travels

$$\frac{r^2 (4\pi - \theta)\,\theta}{4\pi^2} = h\text{^}2;\quad \frac{2 h \pi}{\sqrt{4\pi\theta - \theta^2}} = r$$

$$\text{Simplify}\left[\sqrt{\frac{r^2 (4\pi - \theta)\,\theta}{4\pi^2}}\right]$$

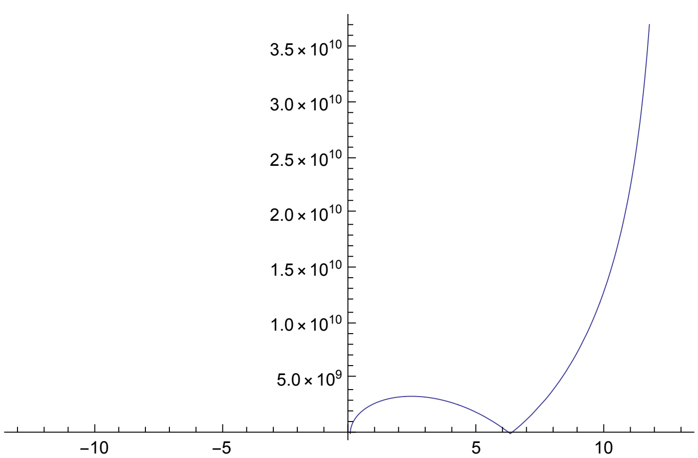
$$\frac{\sqrt{r^2 (4\pi - \theta)\,\theta}}{2\pi}$$

For light, the equation would read:

$$r_1 = \sqrt{\left(\left(\frac{2\,(2.99792 * 10\text{^}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\pi\theta - \theta^2}}\right)\text{^}2 - \left(\frac{\sqrt{\left(\frac{2\,(2.99792*10\text{^}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2 (4\pi - \theta)\,\theta}}{2\pi}\right)\text{^}2\right)}$$

$$\sqrt{\frac{1.27733\times 10^{20}\,\theta^2}{4\pi\theta - \theta^2} - \frac{3.23551\times 10^{18}\,(4\pi - \theta)\,\theta^3}{4\pi\theta - \theta^2}}$$

$$\text{Plot}\left[\sqrt{\frac{1.2773276589129854\text{`}*\text{^}20\,\theta^2}{4\pi\theta - \theta^2} - \frac{3.235508757504\text{`}*\text{^}18\,(4\pi - \theta)\,\theta^3}{4\pi\theta - \theta^2}},\ \{\theta, -13, 13\}\right]$$



This is something much different from the quality of matter whose energetic relation to velocity is defined within its own consistency.

Now we will return to the more general form of the equation. The case when h = (r/6 θ) (6 θ)

Now, by doing the first and second derivatives of the functions for radius in terms of the square of h being equal to the are of the cirle of r_1 with respect to time will give us velocity.

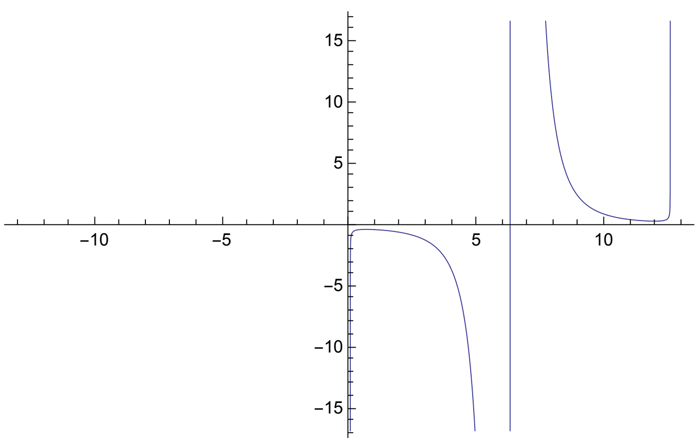
$$\left\{r \to -\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right\},\ \left\{r \to \frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right\}$$

$$D\left[-\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right] = D[r,\theta]$$

$$D\left[-\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right]$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}\,(4\pi-2\theta)}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}} \tag{11}$$

$$\mathrm{Plot}\left[\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}\,(4\pi-2\theta)}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \{\theta,-13,13\}\right]$$

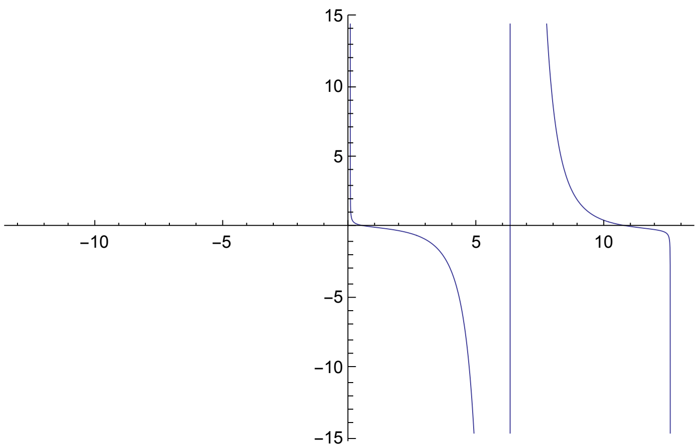


$$D\left[\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right] = D[r,\theta]$$

$$D\left[\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right]$$

$$-\frac{\sqrt{\pi}\ \sqrt{4\,\pi\,\theta-\theta^2}\ \left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\ (4\,\pi-2\,\theta)}{\sqrt{4\,\pi\,\theta-\theta^2}\ \sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}} \tag{11}$$

$$\text{Plot}\left[\frac{\sqrt{\pi}\ \sqrt{4\,\pi\,\theta-\theta^2}\ \left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\ (4\,\pi-2\,\theta)}{\sqrt{4\,\pi\,\theta-\theta^2}\ \sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{D}\left[\frac{\sqrt{\pi}\ \sqrt{4\,\pi\,\theta-\theta^2}\ \left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}-\frac{\sqrt{\pi}\ (4\,\pi-2\,\theta)}{\sqrt{4\,\pi\,\theta-\theta^2}\ \sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\ \theta\right]$$

$$-\frac{3\ \sqrt{\pi}\ \sqrt{4\,\pi\,\theta-\theta^2}\ \left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2}{2\ \left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{5/2}}+\frac{\sqrt{\pi}\ \sqrt{4\,\pi\,\theta-\theta^2}\ \left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\ (4\,\pi-2\,\theta)\ \left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)}{\sqrt{4\,\pi\,\theta-\theta^2}\ \left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\ (4\,\pi-2\,\theta)^2}{2\ \left(4\,\pi\,\theta-\theta^2\right)^{3/2}\ \sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}+ \tag{12}$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}$$

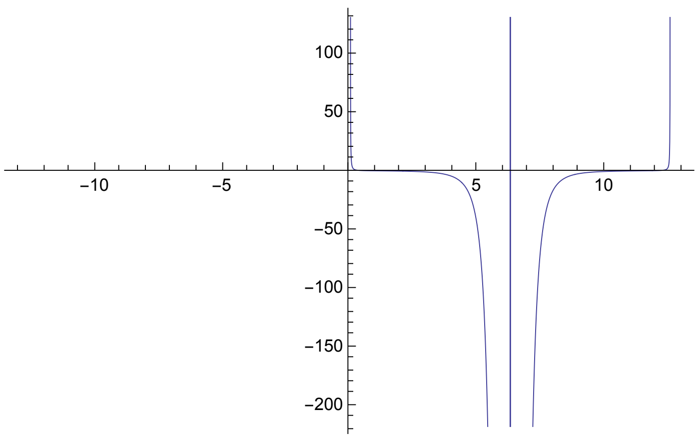
$$\text{Plot}\Big[-\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \{\theta,-13,13\}\Big]$$



$$\text{D}\Big[-\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \theta\Big]$$

$$\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\ (4\pi - 2\theta)\ \left(-32\pi^3 + 48\pi^2\theta - 24\pi\theta^2 + 4\theta^3\right)}{\sqrt{4\pi\theta - \theta^2}\ \left(16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)^{3/2}} -$$

$$\frac{\sqrt{\pi}\ (4\pi - 2\theta)^2}{2\left(4\pi\theta - \theta^2\right)^{3/2}\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}} -$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta - \theta^2}\ \sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}}$$

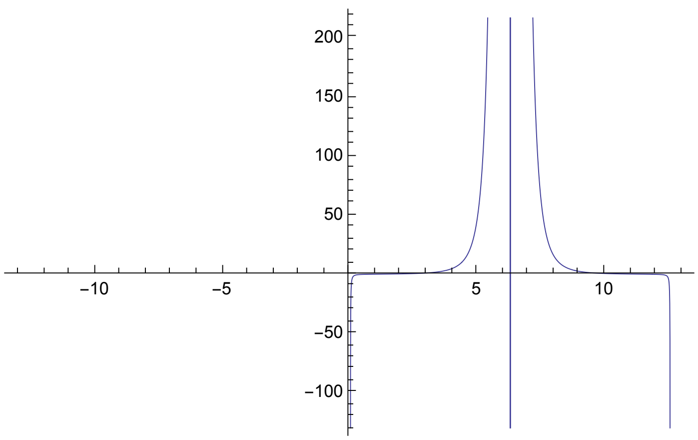
$$\text{Plot}\Big[\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta - \theta^2}\ \left(-32\pi^3 + 48\pi^2\theta - 24\pi\theta^2 + 4\theta^3\right)^2}{2\left(16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)^{5/2}} -$$

$$\frac{\sqrt{\pi}\ \sqrt{4\pi\theta - \theta^2}\ \left(48\pi^2 - 48\pi\theta + 12\theta^2\right)}{\left(16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)^{3/2}} -$$

$$\frac{\sqrt{\pi}\ (4\pi - 2\theta)\ \left(-32\pi^3 + 48\pi^2\theta - 24\pi\theta^2 + 4\theta^3\right)}{\sqrt{4\pi\theta - \theta^2}\ \left(16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)^{3/2}} -$$

$$\frac{\sqrt{\pi}\ (4\pi - 2\theta)^2}{2\left(4\pi\theta - \theta^2\right)^{3/2}\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}} -$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta - \theta^2}\ \sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}},\ \{\theta, -13, 13\}\Big]$$



In the following graph, we will zoom in to show that there is possibly a solution for theta , which is the Golden Ratio.

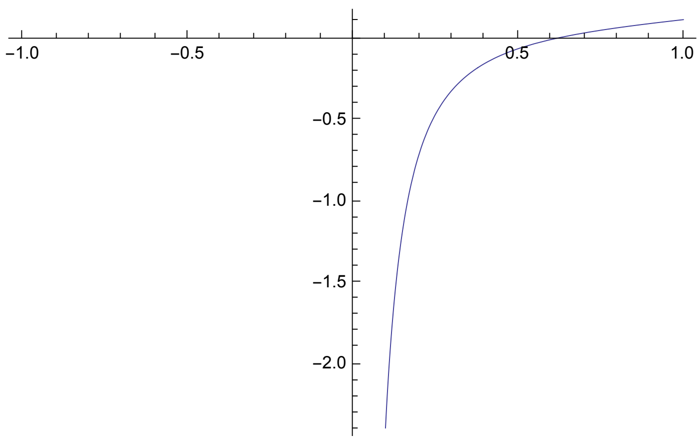
$$\text{Plot}\Big[\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \{\theta,-1,1\}\Big]$$



There is a gap at the Golden ratio, and we can show this by saying :

That, for instance, when considering the above equation and graph, we note that :

$$\text{when a = 0 = } \frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}} - \frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}} - \frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}$$

$$\text{Solve}\left[0 == \frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}} - \frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} - \frac{\sqrt{\pi}(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}} - \frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}, \theta\right]$$

$$\left\{\left\{\theta\to 2\pi-\sqrt{9-\sqrt{33}}\,\pi\right\}, \left\{\theta\to 2\pi+\sqrt{9-\sqrt{33}}\,\pi\right\}, \left\{\theta\to 2\pi-\sqrt{9+\sqrt{33}}\,\pi\right\}, \left\{\theta\to 2\pi+\sqrt{9+\sqrt{33}}\,\pi\right\}\right\}$$

The following solutions for theta come from :

$$\text{Solve}\left[\pi\left(r\wedge 2-\left(\frac{r^2(4\pi-\theta)\theta}{4\pi^2}\right)\right)\wedge 2 == \left(\frac{r^2(4\pi-\theta)\theta}{4\pi^2}\right), \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi r^2-\sqrt{2\pi}\sqrt{-r^2-r^2\sqrt{1+4\pi r^2}}}{r^2}\right\}, \left\{\theta\to\frac{2\pi r^2+\sqrt{2\pi}\sqrt{-r^2-r^2\sqrt{1+4\pi r^2}}}{r^2}\right\},\right.$$

(44)

$$\left\{\theta \to \frac{2\pi r^2 - \sqrt{2\pi}\ \sqrt{-r^2 + r^2\ \sqrt{1 + 4\pi r^2}}}{r^2}\right\},$$

$$\left\{\theta \to \frac{2\pi r^2 + \sqrt{2\pi}\ \sqrt{-r^2 + r^2\ \sqrt{1 + 4\pi r^2}}}{r^2}\right\}\}$$

This frequency comes from :

$$r = \frac{2\ (3.0 * 10\wedge 8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} = \lambda = \frac{2\ \sqrt{\pi}\ \sqrt{4\pi\theta - \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}} \tag{15}$$

$$\mathbf{r = \frac{2\,h\,\pi}{\sqrt{4\pi\theta - \theta^2}} = \frac{2\ (c)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} == \frac{2\ (r\ /\ t)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} == \frac{2\ (r\ /\ (6\,\theta))\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} = \frac{2\ \sqrt{\pi}\ \sqrt{4\pi\theta - \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}}}$$

Where c is the speed of light.

$$\mathbf{Solve\left[\frac{2\ \sqrt{\pi}\ \sqrt{4\pi\theta - \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}} == \frac{2\ (r\ /\ (6\,\theta))\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}},\ \theta\right]}$$

$$\left\{\left\{\theta \to \frac{2\left(-\pi + \pi^{3/2}\ r - \sqrt{\pi^2 - \pi^{5/2}\ r}\right)}{-1 + \sqrt{\pi}\ r}\right\}, \left\{\theta \to \frac{2\left(-\pi + \pi^{3/2}\ r + \sqrt{\pi^2 - \pi^{5/2}\ r}\right)}{-1 + \sqrt{\pi}\ r}\right\},\right.$$

$$\left.\left\{\theta \to \frac{2\left(\pi + \pi^{3/2}\ r - \sqrt{\pi^2 + \pi^{5/2}\ r}\right)}{1 + \sqrt{\pi}\ r}\right\}, \left\{\theta \to \frac{2\left(\pi + \pi^{3/2}\ r + \sqrt{\pi^2 + \pi^{5/2}\ r}\right)}{1 + \sqrt{\pi}\ r}\right\}\right\}$$

$$\mathbf{Solve\left[\frac{2\ (r\ /\ (6\,\theta))\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} == r,\ \theta\right]}$$

$$\{\{\theta \to 2\pi\}\}$$

The age of a negative mitichlorian.

(See the Geometric Patterns of Perception Series for more in depth solutions (explainations, system of variables and postulates))

E = hnf=hν, where h is Planck' s constant, not the height of the cone.

$$\mathbf{r\ /\ t = r\ /\ (6\,\theta) = c = \lambda f = r\ (1\ /\ 6\,\theta)}$$

r/t is the rate of travel for the wave and is related to the speed of light. The speed of light is variable.

$$\mathbf{Solve\left[(r\ /\ t) == \frac{(r\ /\ t)\ 6\ (\theta)\ \pi}{\sqrt{4\pi\theta - \theta^2}} * \nu,\ \nu\right]}$$

$$\left\{\left\{\nu \to \frac{\sqrt{(4\pi - \theta)\ \theta}}{6\pi\theta}\right\}\right\} \tag{16}$$

$$\text{Solve}\left[n\ (1/6\,\theta) == \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta}, n\right]$$

$$\left\{\left\{n \to \frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\right\}\right\} \quad (17)$$

Where h is Planck ' s Constant, n the number of moles, and f the frequency, we may say that the force of dark matter (F_{dm}) is capable of being solved for in terms of time or purely space.

$$D[hnf, \theta] = (F_{dm})$$

$$D\left[(6.62606896 * 10\text{^}-34)\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta}, \theta\right] = (F_{dm}) = m\,a$$

$$D\left[(6.62606896 * 10\text{^}-34)\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta}, \theta\right]$$

$$-\frac{2.2378704997431808\text{`}*\text{^}-35\ (4\pi-\theta)}{\theta^3} - \frac{1.1189352498715904\text{`}*\text{^}-35}{\theta^2} =$$

$$(F_{dm}) = ma = m\left(\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}} - \right.$$

$$\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} -$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}} -$$

$$\frac{\sqrt{\pi}\ (4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}} -$$

$$\left.\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)$$

$$\text{Solve}\Big[-\frac{2.2378704997431808\grave{}*\hat{}{-35}\,(4\pi-\theta)}{\theta^3}-\frac{1.1189352498715904\grave{}*\hat{}{-35}}{\theta^2}==$$

$$m\left(\frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-\right.$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\left.\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right),m\Big]$$

$$\Big\{\Big\{m\to-\left(1.\left(\frac{2.23787\times10^{-35}\,(12.5664-1.\,\theta)}{\theta^3}+\frac{1.11894\times10^{-35}}{\theta^2}\right)\right)\Big/$$

$$\Big(\left(2.65868\sqrt{12.5664\,\theta-1.\,\theta^2}\left(-992.201+473.741\,\theta-75.3982\,\theta^2+4.\,\theta^3\right)^2\right)\Big/$$

$$\left(1558.55-992.201\,\theta+236.871\,\theta^2-25.1327\,\theta^3+\theta^4\right)^{5/2}-$$

$$\frac{1.77245\sqrt{12.5664\,\theta-1.\,\theta^2}\left(473.741-150.796\,\theta+12.\,\theta^2\right)}{\left(1558.55-992.201\,\theta+236.871\,\theta^2-25.1327\,\theta^3+\theta^4\right)^{3/2}}-$$

$$\left(1.77245\,(12.5664-2.\,\theta)\left(-992.201+473.741\,\theta-75.3982\,\theta^2+4.\,\theta^3\right)\right)\Big/$$

$$\left(\sqrt{12.5664\,\theta-1.\,\theta^2}\left(1558.55-992.201\,\theta+236.871\,\theta^2-25.1327\,\theta^3+\theta^4\right)^{3/2}\right)-$$

$$\left(0.886227\,(12.5664-2.\,\theta)^2\right)\Big/$$

$$\left(\left(12.5664\,\theta-1.\,\theta^2\right)^{3/2}\sqrt{1558.55-992.201\,\theta+236.871\,\theta^2-25.1327\,\theta^3+\theta^4}\right)-$$

$$3.54491\Big/\left(\sqrt{12.5664\,\theta-1.\,\theta^2}\sqrt{1558.55-992.201\,\theta+236.871\,\theta^2-25.1327\,\theta^3+\theta^4}\right)\Big)\Big\}\Big\}$$

Remember that this solution is only for one of the possibilities for theta and r put together. There are other valid solutions that may work parametrically. Approximating these by their derivative functions relates to the uncertainty of their position to a more simplified structure for solutions. Now we'll find Planck's constant in terms of the S.I. units.

h = ((m r^2) / (6 θ)^2) (6 θ) = (m r^2) / (6 θ)

E = hnf = hν

$$E = hnf = (m r^2) / (6 \theta) \nu = (m r^2) / (6 \theta) \frac{\sqrt{(4\pi - \theta)\theta}}{\pi \theta^2} \frac{\sqrt{(4\pi - \theta)\theta}}{6 \pi \theta} = hnf$$

$$(m r^2) / (6 \theta) \frac{\sqrt{(4\pi - \theta)\theta}}{\pi \theta^2} \frac{\sqrt{(4\pi - \theta)\theta}}{6 \pi \theta} = hnf$$

This is the acceleration due to gravity of dark matter.

$$g = -(mG / d^2) \hat{r}$$

For $\hat{r}$, we will say that it is any distance with a max of r. Before, we defined h to be the height of a cone and then changed our definition of the variable h to be Planck ' s constant. We are now redefining again for h to say that it is the height of the cone once again.

$$\text{Solve}\left[\frac{r^2 (4\pi - \theta)\theta}{4\pi^2} == h^2,\ h\right]$$

$$\left\{\left\{\eta = h \to -\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}, \left\{\eta = h \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}\right\}$$

Final redefinition :

h := Planck' s Constant

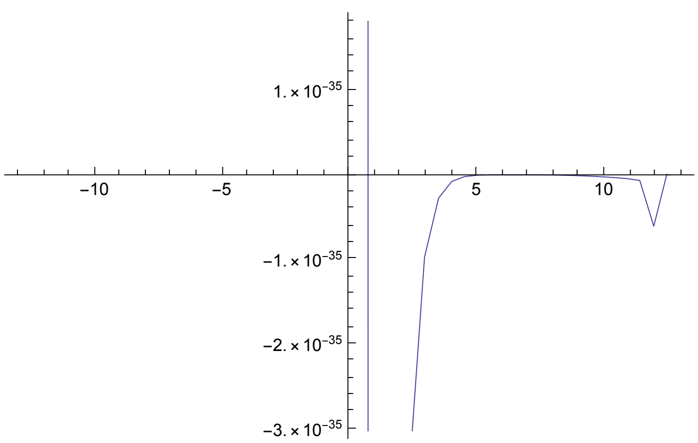
$$d = r$$

$$g = -(mG / r^2) \hat{r} = -(mG / \eta^2) = \tag{18}$$

The big G is the universal gravitational constant, which we will now take out the numerical constant part of it, and replace its units with variables.

The object is taken up by the sphere with radius r_1. η is the distance away from the center of the other gravitational object. This shows that the radius, r_1 refers to an expanding object when gravity accelerates objects through spacetime. This is why the universe is expanding.

```
Plot[{{-(1.` ((2.2378704997431808`*^-35 (12.566370614359172` - 1.` θ))/θ^3 +
        1.1189352498715904`*^-35/θ^2)) /
    ((2.658680776358274` Sqrt[12.566370614359172` θ - 1.` θ^2] (-992.2008537695941` +
            473.7410112522892` θ - 75.39822368615503` θ^2 + 4.` θ^3)^2) /
       (1558.5454565440389` - 992.2008537695941` θ + 236.8705056261446` θ^2 -
          25.132741228718345` θ^3 + θ^4)^(5/2) -
      (1.7724538509055159` Sqrt[12.566370614359172` θ - 1.` θ^2]
          (473.7410112522892` - 150.79644737231007` θ + 12.` θ^2)) /
       (1558.5454565440389` - 992.2008537695941` θ + 236.8705056261446` θ^2 -
          25.132741228718345` θ^3 + θ^4)^(3/2) -
      (1.7724538509055159` (12.566370614359172` - 2.` θ) (-992.2008537695941` +
           473.7410112522892` θ - 75.39822368615503` θ^2 + 4.` θ^3)) /
       (Sqrt[12.566370614359172` θ - 1.` θ^2] (1558.5454565440389` - 992.2008537695941` θ +
            236.8705056261446` θ^2 - 25.132741228718345` θ^3 + θ^4)^(3/2)) -
      (0.8862269254527579` (12.566370614359172` - 2.` θ)^2) /
       ((12.566370614359172` θ - 1.` θ^2)^(3/2) Sqrt[(1558.5454565440389` - 992.2008537695941`
             θ + 236.8705056261446` θ^2 - 25.132741228718345` θ^3 + θ^4)]) -
      3.5449077018110318` / (Sqrt[12.566370614359172` θ - 1.` θ^2]
         Sqrt[(1558.5454565440389` - 992.2008537695941` θ + 236.8705056261446` θ^2 -
              25.132741228718345` θ^3 + θ^4)]))}}, {θ, -13, 13}]
```



E = h ν, where E is energy, h is Planck ' s Constant, and ν is frequency. (19)

E = ℏ ω, where E is energy, h - bar is h / 2 π, and omega is angular frequency. (20)

v = λ ν, where v is velocity, λ is wavelength, and f is frequency. (21)

E = m c^2, where E is energy, m is mass, and c is the speed of light. (22)

The First r and θ solutions will be discussed now.

$$v = \lambda \nu$$

$$\left(\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\left(1\Big/\frac{2\left(-\pi+\pi^{3/2}\,r-\sqrt{\pi^2-\pi^{5/2}\,r}\right)}{-1+\sqrt{\pi}\,r}\right)$$

$$v = \left(\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\left(1\Big/\frac{1}{-1+\sqrt{\pi}\left(\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)}\right.$$
$$2\left(-\pi+\pi^{3/2}\left(\left(\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\right)-\right.$$
$$\left.\left.\sqrt{\pi^2-\pi^{5/2}\left(\frac{2\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)}\right)\right)$$

$$\text{Simplify}\Bigg[\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\left(1\Big/\frac{1}{-1+\sqrt{\pi}\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)}\times 2\right.$$

$$\left(-\pi+\pi^{3/2}\left(\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\right)-\right.$$

$$\left.\left.\sqrt{\pi^2-\pi^{5/2}\left(\frac{2\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)}\right)\right)\Bigg]$$

$$\frac{1}{\left((-2\pi+\theta)^4\right)^{3/2}}$$

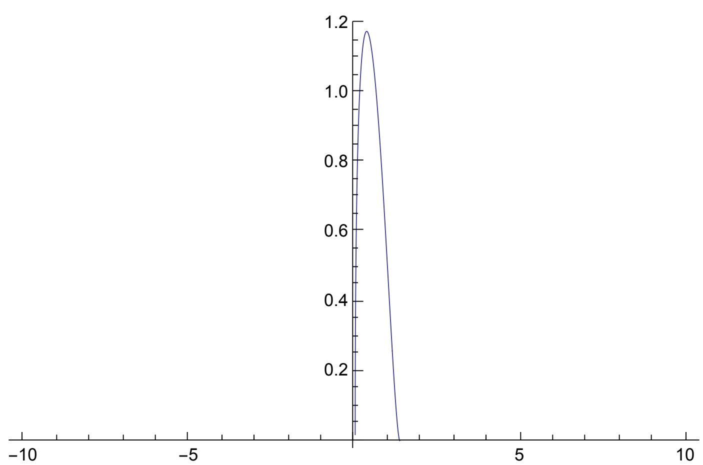
$$4\pi^{3/2}\sqrt{(4\pi-\theta)\,\theta}\left(-2\pi\sqrt{(4\pi-\theta)\,\theta}+\sqrt{(-2\pi+\theta)^4}\right)\left(-2\pi\sqrt{(4\pi-\theta)\,\theta}+\sqrt{(-2\pi+\theta)^4}+\right.$$

$$\left.\sqrt{(-2\pi+\theta)^4}\ \sqrt{\frac{(-2\pi+\theta)^4-2\pi\sqrt{(4\pi-\theta)\,\theta}\ \sqrt{(-2\pi+\theta)^4}}{(-2\pi+\theta)^4}}\right)$$

$$\text{Plot}\Bigg[\frac{1}{\left((-2\pi+\theta)^4\right)^{3/2}}\,4\pi^{3/2}\sqrt{(4\pi-\theta)\,\theta}$$

$$\left(-2\pi\sqrt{(4\pi-\theta)\,\theta}+\sqrt{(-2\pi+\theta)^4}\right)\left(-2\pi\sqrt{(4\pi-\theta)\,\theta}+\sqrt{(-2\pi+\theta)^4}+\right.$$

$$\left.\sqrt{(-2\pi+\theta)^4}\ \sqrt{\frac{(-2\pi+\theta)^4-2\pi\sqrt{(4\pi-\theta)\,\theta}\ \sqrt{(-2\pi+\theta)^4}}{(-2\pi+\theta)^4}}\right),\ \{\theta,\ -10,\ 10\}\Bigg]$$



$$\frac{1}{\left((-2\pi+\theta)^4\right)^{3/2}} 4\pi^{3/2}\sqrt{(4\pi-\theta)\theta}$$

$$\left(-2\pi\sqrt{(4\pi-\theta)\theta}+\sqrt{(-2\pi+\theta)^4}\right)\left(-2\pi\sqrt{(4\pi-\theta)\theta}+\sqrt{(-2\pi+\theta)^4}+\right.$$

$$\left.\sqrt{(-2\pi+\theta)^4}\sqrt{\frac{(-2\pi+\theta)^4-2\pi\sqrt{(4\pi-\theta)\theta}\sqrt{(-2\pi+\theta)^4}}{(-2\pi+\theta)^4}}\right)=r/6\theta$$

E = h ν

v = λ ν = r / 6 θ

$$\theta\to\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}$$

$$\lambda\nu=r/6\theta=r\left(1/6\left(\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}\right)\right)$$

$$r/6\left(1/6\left(\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}\right)\right)=r\left(1/6\left(\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}\right)\right)$$

$$\text{Solve}\left[r/6\left(1/6\left(\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}\right)\right)==r\left(1/6\left(\frac{2\left(\pi+\pi^{3/2}r-\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}\right)\right),r\right]$$

{{r → 0}}

E = h ν

v = λ ν = r / 6 θ

$$\theta=\frac{2\left(\pi+\pi^{3/2}r+\sqrt{\pi^2+\pi^{5/2}r}\right)}{1+\sqrt{\pi}r}$$

From a Basic Equation for Acceleration

From a basic equation for acceleration.

$$\text{Solve}\left[\frac{2\sqrt{\pi}}{\sqrt{4\pi(\theta)-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}==a,a\right]$$

$$\left\{\left\{a\to\frac{2\sqrt{\pi}}{\sqrt{(2\pi-\theta)^4}\sqrt{(4\pi-\theta)\theta}}\right\}\right\}$$

$$\text{Solve}\left[a == \frac{2\sqrt{\pi}}{\sqrt{(2\pi-\theta)^4}\ \sqrt{(4\pi-\theta)\,\theta}},\ \theta\right]$$

$$\begin{aligned}
\Big\{\Big\{\theta \to -\Big(&-12\, a^2\, \pi \left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} - \\
&\sqrt{\Big(384 \times 2^{1/3}\, a^8\, \pi^{16/3} - 324\, a^6\, (2\pi)^{1/3} + 36\sqrt{3}\, a^2\, (2\pi)^{1/3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)} +} \\
&\quad 96 \times 2^{2/3}\, a^6\, \pi^{11/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\quad 48\, a^4\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3}\Big)\Big) \Big/ \\
&\left(6\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\right)\Big\},
\end{aligned}$$

$$\begin{aligned}
\Big\{\theta \to -\Big(&-12\, a^2\, \pi \left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\sqrt{\Big(384 \times 2^{1/3}\, a^8\, \pi^{16/3} - 324\, a^6\, (2\pi)^{1/3} + 36\sqrt{3}\, a^2\, (2\pi)^{1/3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)} +} \\
&\quad 96 \times 2^{2/3}\, a^6\, \pi^{11/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\quad 48\, a^4\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3}\Big)\Big) \Big/ \\
&\left(6\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\right)\Big\},
\end{aligned}$$

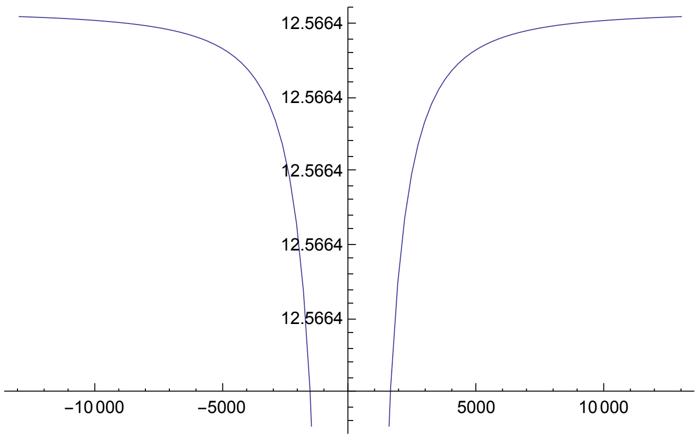
$$\begin{aligned}
\Big\{\theta \to \Big(&24\, a^2\, \pi \left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} - \\
&\sqrt{\Big(576\, a^4\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3} -} \\
&\quad 24\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\Big(8 \times 2^{2/3}\, a^4\, \pi^{11/3} + \\
&\qquad 8\, i\, 2^{2/3}\sqrt{3}\, a^4\, \pi^{11/3} + 16\, a^2\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\qquad (2\pi)^{1/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3} - \\
&\qquad i\sqrt{3}\,(2\pi)^{1/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3}\Big)\Big)\Big) \Big/ \\
&\left(12\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\right)\Big\},
\end{aligned}$$

$$\begin{aligned}
\Big\{\theta \to \Big(&24\, a^2\, \pi \left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\sqrt{\Big(576\, a^4\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3} -} \\
&\quad 24\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\Big(8 \times 2^{2/3}\, a^4\, \pi^{11/3} + \\
&\qquad 8\, i\, 2^{2/3}\sqrt{3}\, a^4\, \pi^{11/3} + 16\, a^2\, \pi^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3} + \\
&\qquad (2\pi)^{1/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3} - \\
&\qquad i\sqrt{3}\,(2\pi)^{1/3}\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{2/3}\Big)\Big)\Big) \Big/ \\
&\left(12\, a^2\left(-27\, a^4 + 32\, a^6\, \pi^5 + 3\sqrt{3}\sqrt{-a^8\left(-27 + 64\, a^2\, \pi^5\right)}\right)^{1/3}\right)\Big\},
\end{aligned}$$

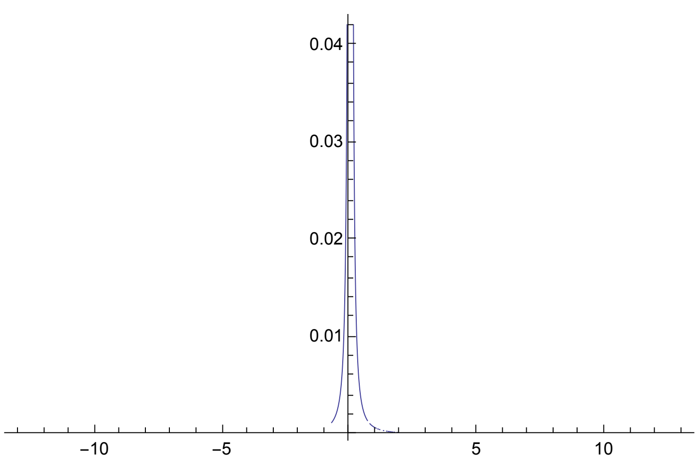
$$\Big\{\theta \to \Big(24\,a^2\,\pi\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} - \sqrt{\Big(576\,a^4\,\pi^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3} - 24\,a^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\Big(8\times 2^{2/3}\,a^4\,\pi^{11/3} - 8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} + (2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3} + i\,\sqrt{3}\,(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)\Big)}\Big) \Big/ \left(12\,a^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right)\Big\},$$

$$\Big\{\theta \to \Big(24\,a^2\,\pi\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} + \sqrt{\Big(576\,a^4\,\pi^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3} - 24\,a^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\Big(8\times 2^{2/3}\,a^4\,\pi^{11/3} - 8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} + (2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3} + i\,\sqrt{3}\,(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)\Big)}\Big) \Big/ \left(12\,a^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right)\Big\}\Big\}$$

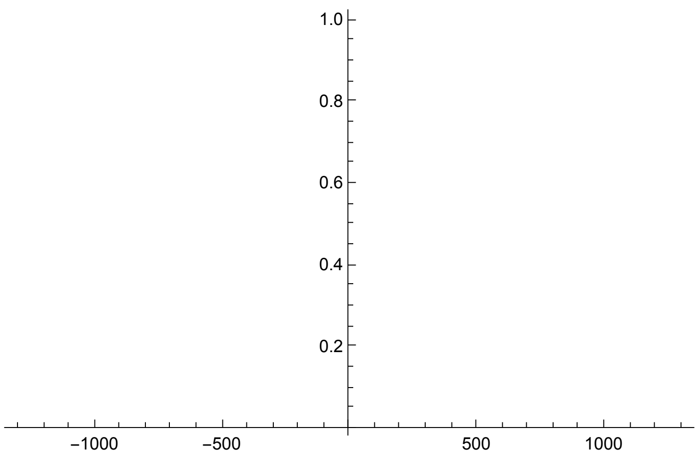
Plot$\Big[-\Big(-12\,a^2\,\pi\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} - \sqrt{\Big(384\times 2^{1/3}\,a^8\,\pi^{16/3} - 324\,a^6\,(2\,\pi)^{1/3} + 36\,\sqrt{3}\,a^2\,(2\,\pi)^{1/3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)} + 96\times 2^{2/3}\,a^6\,\pi^{11/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3} + 48\,a^4\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)}\Big) \Big/ \left(6\,a^2\,\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right),\ \{a,\ -13\,000,\ 13\,000\}\Big]$



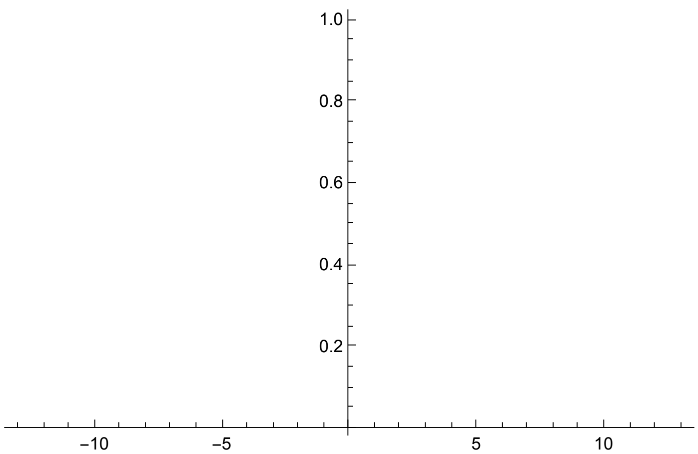

```
Plot[-(-12 a^2 π (-27 a^4 + 32 a^6 π^5 + 3 Sqrt[3] Sqrt[-a^8 (-27 + 64 a^2 π^5)])^(1/3) +
    Sqrt[(384 × 2^(1/3) a^8 π^(16/3) - 324 a^6 (2 π)^(1/3) + 36 Sqrt[3] a^2 (2 π)^(1/3) Sqrt[-a^8 (-27 + 64 a^2 π^5)] +
       96 × 2^(2/3) a^6 π^(11/3) (-27 a^4 + 32 a^6 π^5 + 3 Sqrt[3] Sqrt[-a^8 (-27 + 64 a^2 π^5)])^(1/3) +
       48 a^4 π^2 (-27 a^4 + 32 a^6 π^5 + 3 Sqrt[3] Sqrt[-a^8 (-27 + 64 a^2 π^5)])^(2/3))])/
  (6 a^2 (-27 a^4 + 32 a^6 π^5 + 3 Sqrt[3] Sqrt[-a^8 (-27 + 64 a^2 π^5)])^(1/3)), {a,
  -13,
  13}]
```



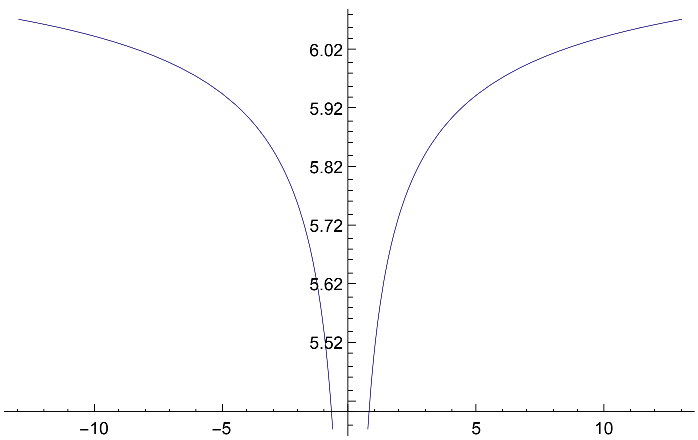
$$\text{Plot}\Big[\Big(24\,a^2\,\pi\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{1/3}-\sqrt{\Big(576\,a^4\,\pi^2\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{2/3}-24\,a^2\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{1/3}\,\big(8\times 2^{2/3}\,a^4\,\pi^{11/3}+8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{1/3}+(2\,\pi)^{1/3}\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{2/3}-i\,\sqrt{3}\,(2\,\pi)^{1/3}\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{2/3}\big)\Big)}\Big)\Big/\Big(12\,a^2\,\big(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\,(-27+64\,a^2\,\pi^5)}\big)^{1/3}\Big),\ \{a,-1300,1300\}\Big]$$



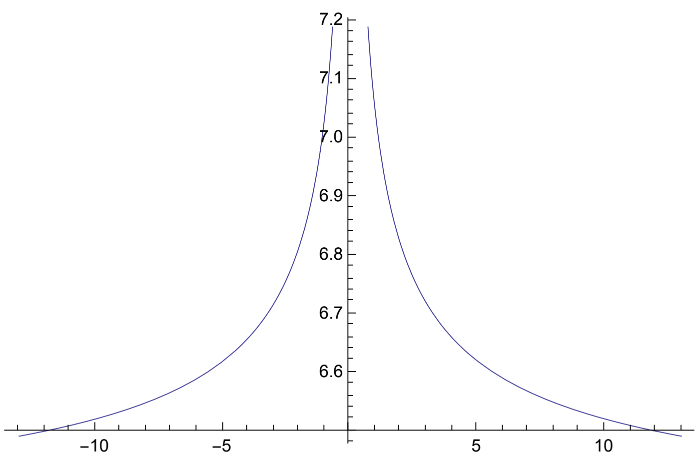
$$\text{Plot}\Big[\Big(\left(24\,a^2\,\pi\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)\right)^{1/3}+$$
$$\sqrt{\Big(\left(576\,a^4\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)\right)^{2/3}-}$$
$$24\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\Big(8\times2^{2/3}\,a^4\,\pi^{11/3}+$$
$$8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}+$$
$$(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}-$$
$$i\,\sqrt{3}\,(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)\Big)\Big)\Big/$$
$$\left(12\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right),\ \{a,\ -13,\ 13\}\Big]$$



$$\text{Plot}\Big[\Big(24\,a^2\,\pi\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}-\sqrt{\Big(576\,a^4\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}-24\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\Big(8\times 2^{2/3}\,a^4\,\pi^{11/3}-8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}+(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}+i\,\sqrt{3}\,(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)\Big)}\Big)\Big/\left(12\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right),\ \{a,\ -13,\ 13\}\Big]$$



$$\text{Plot}\Big[\Big(24\,a^2\,\pi\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}+$$
$$\sqrt{\left(576\,a^4\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}-\right.}$$
$$24\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\Big(8\times 2^{2/3}\,a^4\,\pi^{11/3}-$$
$$8\,i\,2^{2/3}\,\sqrt{3}\,a^4\,\pi^{11/3}+16\,a^2\,\pi^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}+$$
$$(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}+$$
$$i\,\sqrt{3}\,(2\,\pi)^{1/3}\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{2/3}\Big)\Big)\Big)\Big/$$
$$\left(12\,a^2\left(-27\,a^4+32\,a^6\,\pi^5+3\,\sqrt{3}\,\sqrt{-a^8\left(-27+64\,a^2\,\pi^5\right)}\right)^{1/3}\right),\ \{a,$$
$$-13,$$
$$13\}\Big]$$



Accretion of Contour

```
t = θ / k == (θ r) / (r k) == (2 π r - 2 π x) / (r k)
```

```
Solve[θ / k
```

$$\text{Solve}\left[t == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\,^\wedge 2 - \eta\,^\wedge 2)}\right)\Big/\,(r\,k),\ t\right]$$

$$\left\{\left\{t \to -\frac{2\left(-\pi\,r + \pi\,\sqrt{r^2-\eta^2}\right)}{k\,r}\right\}\right\}$$

```
Solve[t == (2 π r - 2 π √(r^2 - η^2)) / (r k), k]
```

$$\left\{\left\{k \to \frac{2 \pi \left(r - \sqrt{r^2 - \eta^2}\right)}{r\, t}\right\}\right\}$$

```
Solve[t == (2 π r - 2 π √(r^2 - η^2)) / (r k), r]
```

$$\left\{\left\{r \to -\frac{2 \pi \eta}{\sqrt{4 k \pi t - k^2 t^2}}\right\}, \left\{r \to \frac{2 \pi \eta}{\sqrt{4 k \pi t - k^2 t^2}}\right\}\right\}$$

```
Solve[(2 π r - 2 π √(r^2 - η^2)) / (r k) == (2 (π + √(π^2 - π^2 Sin[β]^2))) / k, k]
```

{{}}

```
Solve[(2 π r - 2 π √(r^2 - η^2)) / (r k) == (2 (π + √(π^2 - π^2 Sin[β]^2))) / k, r]
Solve[2 π √(r^2 - η^2) == 2 π r - (r k) t, η]
Solve[(2 π r - (r k) t) / (2 π) == √(r^2 - η^2), η]
```

$$\left\{\left\{\eta \to -\frac{\sqrt{k}\, r \sqrt{t} \sqrt{4 \pi - k t}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{k}\, r \sqrt{t} \sqrt{4 \pi - k t}}{2 \pi}\right\}\right\}$$

```
Solve[√(4 k π r^2 t - k^2 r^2 t^2) / (2 π) == √k r √t √(4 π - k t) / (2 π), k]
```

{{}}

```
Solve[((2 π r - (r k) t) / (2 π)) ^2 == (r^2 - η^2), η]
```

$$\left\{\left\{\eta \to -\frac{\sqrt{4 k \pi r^2 t - k^2 r^2 t^2}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{4 k \pi r^2 t - k^2 r^2 t^2}}{2 \pi}\right\}\right\}$$

```
Solve[((2 π r - (r k) t) / (2 π)) ^2 == (r^2 - η^2), η]
Solve[((2 π r - (r k) t) / (2 π)) ^2 == √(r^2 - η^2) ^2, η]
Solve[t == (2 π r - 2 π √(r^2 - η^2)) / (r k), η]
```

$$\left\{\left\{\eta \to -\frac{\sqrt{k}\, r \sqrt{t} \sqrt{4 \pi - k t}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{k}\, r \sqrt{t} \sqrt{4 \pi - k t}}{2 \pi}\right\}\right\}$$

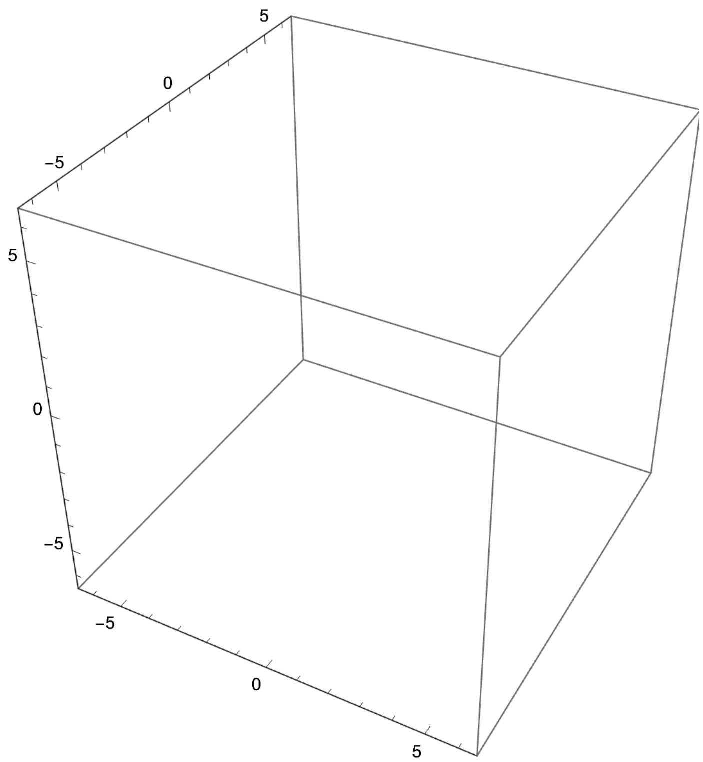
```
Solve[√(4 π r^2 θ - r^2 θ^2) / (2 π) == √k r √t √(4 π - k t) / (2 π), t]
```

$$\left\{\left\{t \to \frac{4 \pi - \Theta}{k}\right\}, \left\{t \to \frac{\Theta}{k}\right\}\right\}$$

$$\text{Solve}\left[\eta == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi - k\,t}}{2\pi},\ k\right]$$

$$\begin{aligned}
&\Big\{\Big\{k \to \Big(-\pi\, t\, \big(-64\,\pi^2\,\theta^2 + 32\,\pi\,\theta^3 - 4\,\theta^4 + 128\,\pi^3\,\theta\,\text{Sin}[\beta]^2 - 32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 - 64\,\pi^4\,\text{Sin}[\beta]^4\big) - \\
&\quad \surd\Big(\pi^2\,t^2\,\big(-64\,\pi^2\,\theta^2 + 32\,\pi\,\theta^3 - 4\,\theta^4 + 128\,\pi^3\,\theta\,\text{Sin}[\beta]^2 - 32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 - 64\,\pi^4\,\text{Sin}[\beta]^4\big)^2 + \\
&\qquad 4\,\pi^2\,t^2\,\eta^2\,\theta\,\big(-1024\,\pi^4\,\theta + 1536\,\pi^3\,\theta^2 - 832\,\pi^2\,\theta^3 + 192\,\pi\,\theta^4 - 16\,\theta^5 - \\
&\qquad\quad 1024\,\pi^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 1280\,\pi^3\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] - \\
&\qquad\quad 512\,\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 64\,\pi\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] - \\
&\qquad\quad 1024\,\pi^5\,\text{Sin}[\beta]^2 + 1280\,\pi^4\,\theta\,\text{Sin}[\beta]^2 - 512\,\pi^3\,\theta^2\,\text{Sin}[\beta]^2 + 64\,\pi^2\,\theta^3\,\text{Sin}[\beta]^2\big) \\
&\qquad \big(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4 - 32\,\pi^3\,\theta\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 + 16\,\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big) \Big/ \\
&\quad \Big(2\,t^2\,\big(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4 - 32\,\pi^3\,\theta\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 + 16\,\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big\}, \\
&\ \Big\{k \to \Big(-\pi\, t\, \big(-64\,\pi^2\,\theta^2 + 32\,\pi\,\theta^3 - 4\,\theta^4 + 128\,\pi^3\,\theta\,\text{Sin}[\beta]^2 - 32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 - 64\,\pi^4\,\text{Sin}[\beta]^4\big) + \\
&\quad \surd\Big(\pi^2\,t^2\,\big(-64\,\pi^2\,\theta^2 + 32\,\pi\,\theta^3 - 4\,\theta^4 + 128\,\pi^3\,\theta\,\text{Sin}[\beta]^2 - 32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 - 64\,\pi^4\,\text{Sin}[\beta]^4\big)^2 + \\
&\qquad 4\,\pi^2\,t^2\,\eta^2\,\theta\,\big(-1024\,\pi^4\,\theta + 1536\,\pi^3\,\theta^2 - 832\,\pi^2\,\theta^3 + 192\,\pi\,\theta^4 - 16\,\theta^5 - \\
&\qquad\quad 1024\,\pi^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 1280\,\pi^3\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] - \\
&\qquad\quad 512\,\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 64\,\pi\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] - \\
&\qquad\quad 1024\,\pi^5\,\text{Sin}[\beta]^2 + 1280\,\pi^4\,\theta\,\text{Sin}[\beta]^2 - 512\,\pi^3\,\theta^2\,\text{Sin}[\beta]^2 + 64\,\pi^2\,\theta^3\,\text{Sin}[\beta]^2\big) \\
&\qquad \big(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4 - 32\,\pi^3\,\theta\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 + 16\,\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big) \Big/ \\
&\quad \Big(2\,t^2\,\big(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4 - 32\,\pi^3\,\theta\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2 + 16\,\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big\}\Big\}
\end{aligned}$$

```
ContourPlot3D[
 (-π t (-64 π^2 θ^2 + 32 π θ^3 - 4 θ^4 + 128 π^3 θ Sin[β]^2 - 32 π^2 θ^2 Sin[β]^2 - 64 π^4 Sin[β]^4) +
    √(π^2 t^2 (-64 π^2 θ^2 + 32 π θ^3 - 4 θ^4 + 128 π^3 θ Sin[β]^2 - 32 π^2 θ^2 Sin[β]^2 - 64 π^4 Sin[β]^4)^2 +
       4 π^2 t^2 (√(4 π r^2 θ - r^2 θ^2)/(2 π))^2 θ (-1024 π^4 θ + 1536 π^3 θ^2 - 832 π^2 θ^3 + 192 π θ^4 -
          16 θ^5 - 1024 π^4 √((4 π - θ) θ) Sin[β] + 1280 π^3 θ √((4 π - θ) θ) Sin[β] -
          512 π^2 θ^2 √((4 π - θ) θ) Sin[β] + 64 π θ^3 √((4 π - θ) θ) Sin[β] -
          1024 π^5 Sin[β]^2 + 1280 π^4 θ Sin[β]^2 - 512 π^3 θ^2 Sin[β]^2 + 64 π^2 θ^3 Sin[β]^2)
        (16 π^2 θ^2 - 8 π θ^3 + θ^4 - 32 π^3 θ Sin[β]^2 + 8 π^2 θ^2 Sin[β]^2 + 16 π^4 Sin[β]^4))) /
  (2 t^2 (16 π^2 θ^2 - 8 π θ^3 + θ^4 - 32 π^3 θ Sin[β]^2 + 8 π^2 θ^2 Sin[β]^2 + 16 π^4 Sin[β]^4)), {θ,
  -2 π,
  2 π}, {t,
  -2 π,
  2 π}, {β,
  -2 π,
  2 π}]
```



$$\text{Solve}\left[\frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi - k\,t}}{2\pi} == \frac{\sqrt{4\pi\, r^2\,\theta - r^2\,\theta^2}}{2\pi}, k\right]$$

$$\left\{\left\{k \to \frac{4\pi - \theta}{t}\right\}, \left\{k \to \frac{\theta}{t}\right\}\right\}$$

$$t = \theta / k = \theta \Big/ \frac{4\pi - \theta}{t}$$

$$\text{Solve}\left[\theta \Big/ \frac{4\pi - \theta}{t} == t, t\right]$$

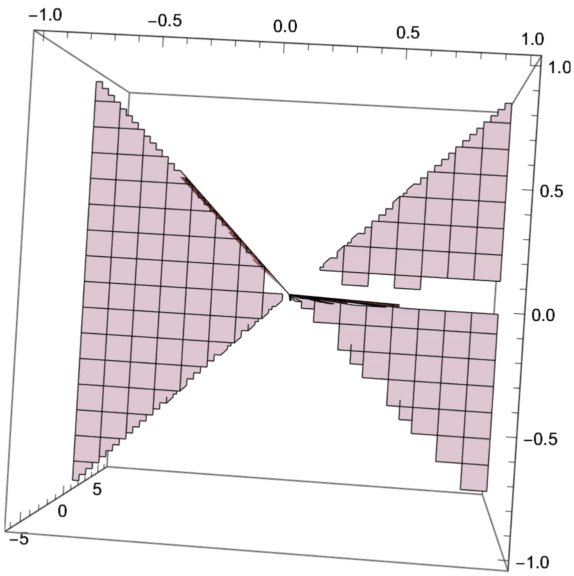
$$\{\{t \to 0\}\}$$

$$\text{Solve}\left[\theta \Big/ \frac{4\pi - \theta}{t} == t, \theta\right]$$

$$\{\{\theta \to 2\pi\}\}$$

$$\text{Solve}\left[\theta\, r == y\, r - y\sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)},\ y\right]$$

$$\left\{\left\{y \to -\frac{r\,\theta}{-r + \sqrt{r^2 - \eta^2}}\right\}\right\}$$



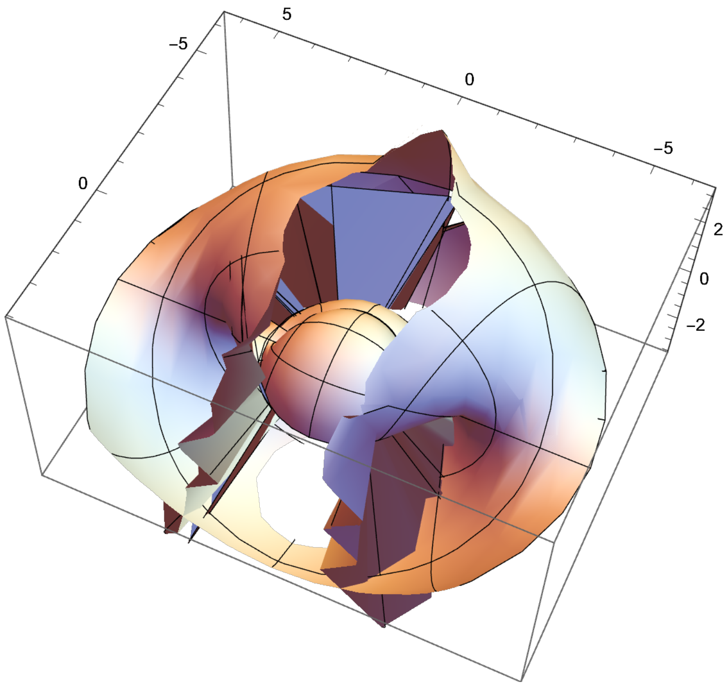
$$\frac{r\,\theta}{-r + \sqrt{r^2 - \left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)^2}}$$

$$r := \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\,\pi - k\,t}}{2\,\pi},\ k\right]$$

$$\left\{\left\{k \to \frac{4\,\pi - \theta}{t}\right\}, \left\{k \to \frac{\theta}{t}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{r\,\theta}{-r+\sqrt{r^2-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}},\ \{\beta,-2\pi,2\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}\ =h$$

$$\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}\ =h$$

$$\text{Solve}\left[\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}=\!=\eta,\ \eta\right]$$

$$\left\{\left\{\eta\to\frac{\sqrt{r\,(-2\,\pi+2\,\pi\,r+k\,t)}}{\sqrt{2\,\pi}}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}=\!=\eta,\ k\right]$$

$$\left\{\left\{k\to-\frac{2\,(-\pi\,r+\pi\,r^2-\pi\,\eta^2)}{r\,t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}=\!=\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ k\right]$$

$$\left\{\left\{k\to\frac{4\,\pi^2-4\,\pi^2\,r+4\,\pi\,r\,\theta-r\,\theta^2}{2\,\pi\,t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r\,\char`^2-((2\,\pi\,r-k\,r\,t)\,/\,(2\,\pi))}=\!=\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ r\right]$$

$$\left\{\{r\to 0\},\ \left\{r\to\frac{2\,\pi\,(2\,\pi-k\,t)}{(2\,\pi-\theta)^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^{\wedge}2-((2\pi r-k r t)/(2\pi))} == \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}, t\right]$$

$$\left\{\left\{t\to\frac{4\pi^2-4\pi^2 r+4\pi r\theta-r\theta^2}{2 k\pi}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^{\wedge}2-((2\pi r-k r t)/(2\pi))} == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi-k t}}{2\pi}, r\right]$$

$$\left\{\{r\to 0\},\left\{r\to\frac{2\pi}{2\pi-k t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^{\wedge}2-((2\pi r-k r t)/(2\pi))} == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi-k t}}{2\pi}, t\right]$$

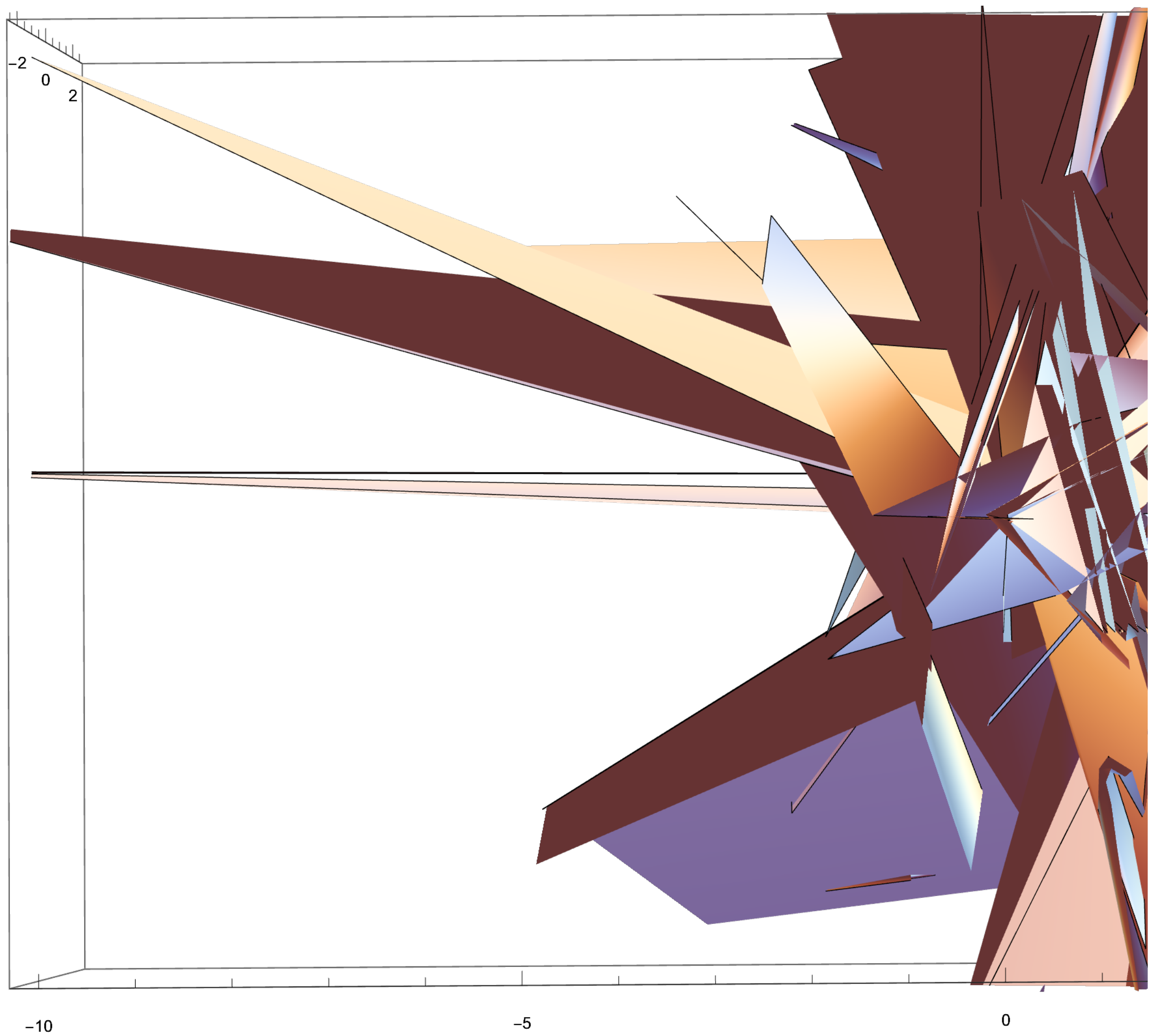
$$\left\{\left\{t\to\frac{2\pi}{k}\right\},\left\{t\to\frac{2\pi(-1+r)}{k r}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi} == r\,\text{Sin}[\beta], \theta\right]$$

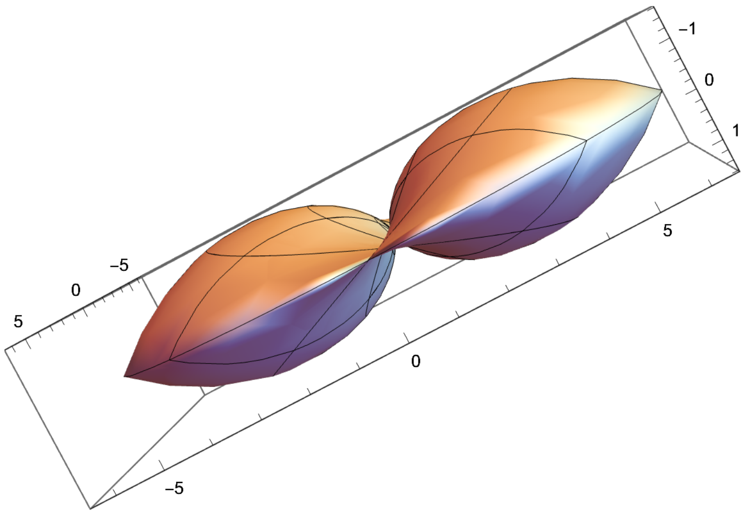
$$\left\{\left\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\ 0.5\left(-1.12941\times10^{18}+12.5664\,v^2-1.\sqrt{\left(\left(1.12941\times10^{18}-12.5664\,v^2\right)^2-4.\left(-8.98755\times10^{16}+v^2\right)\left(-3.54814\times10^{18}+39.4784\,v^2\right)\text{Sin}[\beta]^2\right)}\right)\right\},\left\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\ 0.5\left(-1.12941\times10^{18}+12.5664\,v^2+\sqrt{\left(\left(1.12941\times10^{18}-12.5664\,v^2\right)^2-4.\left(-8.98755\times10^{16}+v^2\right)\left(-3.54814\times10^{18}+39.4784\,v^2\right)\text{Sin}[\beta]^2\right)}\right)\right\}\right\}$$

$$v := \left(\sqrt{\left(-1.1294090667581471\grave{}*^{\wedge}18\,\theta+8.987551787368176\grave{}*^{\wedge}16\,\theta^2+3.5481432270250993\grave{}*^{\wedge}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\,\theta+\theta^2+39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right)$$

```
SphericalPlot3D[            1
               ─────────────────────────────────
               -8.987551787368176`*^16 + v^2
  0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
    √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
      4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
        39.47841760435743` v^2) Sin[β]^2)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



```
SphericalPlot3D[1/(-8.987551787368176`*^16 + v^2)
  0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
    Sqrt[((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
       4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
          39.47841760435743` v^2) Sin[β]^2)]), {v, -2 π, 2 π}, {β, -π, π}]
```




```
c := 2.99792458 (10^8)
```

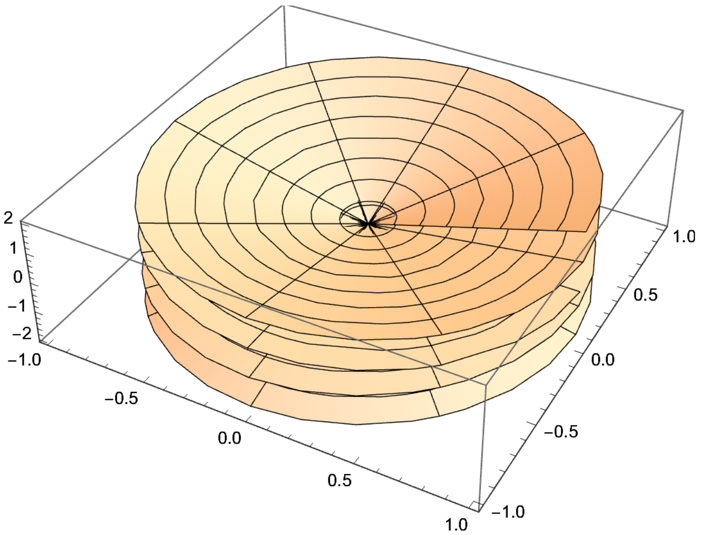
$$\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]$$

$$\mathrm{ArcCos}[\eta / r] == \beta$$

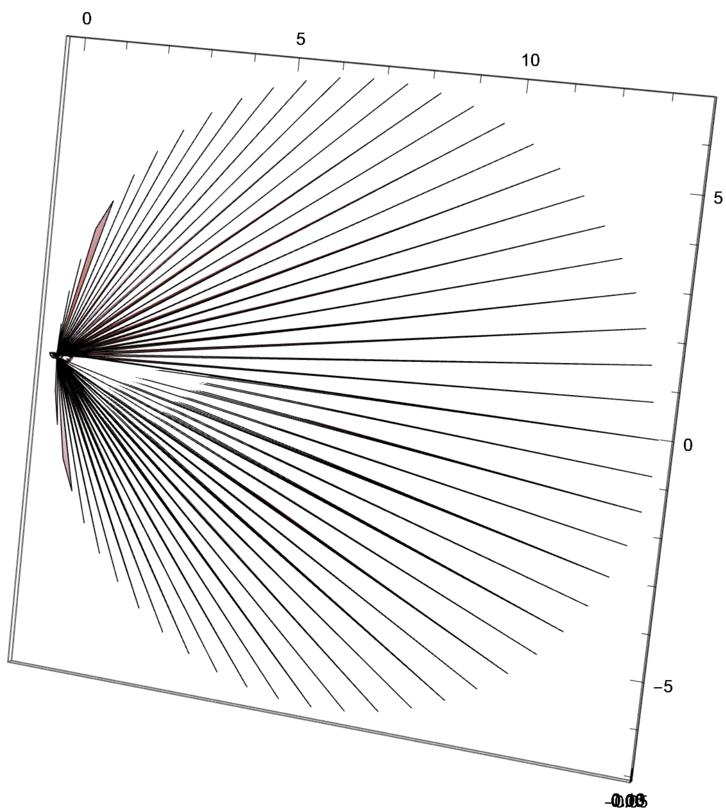
$$\mathrm{Solve}\left[\mathrm{ArcCos}[\eta / r] == \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right], \eta\right]$$

$$\left\{\left\{\eta \to r\,\sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[r\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{r,-1,1\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[r\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\eta=\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}$$

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == r\sqrt{1-\frac{(4\pi-\theta)\theta}{4\pi^2}},\ \theta\right]$$

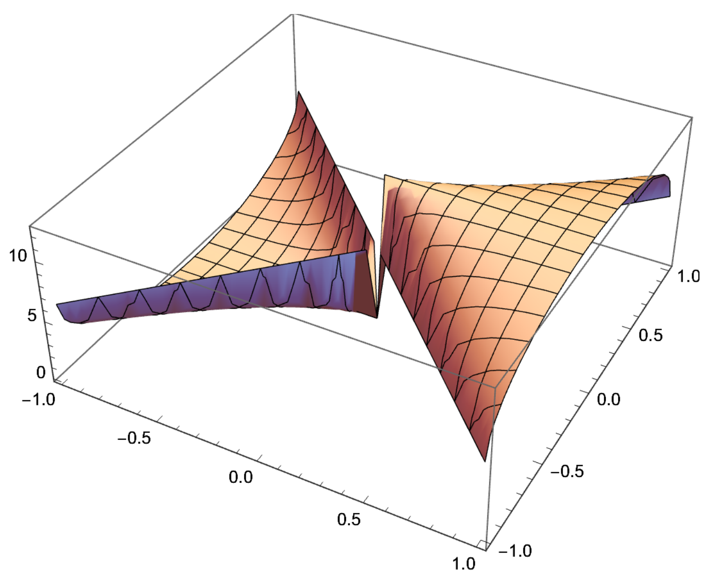
$$\left\{\left\{\theta\to\left(2-\sqrt{2}\right)\pi\right\},\ \left\{\theta\to\left(2+\sqrt{2}\right)\pi\right\}\right\}$$

```
c := 2.99792458 * (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(4\pi-\theta)\theta}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(4\pi-\theta)\theta}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{0.5\left(12.5664\,r^2 - 12.5664\,r\sqrt{1.\,r^2-1.\,\eta^2}\right)}{r^2}\right\},\right.$$
$$\left.\left\{\theta\to\frac{0.5\left(12.5664\,r^2 + 12.5664\,r\sqrt{1.\,r^2-1.\,\eta^2}\right)}{r^2}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{0.5`\left(12.566370614359172`\,r^2 + 12.566370614359172`\,r\sqrt{1.`\,r^2-1.`\,\eta^2}\right)}{r^2},\right.$$
$$\left.\{r,-1,1\},\{\eta,-1,1\}\right]$$

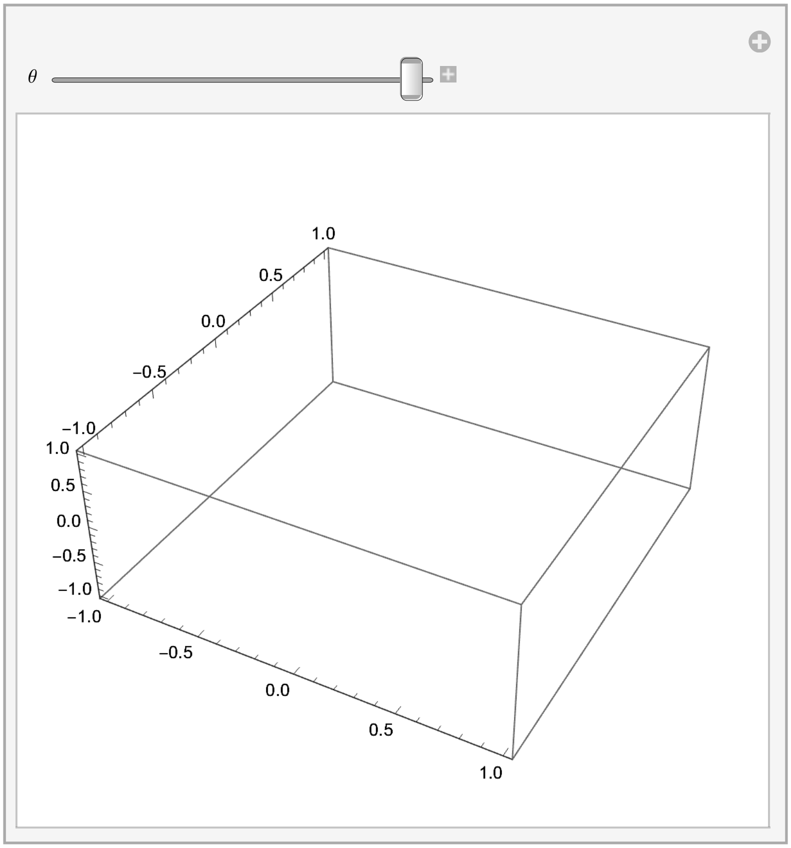


$$r = \sqrt{x\verb|^|2+y\verb|^|2+z\verb|^|2} = \sqrt{x\verb|^|2+y\verb|^|2+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\verb|^|2}$$

$$\text{Solve}\left[r == \sqrt{x\verb|^|2+y\verb|^|2+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\verb|^|2},\ r\right]$$

$$\left\{\left\{r\to-\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\ \left\{r\to\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\}\right\}$$

$$\text{Manipulate}\left[\text{Plot3D}\left[\frac{2\,\pi\,\sqrt{x^2+y^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{x,-1,1\},\ \{y,-1,1\}\right],\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

… Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

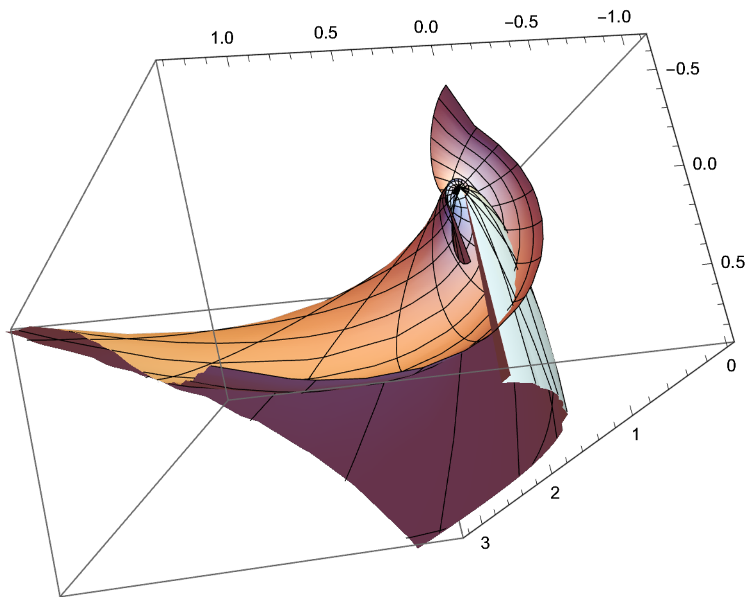
Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

$$\texttt{SphericalPlot3D}\left[\frac{2\pi\sqrt{\left(\frac{2\pi r-r\theta}{2\pi}\right)^2+\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\texttt{Solve}\left[\frac{r\sqrt{\pi^2-\texttt{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\texttt{Sin}[\theta]^2}}\right]^2}}{\pi}==r\,\texttt{Sin}[\beta],\ \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta\to\texttt{ArcSin}\left[\frac{1}{\pi}\left(\sqrt{\left(\left(\pi-\texttt{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\texttt{Sin}[\theta]^2}}\right]\right)\left(\pi+\texttt{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\texttt{Sin}[\theta]^2}}\right]\right)\right)}\right)\right]\right\}\right\}$$

$$\texttt{c := 2.99792458}\,(10^8)$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}==r,\ v\right]$$

$$\text{Solve}\left[\frac{r\sqrt{1-\left(\frac{v^2}{c^2}\right)}\ \sqrt{\pi^2-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\text{Sin}\left[\theta\Big/\sqrt{1-\left(\frac{v^2}{c^2}\right)}\right]^2}}\right]^2}}{\pi}==r\,\text{Sin}[\beta],\ v\right]$$

Solve::tdep : The equations appear to involve the variables to be solved for in an essentially non–algebraic way. ≫

$$\text{Solve}\left[\frac{1}{\pi}r\sqrt{1-1.11265\times10^{-17}v^2}\ \sqrt{\pi^2-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\text{Sin}\left[\frac{\theta}{\sqrt{1-1.11265\times10^{-17}v^2}}\right]^2}}\right]^2}==r\,\text{Sin}[\beta],\ v\right]$$

$$r:=\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{Solve}\left[\frac{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}{\left(2\pi r-r\theta-2\pi\sqrt{r^2-\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}}\right)}==t,\ v\right]$$

Power::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}=\eta,\ v\right]$$

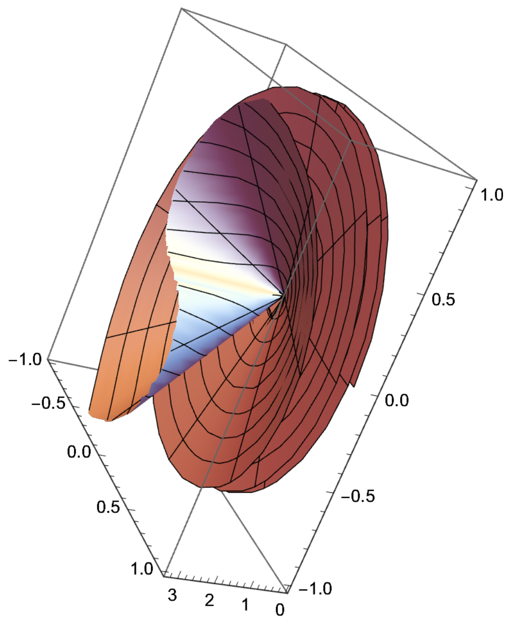
Set::write : Tag Times in $\frac{\sqrt{\frac{\theta}{\sqrt{1-\ll 24\gg v^2}}}\ \sqrt{\frac{\ll 1\gg}{\ll 1\gg}}\ \sqrt{\frac{4\pi(\ll 1\gg)}{\ll 1\gg}-\frac{\theta(\ll 1\gg)}{\ll 1\gg}}}{2\pi}$ is Protected. ≫

Solve::eqf : η is not a well–formed equation. ≫

$\text{Solve}[\eta,\ v]$

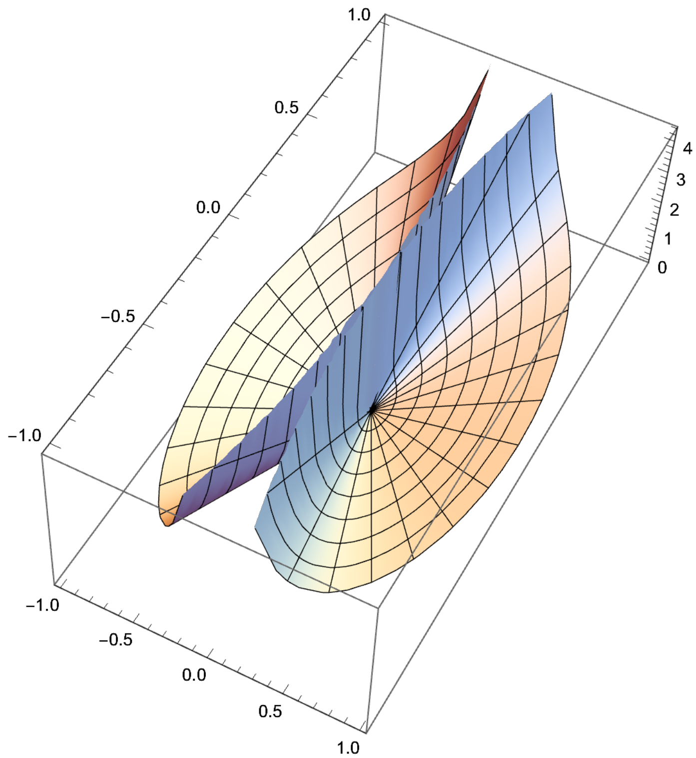
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r,v\right]$$

$$\text{RevolutionPlot3D}\left[\frac{2\pi\sqrt{\left(\frac{2\pi r-r\theta}{2\pi}\right)^2+\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

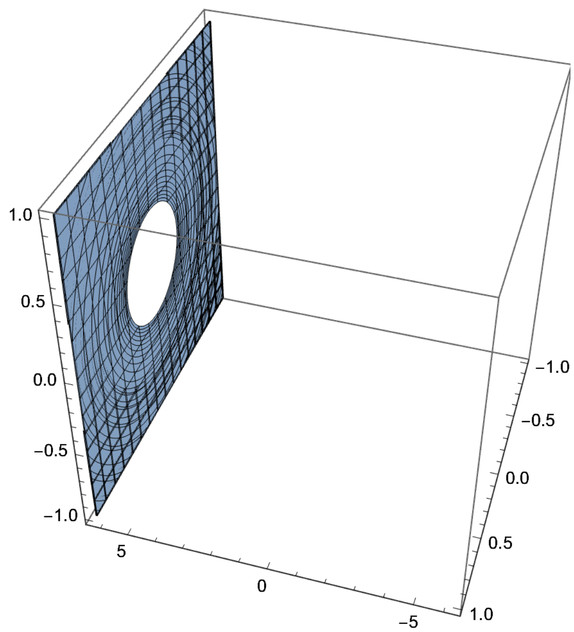


$$\text{RevolutionPlot3D}\left[\frac{2\pi\sqrt{\left(\frac{2\pi r-r\theta}{2\pi}\right)^2+\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

```
RevolutionPlot3D[1/Sqrt[4 π^2 - 4 π 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2]
  2 π Sqrt[(((2 π r - r 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/(2 π))^2 +
      (1/(2 π) (Sqrt[(4 π r^2 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) - r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2)]))^2)],
  {r, -1, 1}, {β, -π / 2, π / 2}]
```



$$\texttt{ContourPlot3D}\left[\frac{2\,\pi\,\sqrt{x^2+(y)^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{x,\,-1,\,1\},\ \{y,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



$$z == r\ \texttt{Cos}[\beta]$$

$$\texttt{Solve}\left[r == \frac{2\,\pi\,\sqrt{\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)^2+y^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ r\right]$$

{ }

$$\texttt{Solve}\left[r == \sqrt{\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\,\hat{}\,2+y\,\hat{}\,2+\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\hat{}\,2},\ r\right]$$

{ }

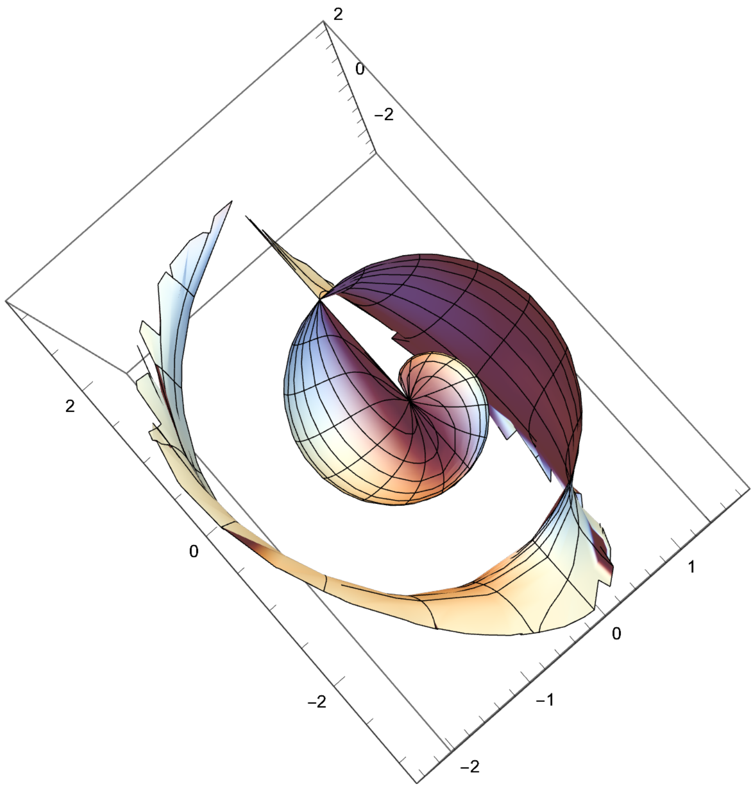
$$\beta == \texttt{ArcCos}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\Big/\ r\right]$$

$$\texttt{Solve}\left[\frac{2\,\pi\,r-r\,\theta}{2\,\pi} == r\ \texttt{Sin}[\beta]\ \texttt{Cos}[\phi],\ \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi\to-\texttt{ArcCos}\left[\frac{(2\,\pi-\theta)\ \texttt{Csc}[\beta]}{2\,\pi}\right]\right\},\ \left\{\phi\to\texttt{ArcCos}\left[\frac{(2\,\pi-\theta)\ \texttt{Csc}[\beta]}{2\,\pi}\right]\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\text{ArcCos}\left[\frac{(2\,\pi-\theta)\ \text{Csc}[\beta]}{2\,\pi}\right],\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$

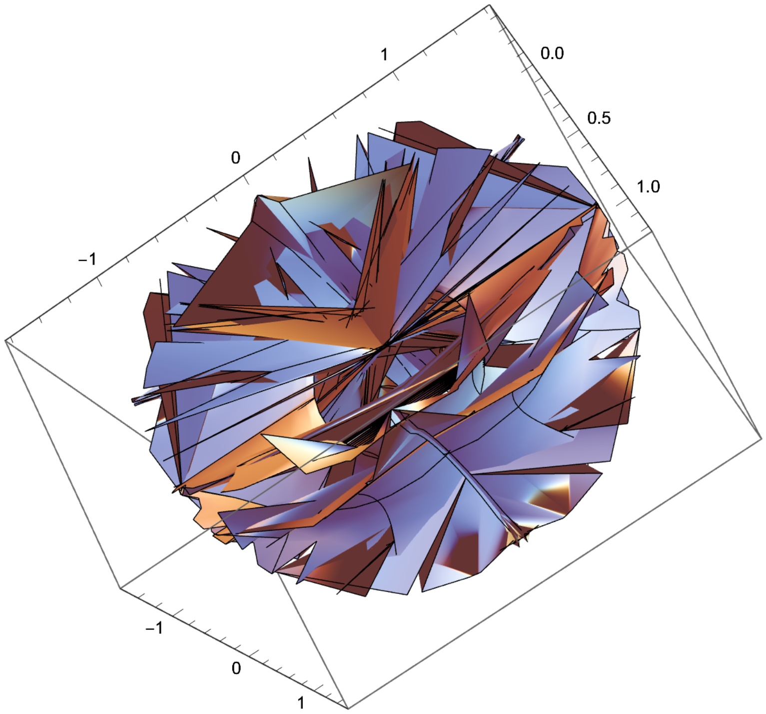


$$\text{Solve}\left[\frac{2\,\pi\,r-r\,\theta}{2\,\pi}=r\ \text{Sin}[\beta]\ \text{Cos}[\phi],\ \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{(2\,\pi-\theta)\ \text{Sec}[\phi]}{2\,\pi}\right]\right\}\right\}$$

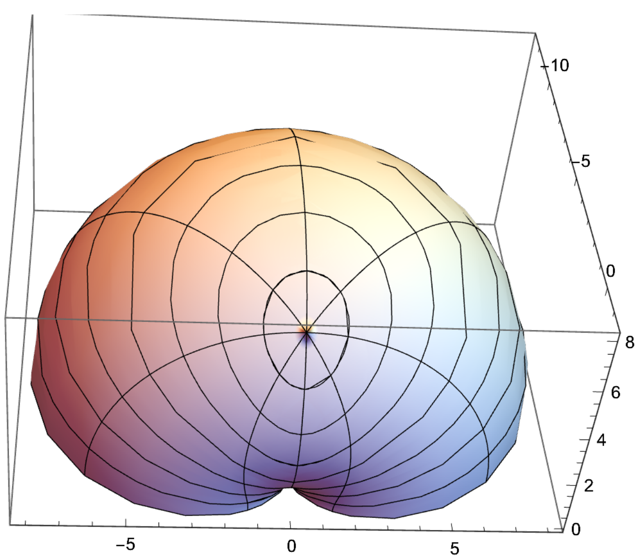
```
SphericalPlot3D[ArcSin[(2 π - θ) Sec[ϕ] / (2 π)], {θ, -2 π, 2 π}, {ϕ, -π, π}]
```

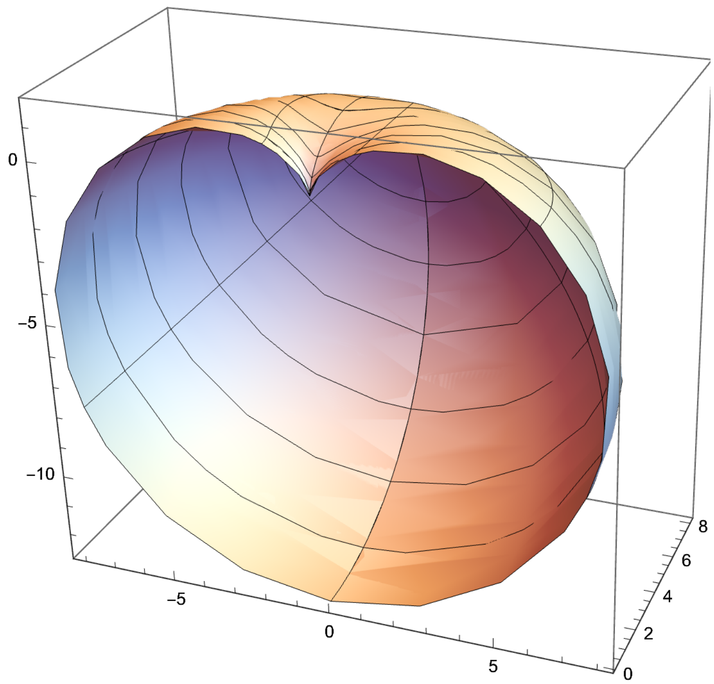



```
Solve[(2 π r - r θ) / (2 π) == r Sin[β] Cos[ϕ], θ]
```

$\{\{\theta \to -2\pi(-1 + \text{Cos}[\phi]\,\text{Sin}[\beta])\}\}$

```
SphericalPlot3D[-2 π (-1 + Cos[ϕ] Sin[β]), {β, -π / 2, π / 2}, {ϕ, -2 π, 2 π}]
```





$$r := \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}$$

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == r\,\text{Sin}[\beta]\,\text{Cos}[\phi],\ \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi \to -\text{ArcCos}\left[\frac{(2\pi-\theta)\,\text{Csc}[\beta]}{2\pi}\right]\right\},\ \left\{\phi \to \text{ArcCos}\left[\frac{(2\pi-\theta)\,\text{Csc}[\beta]}{2\pi}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{2\pi r - r\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}{2\pi} == r\,\text{Sin}[\beta]\,\text{Cos}[\phi],\ \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi \to -\text{ArcCos}\left[-\text{Csc}[\beta]\,\sqrt{1-\text{Sin}[\beta]^2}\right]\right\},\ \left\{\phi \to \text{ArcCos}\left[-\text{Csc}[\beta]\,\sqrt{1-\text{Sin}[\beta]^2}\right]\right\}\right\}$$

$$\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

$$r := \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$r = \sqrt{x^2 + y^2 + z^2} = \sqrt{x^2 + y^2 + \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}^2} ==$$

$$\sqrt{(r\,\mathrm{Sin}[\theta]\,\mathrm{Cos}[\phi])^2 + (r\,\mathrm{Sin}[\theta]\,\mathrm{Sin}[\phi])^2 + (r\,\mathrm{Cos}[\theta])^2}$$

$$\sqrt{(r\,\mathrm{Sin}[\theta]\,\mathrm{Cos}[\phi])^2 + (r\,\mathrm{Sin}[\theta]\,\mathrm{Sin}[\phi])^2 + (r\,\mathrm{Cos}[\theta])^2} == r$$

$$\mathrm{Solve}\left[r == \sqrt{x^2 + y^2 + z^2},\ z\right]$$

$$\left\{\left\{z \to -\frac{1}{2}\sqrt{\left(-4x^2 - 4y^2 + \frac{1}{(2\pi-\theta)^2} - \frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)\,(4\pi-\theta)^2} - \frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)^2\,(4\pi-\theta)} - \frac{4\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(4\pi-\theta)^2\,\theta} + \frac{\mathrm{Sin}[\beta]^2}{(2\pi-\theta)^2} + \frac{\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\theta}\right)}\right\},\right.$$

$$\left.\left\{z \to \frac{1}{2}\sqrt{\left(-4x^2 - 4y^2 + \frac{1}{(2\pi-\theta)^2} - \frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)\,(4\pi-\theta)^2} - \frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)^2\,(4\pi-\theta)} - \frac{4\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(4\pi-\theta)^2\,\theta} + \frac{\mathrm{Sin}[\beta]^2}{(2\pi-\theta)^2} + \frac{\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\theta}\right)}\right\}\right\}$$

$$\mathrm{Solve}\left[r == \sqrt{x^2 + y^2 + \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}^2},\ y\right]$$

{{}}

$$\mathrm{Solve}\left[r == \sqrt{x^2 + y^2 + \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}^2},\ x\right]$$

{{}}

$$\mathrm{Solve}\left[r == \sqrt{x^2 + y^2 + \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}^2},\ x\right]$$

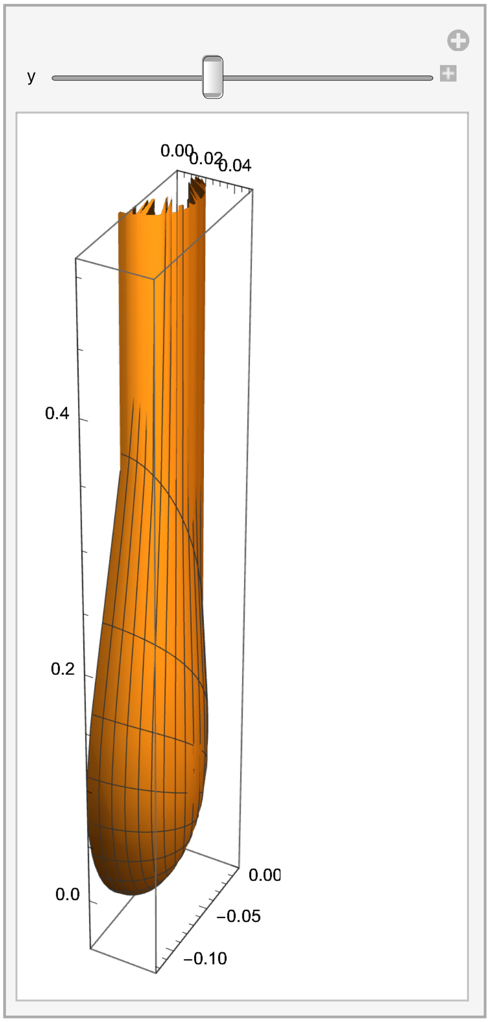
$$\text{Solve}\left[\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)==\sqrt{x\,\hat{}\,2+y\,\hat{}\,2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\hat{}\,2},\;x\right]$$

$$\left\{\left\{x\to-\frac{\sqrt{1-16\pi^2y^2-\frac{\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\pi}\right\},\right.$$

$$\left.\left\{x\to\frac{\sqrt{1-16\pi^2y^2-\frac{\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\pi}\right\}\right\}$$

```
Manipulate[
 SphericalPlot3D[Sqrt[1 - 16 π^2 y^2 - (Sqrt[(4 π - θ) θ] Sin[β])/(4 π - θ) - (Sqrt[(4 π - θ) θ] Sin[β])/θ + (π Sin[β]^2)/(4 π - θ) + (π Sin[β]^2)/θ]/(4 π),
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}], {y, -1, 1}]
```

$$\text{SphericalPlot3D}\left[\frac{\sqrt{1-16\pi^2 y^2-\frac{\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\pi},\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right],\ \{y,-1,1\}$$



$$\text{Solve}\Bigg[\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)==\sqrt{\text{x}^\wedge 2+\text{y}^\wedge 2+\frac{\sqrt{4\,\pi\,\text{r}^2\,\theta-\text{r}^2\,\theta^2}}{2\,\pi}{}^\wedge 2}\,,\ \text{x}\Bigg]$$

$$\Bigg\{\Bigg\{\text{x}\to-\frac{1}{4\,\pi}\Bigg(\sqrt{\Bigg(-16\,\pi^2\,\text{y}^2+\frac{4\,\pi^2}{(2\,\pi-\theta)^2}-16\,\pi\,\text{r}^2\,\theta+4\,\text{r}^2\,\theta^2-\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\,\pi-\theta}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\,\pi^2\,\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\,\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\Bigg)}\Bigg)\Bigg\},$$

$$\Bigg\{\text{x}\to\frac{1}{4\,\pi}\Bigg(\sqrt{\Bigg(-16\,\pi^2\,\text{y}^2+\frac{4\,\pi^2}{(2\,\pi-\theta)^2}-16\,\pi\,\text{r}^2\,\theta+4\,\text{r}^2\,\theta^2-\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\,\pi-\theta}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\,\pi^2\,\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\,\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\Bigg)}\Bigg)\Bigg\}\Bigg\}$$

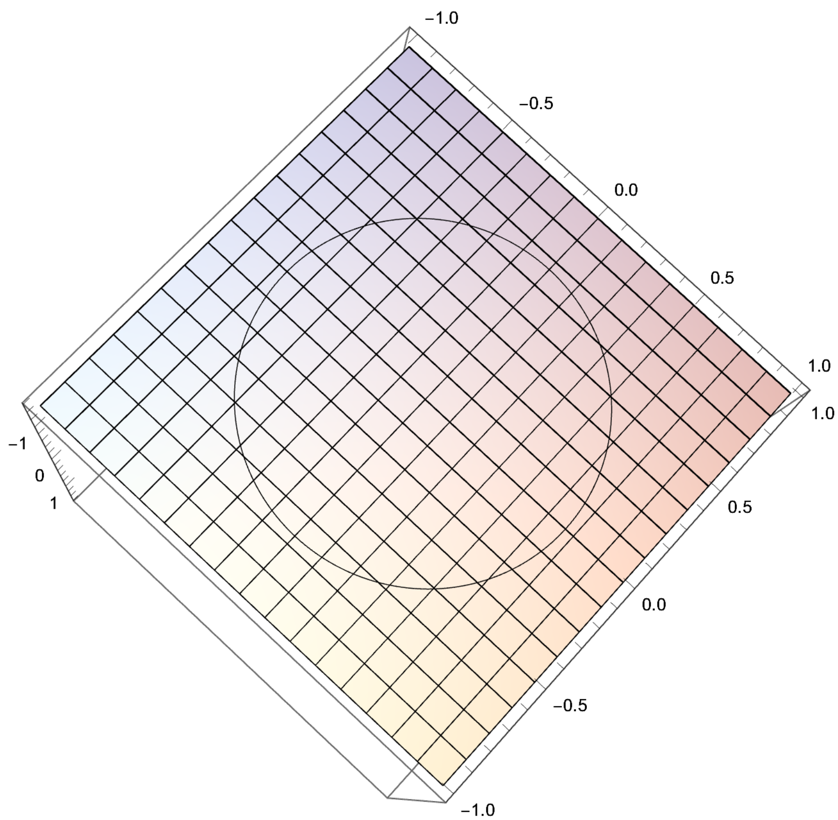
$$\frac{1}{2}\sqrt{\Bigg(-4\,\text{x}^2-4\,\text{y}^2+\frac{1}{(2\,\pi-\theta)^2}-\frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)\,(4\,\pi-\theta)^2}-\frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2\,(4\,\pi-\theta)}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(4\,\pi-\theta)^2\,\theta}+\frac{\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}+\frac{\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\theta}\Bigg)}$$

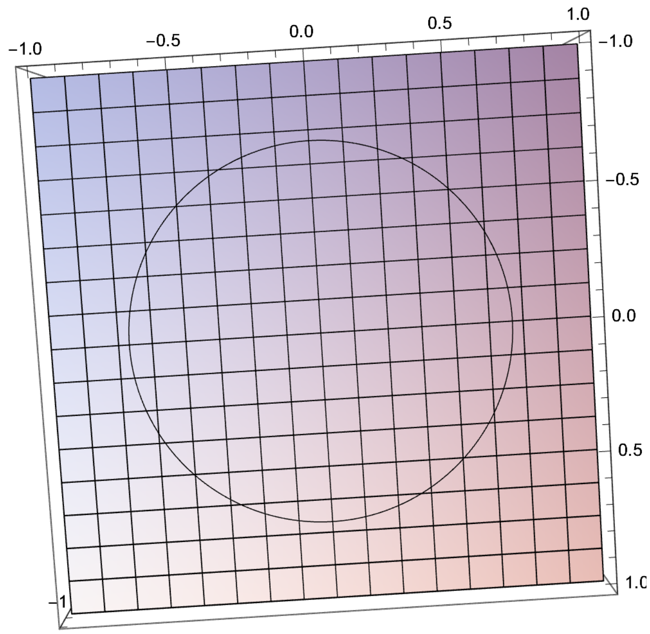
$$\theta := 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

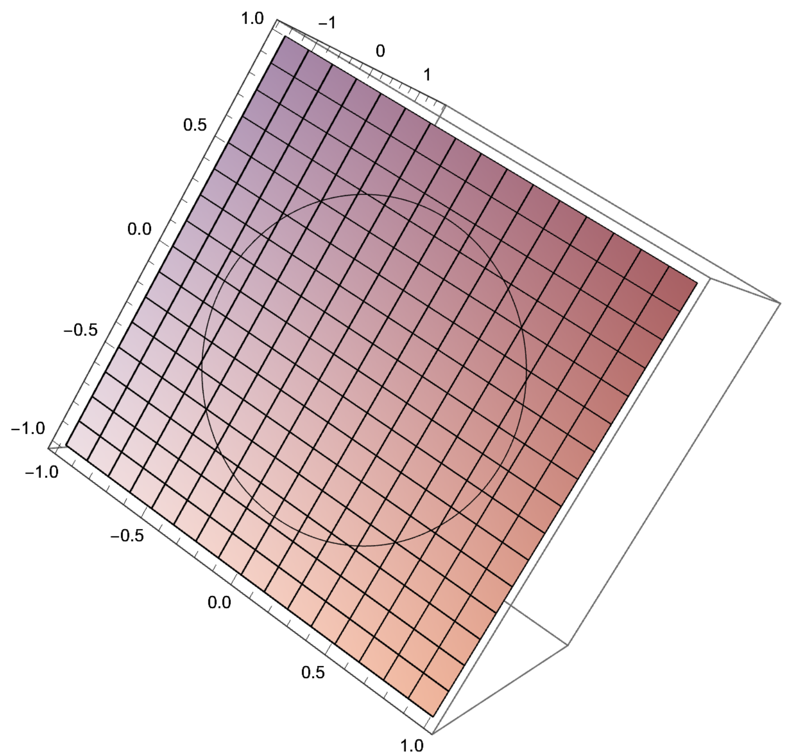
```
ContourPlot3D[
```

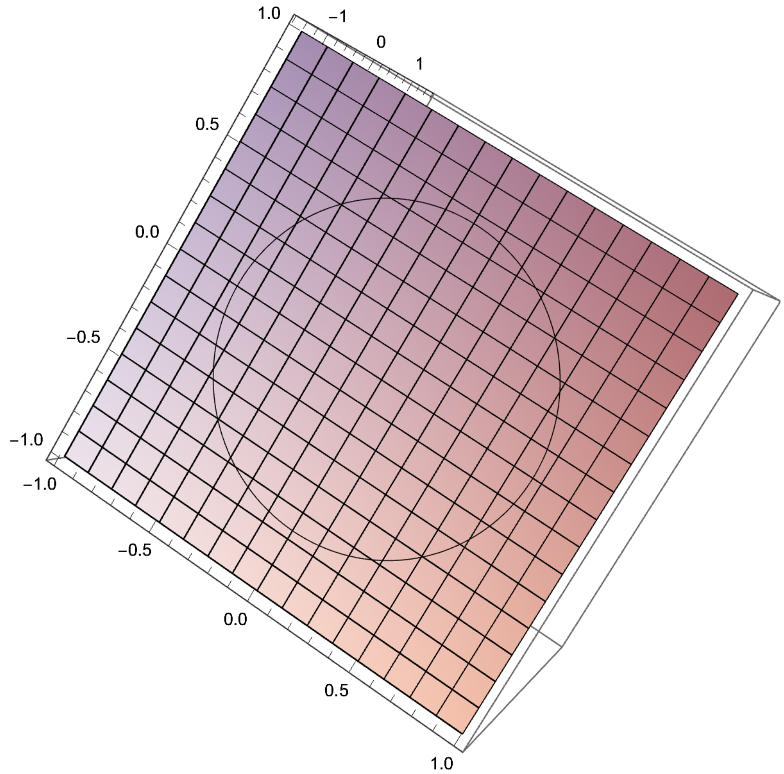
$$\frac{1}{2}\sqrt{\left(-4x^2-4y^2+\frac{1}{(2\pi-\theta)^2}-\frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)\,(4\pi-\theta)^2}-\frac{2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(2\pi-\theta)^2\,(4\pi-\theta)}-\frac{4\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]}{(4\pi-\theta)^2\,\theta}+\frac{\mathrm{Sin}[\beta]^2}{(2\pi-\theta)^2}+\frac{\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\theta}\right)},$$

```
{x, -1, 1}, {y, -1, 1}, {β, -π / 2, π / 2}]
```

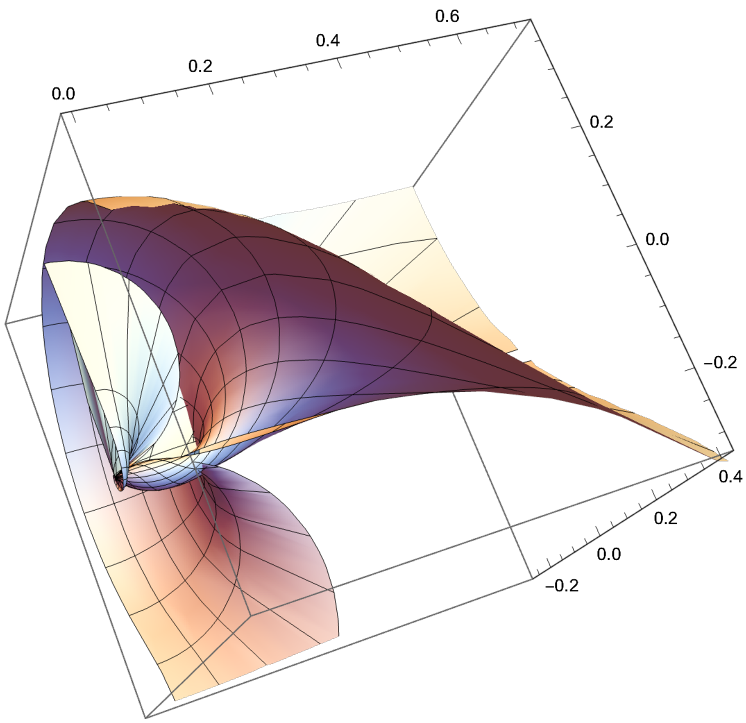



−1.0
−0.5
0.0
0.5
1.0
−1.0
−0.5
0.0
0.5
1.0
−1


1.0
−1
0
1
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0

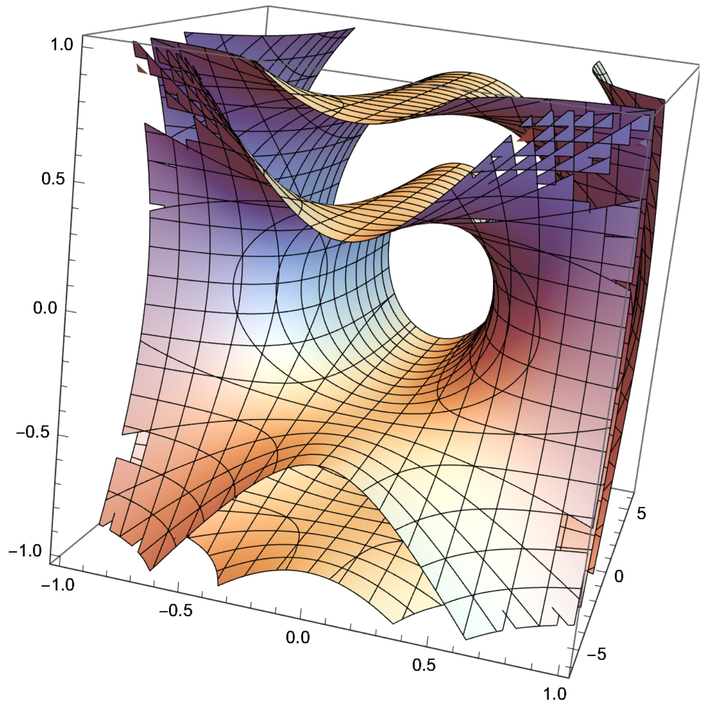

1.0
−1
0
1
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0

$$\text{SphericalPlot3D}\Big[\sqrt{\left(\left(r \,\text{Sin}[\beta]\, \text{Cos}\left[\text{ArcCos}\left[\frac{(2\,\pi - \theta)\ \text{Csc}[\beta]}{2\,\pi}\right]\right]\right)^{\wedge}2 + \left(r \,\text{Sin}[\beta]\, \text{Sin}\left[\text{ArcCos}\left[\frac{(2\,\pi - \theta)\ \text{Csc}[\beta]}{2\,\pi}\right]\right]\right)^{\wedge}2 + (r\ \text{Cos}[\beta])^{\wedge}2\right)},\ \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



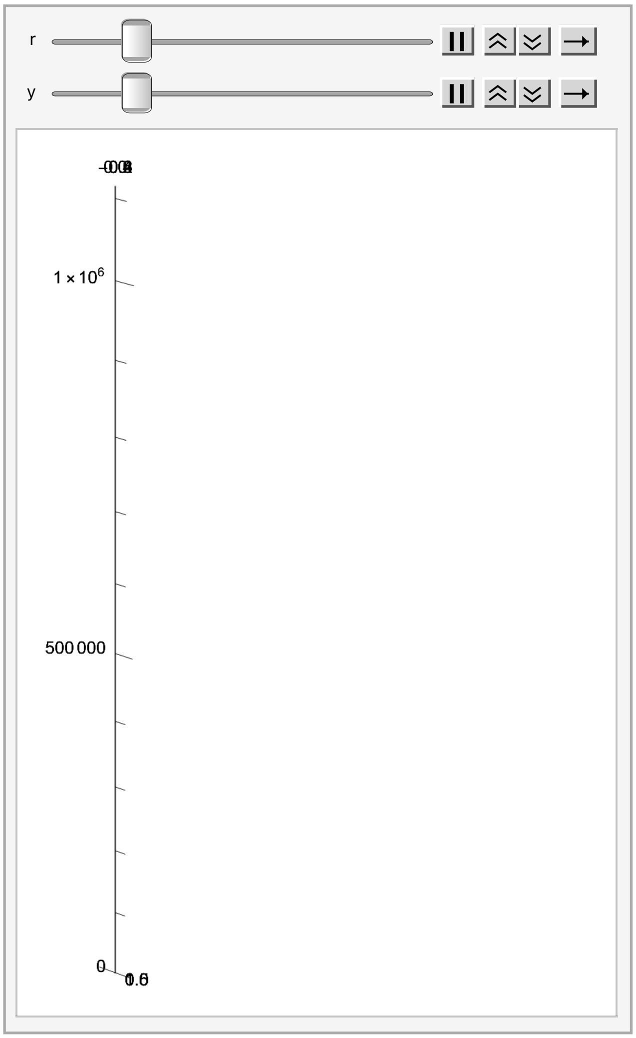
$$\text{ContourPlot3D}\left[\sqrt{x^{\wedge}2 + y^{\wedge}2 + z^{\wedge}2},\ \{x, -1, 1\}, \{y, -2\,\pi, 2\,\pi\}, \{x, -1, 1\}\right]$$

$$\text{ContourPlot3D}\left[\sqrt{r^{\wedge}2 + x^{\wedge}2 + \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^{\wedge}2},\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\},\ \{x, -1, 1\}\right]$$



$$\text{ContourPlot3D}\left[\sqrt{r^{\wedge}2 + x^{\wedge}2 + z^{\wedge}2},\ \{r, -1, 1\},\ \{z, -1, 1\},\ \{x, -1, 1\}\right]$$

$$\text{Animate}\Big[\text{SphericalPlot3D}\Big[\frac{1}{4\pi}\left(\sqrt{\left(-16\pi^2 y^2+\frac{4\pi^2}{(2\pi-\theta)^2}-16\pi r^2\theta+4r^2\theta^2-\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)^2}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\pi^2\,\text{Sin}[\beta]^2}{(2\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\right)}\right),\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big],\{r,-1,1\},\{y,-1,1\}\Big]$$



```
Solve[r == Sqrt[(x^2 + y^2 +
     (1/(4 π^2) (Sqrt[(64 π^4 r^2 - (256 π^5 r^2)/(4 π - θ) + 16 π^3 r^2 θ + 4 π^2 r^2 θ^2 + r^2 θ^4 + 16 π^3 r Sqrt[r^2 (4 π - θ) θ] -
            (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) + 8 π^2 r θ Sqrt[r^2 (4 π - θ) θ])]))^2)], y]
```

$$\left\{\left\{y \to -\frac{1}{4 \pi^2} \left(\sqrt{\left(-48 \pi^4 r^2 - 16 \pi^4 x^2 + \frac{256 \pi^5 r^2}{4 \pi - \theta} - 16 \pi^3 r^2 \theta - 4 \pi^2 r^2 \theta^2 - r^2 \theta^4 - 16 \pi^3 r \sqrt{r^2 (4 \pi - \theta) \theta} + \frac{64 \pi^4 r \sqrt{r^2 (4 \pi - \theta) \theta}}{4 \pi - \theta} - 8 \pi^2 r \theta \sqrt{r^2 (4 \pi - \theta) \theta}\right)}\right)\right\},\right.$$
$$\left.\left\{y \to \frac{1}{4 \pi^2} \left(\sqrt{\left(-48 \pi^4 r^2 - 16 \pi^4 x^2 + \frac{256 \pi^5 r^2}{4 \pi - \theta} - 16 \pi^3 r^2 \theta - 4 \pi^2 r^2 \theta^2 - r^2 \theta^4 - 16 \pi^3 r \sqrt{r^2 (4 \pi - \theta) \theta} + \frac{64 \pi^4 r \sqrt{r^2 (4 \pi - \theta) \theta}}{4 \pi - \theta} - 8 \pi^2 r \theta \sqrt{r^2 (4 \pi - \theta) \theta}\right)}\right)\right\}\right\}$$

```
Export["lldradius.avi"

Export["lldradius.avi",
 Animate[Plot3D[1/(4 π^2) (Sqrt[(-48 π^4 r^2 - 16 π^4 x^2 + (256 π^5 r^2)/(4 π - θ) - 16 π^3 r^2 θ - 4 π^2 r^2 θ^2 - r^2 θ^4 -
          16 π^3 r Sqrt[r^2 (4 π - θ) θ] + (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) - 8 π^2 r θ Sqrt[r^2 (4 π - θ) θ])]),
   {r, -1, 1}, {θ, -2 π, 2 π}], {x, -1.3, 1.3}]]
```

```
lldradius.avi
```

```
Manipulate[
 Plot3D[1/(4 π^2) (Sqrt[(-48 π^4 r^2 - 16 π^4 x^2 + (256 π^5 r^2)/(4 π - θ) - 16 π^3 r^2 θ - 4 π^2 r^2 θ^2 - r^2 θ^4 - 16 π^3
        r Sqrt[r^2 (4 π - θ) θ] + (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) - 8 π^2 r θ Sqrt[r^2 (4 π - θ) θ])]),
  {r, -1, 1}, {θ, -2 π, 2 π}], {x, -1, 1}]
```

$\sqrt{x\hat{}2+y\hat{}2+z\hat{}2}$

$$\text{Solve}\left[\sqrt{x\hat{}2+y\hat{}2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\hat{}2}==\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}},\ r\right]$$

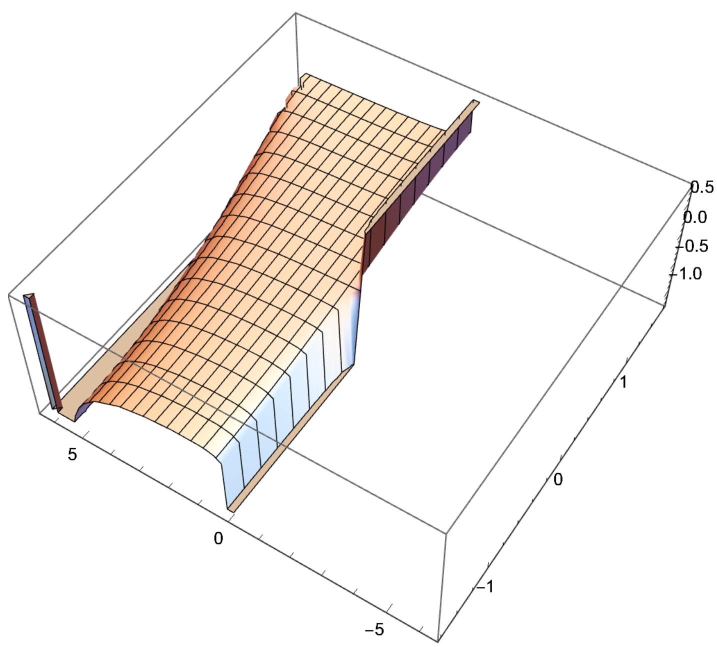
$$\left\{\left\{r\to-\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}\right\},\right.$$

$$\left.\left\{r\to\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}\right\}\right\}$$

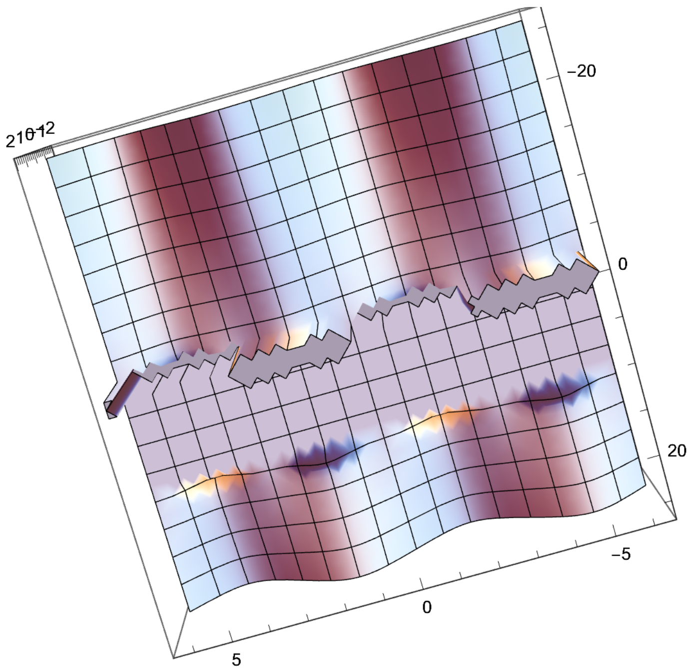
$$\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}$$

$$\text{Solve}\left[\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}==\right.$$

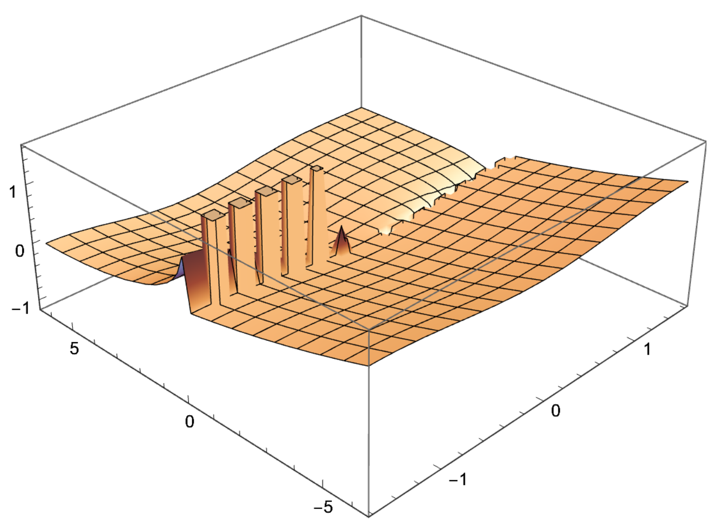
$$\text{Plot3D}\left[\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right),\{\beta,-\pi/2,\pi/2\},\{\theta,-2\pi,2\pi\}\right]$$



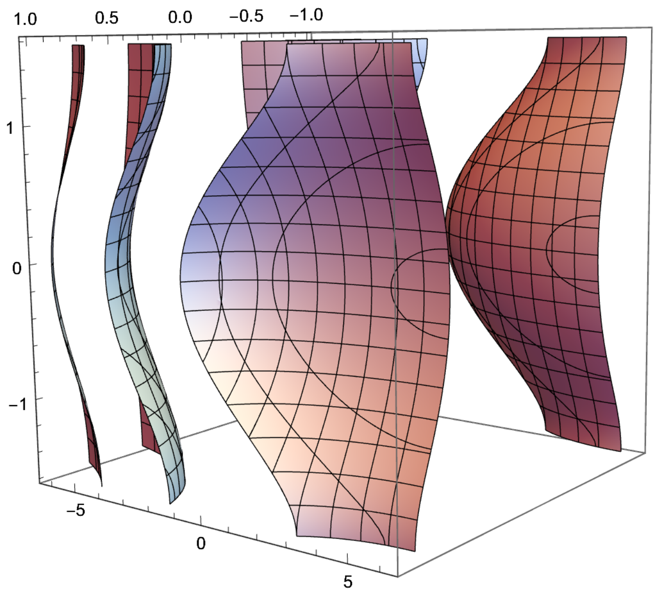
```
Plot3D[0.00633256 Im[-12.5664 θ + θ^2 + 6.28319 Sqrt[(12.5664 - 1. θ) θ] Sin[β] +
    39.4784 Sin[β]^2 - (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / (12.5664 - 1. θ) -
    (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / θ], {β, -6.3, 6.3}, {θ, -26, 26}]
```




```
Plot3D[0.00633256 Re[-12.5664 θ + θ^2 + 6.28319 Sqrt[(12.5664 - 1. θ) θ] Sin[β] +
    39.4784 Sin[β]^2 - (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / (12.5664 - 1. θ) -
    (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / θ], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



$$\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\wedge 2 + \frac{2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) r\, - 2\,\pi\, r}{2\,\pi}\wedge 2,\right.$$
$$\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



Addendum No. 1

Addendum No. 1

Visualizing Multiple Possible Equations for Non-Relativisitc Velocity with Constant Initial Radius through A Transition

All of these functions come from just a single expression. Think about how many different visualizations of a single function there are in terms of our system.

$$\left\{\left\{\theta \to 2\,\pi\left(1 - \sqrt{1 - \text{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\,\pi\left(1 + \sqrt{1 - \text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} == \frac{2\,\pi\,r}{\theta},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{2}{3}\left(2\,\pi - \frac{2\,\pi}{\left(17 + 3\,\sqrt{33}\right)^{1/3}} + \left(17 + 3\,\sqrt{33}\right)^{1/3}\pi\right)\right\},\right.$$

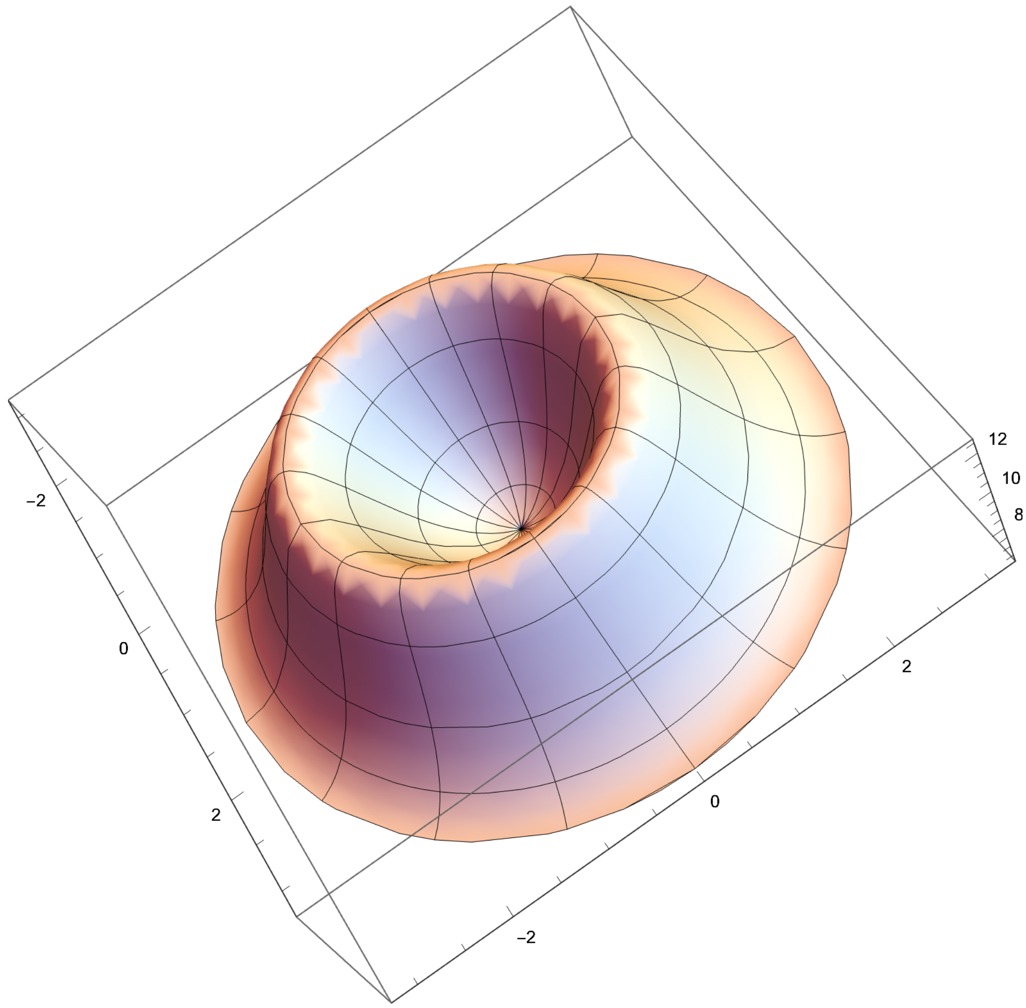
$$\left\{\theta \to \frac{4\,\pi}{3} + \frac{2\left(1 + i\,\sqrt{3}\right)\pi}{3\left(17 + 3\,\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 - i\,\sqrt{3}\right)\left(17 + 3\,\sqrt{33}\right)^{1/3}\pi\right\},$$

$$\left.\left\{\theta \to \frac{4\,\pi}{3} + \frac{2\left(1 - i\,\sqrt{3}\right)\pi}{3\left(17 + 3\,\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i\,\sqrt{3}\right)\left(17 + 3\,\sqrt{33}\right)^{1/3}\pi\right\}\right\}$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2 - 2\,r^2\,2\,\pi\left(1 + \sqrt{1 - \text{Sin}[\beta]^2}\right)}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} == \frac{2\,\pi\,r}{\theta},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{8\,\pi}{3 + \text{Cos}[2\,\beta]}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{8\,\pi}{3+\text{Cos}[2\,\beta]},\ \{\beta,\ -\pi,\ \pi\}\right]$$

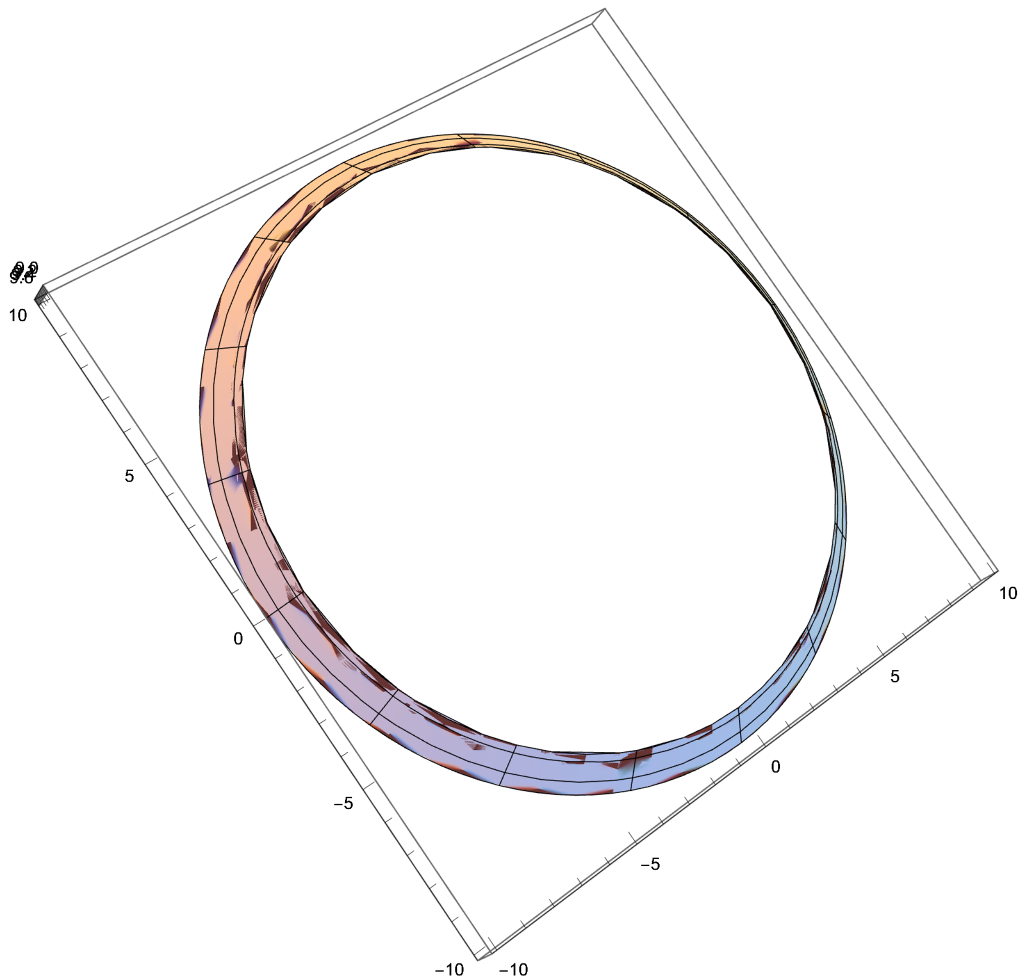


$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\left(2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}{2\,\sqrt{4\,\pi\,r^2\left(2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)-r^2\,\theta^2}}==\frac{2\,\pi\,r}{\theta},\ \theta\right]$$

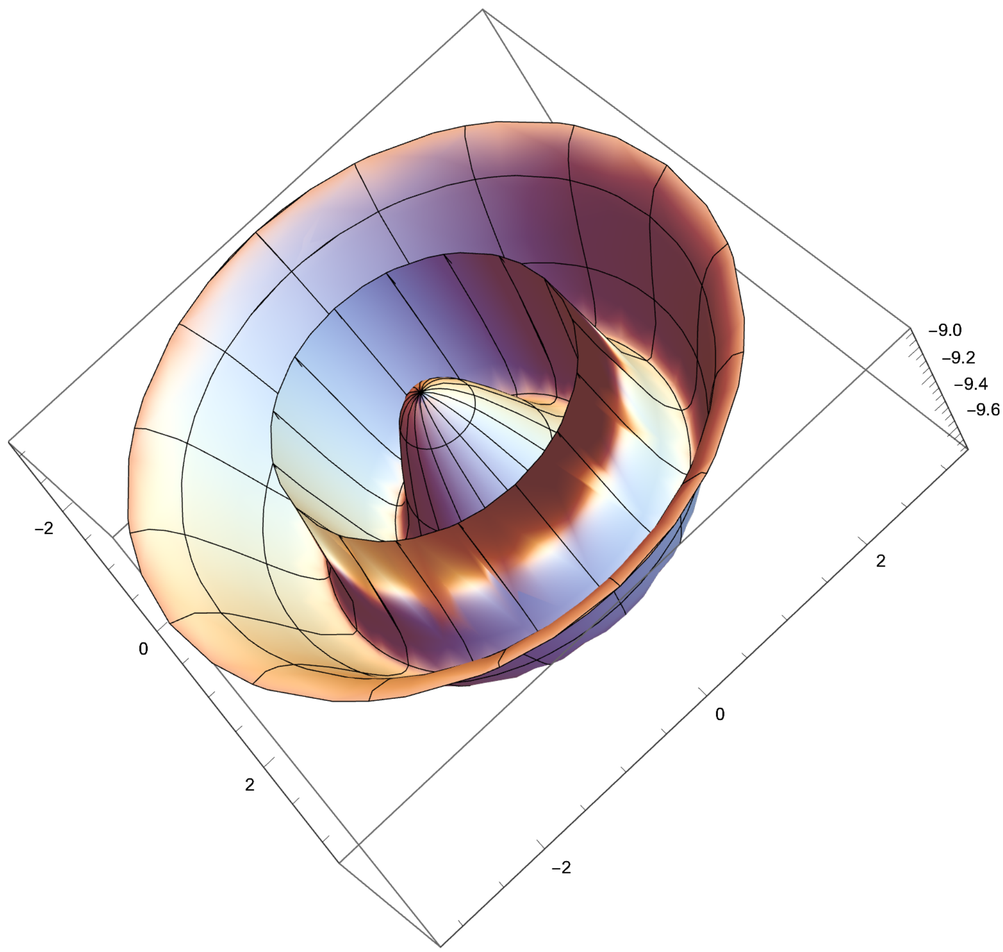
$$\left\{\left\{\theta\to-\frac{2\,\sqrt{2}\,\sqrt{-\pi^2-\pi^2\,\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-2+\text{Sin}[\beta]^2}}\right\},\ \left\{\theta\to\frac{2\,\sqrt{2}\,\sqrt{-\pi^2-\pi^2\,\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-2+\text{Sin}[\beta]^2}}\right\}\right\}$$

RevolutionPlot3D[

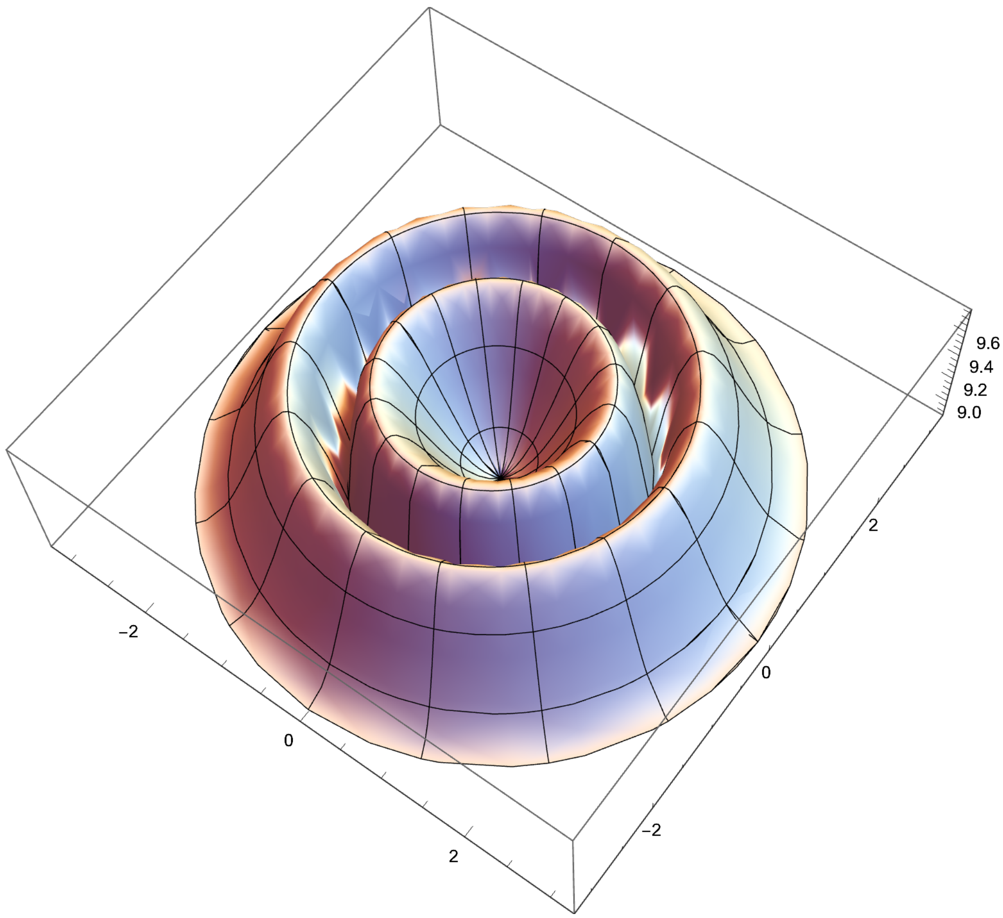
$$\left\{-\frac{2\sqrt{2}\ \sqrt{-\pi^2-\pi^2\ \sqrt{1-\mathrm{Sin}[\beta]^2}}}{\sqrt{-2+\mathrm{Sin}[\beta]^2}},\ \frac{2\sqrt{2}\ \sqrt{-\pi^2-\pi^2\ \sqrt{1-\mathrm{Sin}[\beta]^2}}}{\sqrt{-2+\mathrm{Sin}[\beta]^2}}\right\},\ \{\beta,-\pi,\pi\}\Big]$$



$$\text{RevolutionPlot3D}\left[-\frac{2\sqrt{2}\sqrt{-\pi^2-\pi^2\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-2+\text{Sin}[\beta]^2}},\{\beta,-\pi,\pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\frac{2\sqrt{2}\sqrt{-\pi^2-\pi^2\sqrt{1-\texttt{Sin}[\beta]^2}}}{\sqrt{-2+\texttt{Sin}[\beta]^2}}, \{\beta, -\pi, \pi\}\right]$$

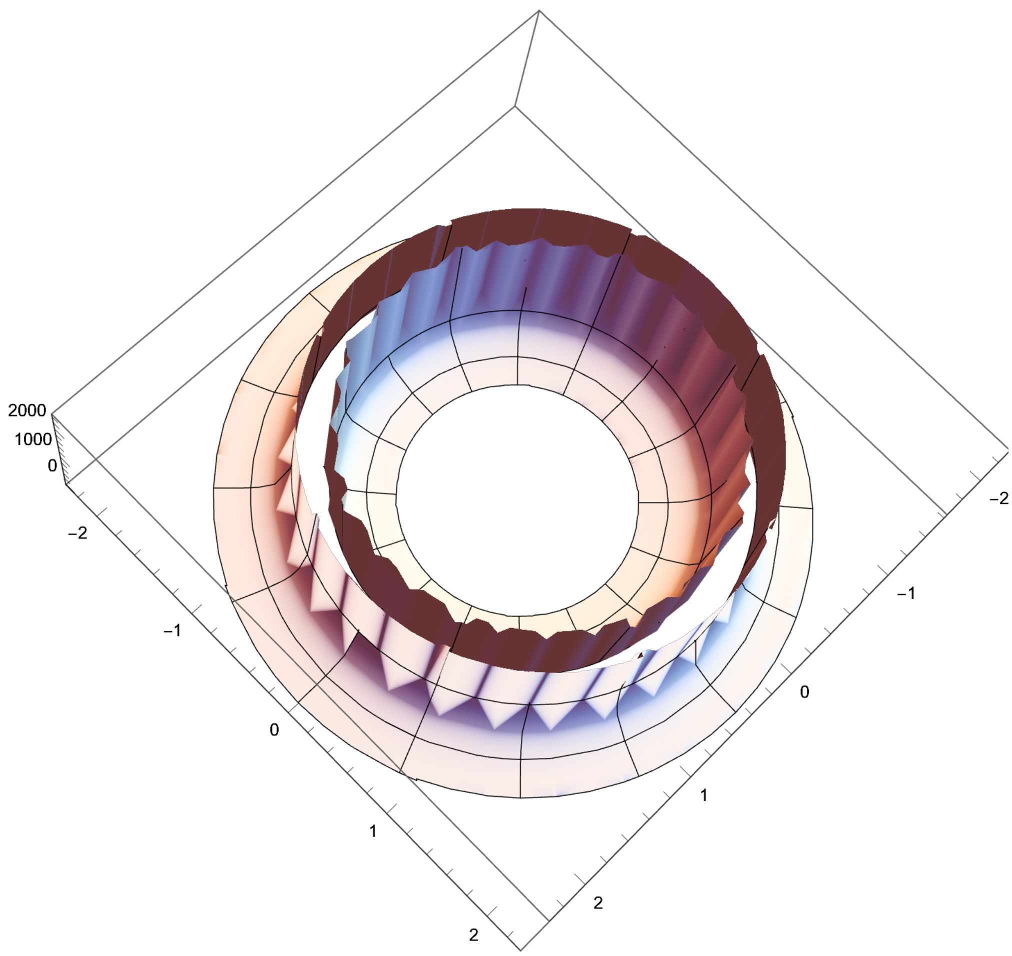


$$\texttt{Solve}\left[\frac{4\pi r^2 - 2r^2\left(2\pi\left(1+\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)}{2\sqrt{4\pi r^2(\theta) - r^2\left(2\pi\left(1+\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)^2}} == \frac{2\pi r}{\theta}, \theta\right]$$

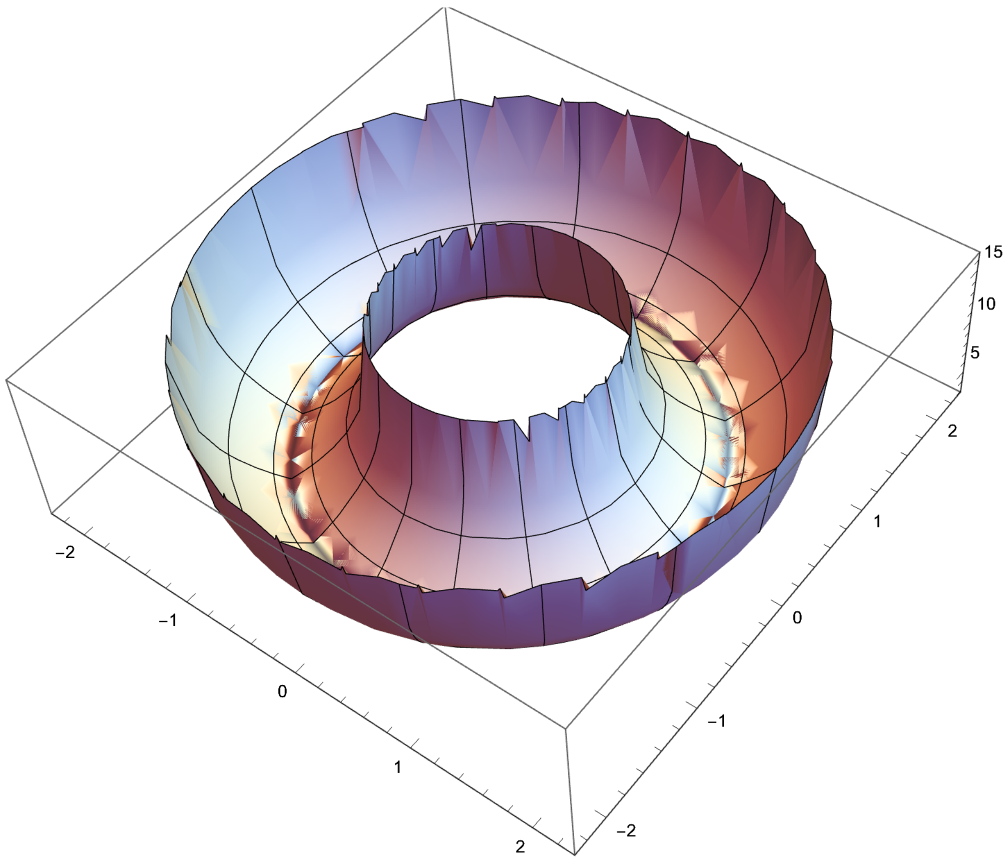
$$\Big\{\{\theta \to \texttt{ComplexInfinity}\},$$
$$\Big\{\theta \to \frac{1}{2\left(-1+\texttt{Sin}[\beta]^2\right)}\left(-4\pi - \sqrt{\left(16\pi^2 - 4\left(-1+\texttt{Sin}[\beta]^2\right)\left(-8\pi^2+4\pi^2\texttt{Sin}[\beta]^2 - 8\pi^2\sqrt{-(-1+\texttt{Sin}[\beta])(1+\texttt{Sin}[\beta])}\right)\right)}\right)\Big\},$$
$$\Big\{\theta \to \frac{1}{2\left(-1+\texttt{Sin}[\beta]^2\right)}\left(-4\pi + \sqrt{\left(16\pi^2 - 4\left(-1+\texttt{Sin}[\beta]^2\right)\left(-8\pi^2+4\pi^2\texttt{Sin}[\beta]^2 - 8\pi^2\sqrt{-(-1+\texttt{Sin}[\beta])(1+\texttt{Sin}[\beta])}\right)\right)}\right)\Big\}\Big\}$$

```
RevolutionPlot3D[
```

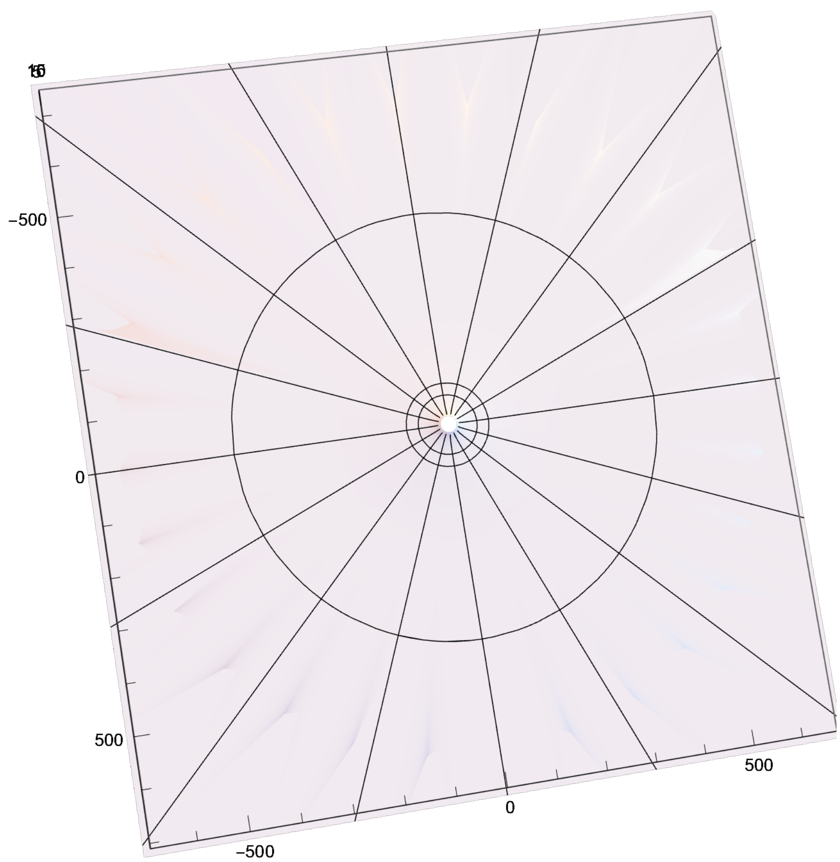
$$\left(\frac{1}{2\left(-1+\text{Sin}[\beta]^2\right)}\left(-4\pi-\sqrt{\left(16\pi^2-4\left(-1+\text{Sin}[\beta]^2\right)\left(-8\pi^2+4\pi^2\,\text{Sin}[\beta]^2-8\pi^2\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\right)\right)}\right)\right),\ \{\beta,-\pi,\pi\}]$$



```
RevolutionPlot3D[
 (1/(2 (-1 + Sin[β]^2)) (-4 π + √(16 π^2 - 4 (-1 + Sin[β]^2) (-8 π^2 + 4 π^2 Sin[β]^2 - 8
      π^2 √(-(-1 + Sin[β]) (1 + Sin[β])))))), {β, -π, π}]
```



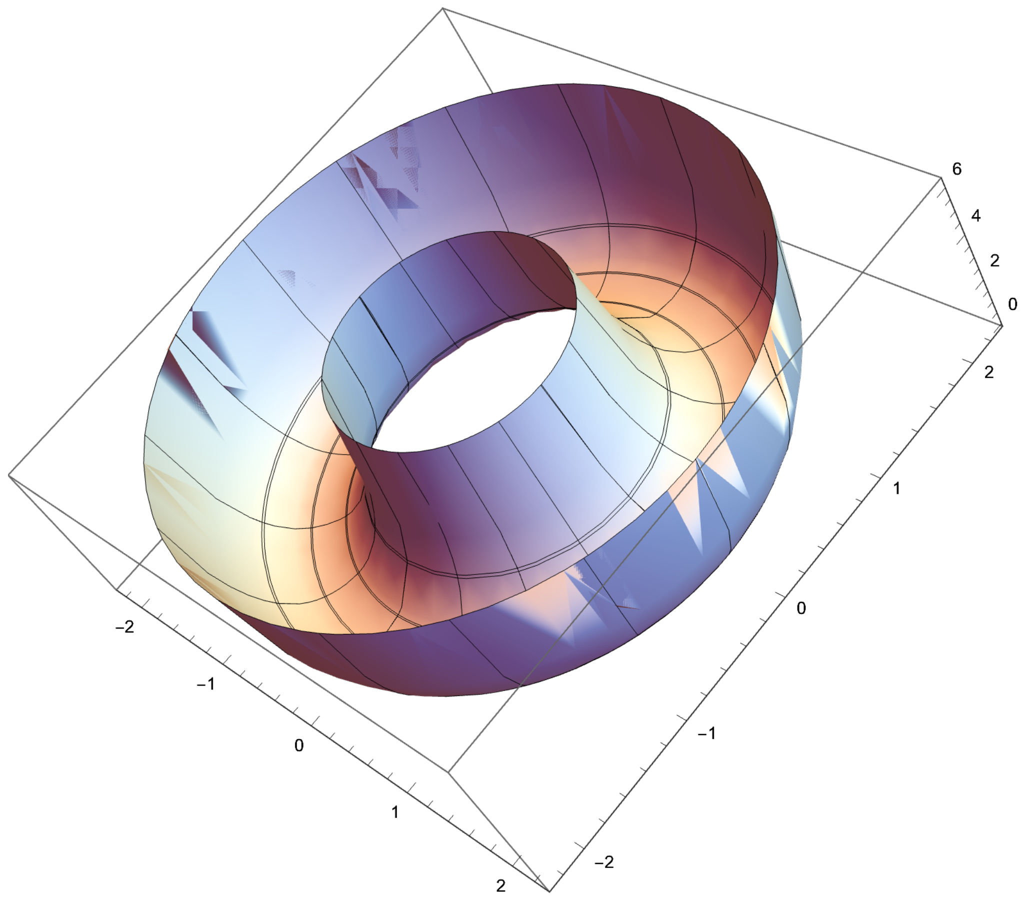
$$\text{RevolutionPlot3D}\left[\left\{\left(\frac{1}{2\left(-1+\text{Sin}[\beta]^2\right)}\left(-4\pi-\sqrt{\left(16\pi^2-4\left(-1+\text{Sin}[\beta]^2\right)\left(-8\pi^2+4\pi^2\,\text{Sin}[\beta]^2-8\pi^2\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\right)\right)}\right)\right),\left(\frac{1}{2\left(-1+\text{Sin}[\beta]^2\right)}\left(-4\pi+\sqrt{\left(16\pi^2-4\left(-1+\text{Sin}[\beta]^2\right)\left(-8\pi^2+4\pi^2\,\text{Sin}[\beta]^2-8\pi^2\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\right)\right)}\right)\right)\right\},\{\beta,-\pi,\pi\}\right]$$



$$\text{Solve}\left[\frac{4\pi r^2-2r^2\left(2\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}{2\sqrt{4\pi r^2\,(\theta)-r^2\,(\theta)^2}}==\frac{2\pi r}{2\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)},\theta\right]$$

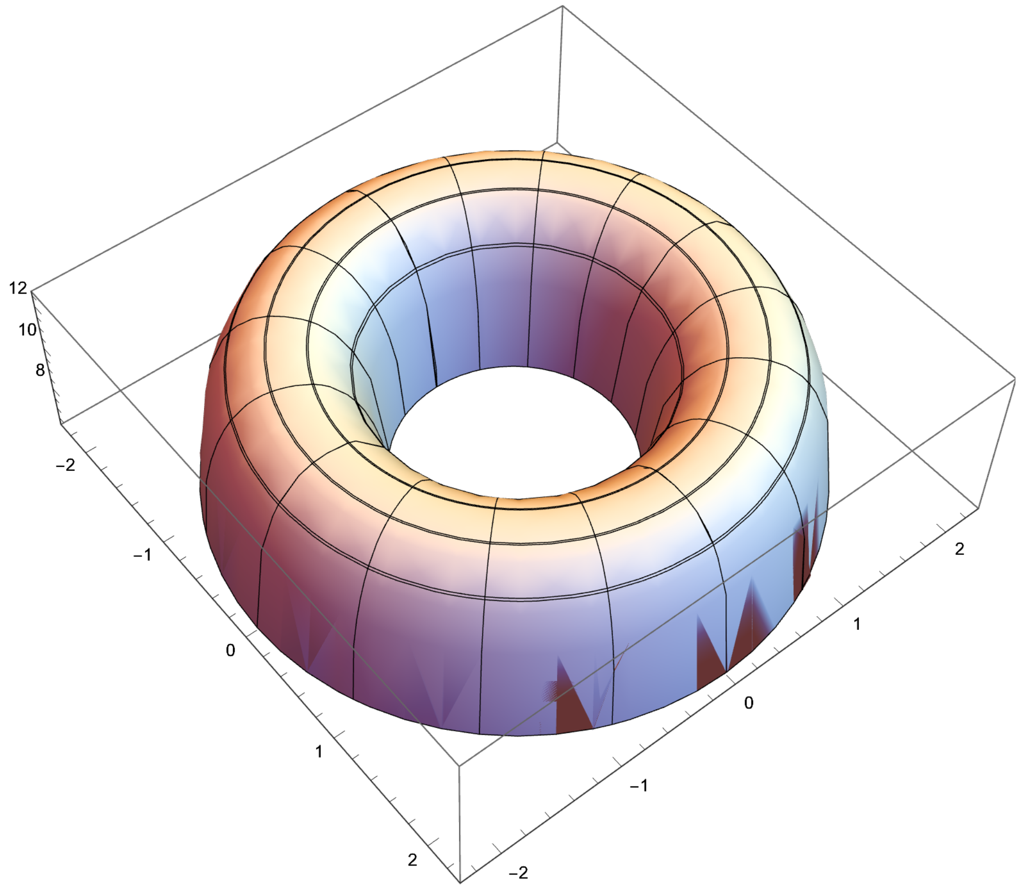
$$\left\{\left\{\theta\to\frac{1}{2}\left(4\pi-\sqrt{\left(16\pi^2+4\pi^2\left(-8+12\,\text{Sin}[\beta]^2-4\,\text{Sin}[\beta]^4-8\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}+8\,\text{Sin}[\beta]^2\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\right)\right)}\right)\right\},\left\{\theta\to\frac{1}{2}\left(4\pi+\sqrt{\left(16\pi^2+4\pi^2\left(-8+12\,\text{Sin}[\beta]^2-4\,\text{Sin}[\beta]^4-8\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}+8\,\text{Sin}[\beta]^2\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\right)\right)}\right)\right\}\right\}$$

```
RevolutionPlot3D[
 1/2 (4 π - √(16 π² + 4 π² (-8 + 12 Sin[β]² - 4 Sin[β]⁴ - 8 √(-(-1 + Sin[β]) (1 + Sin[β])) +
        8 Sin[β]² √(-(-1 + Sin[β]) (1 + Sin[β]))))), {β, -π, π}]
```

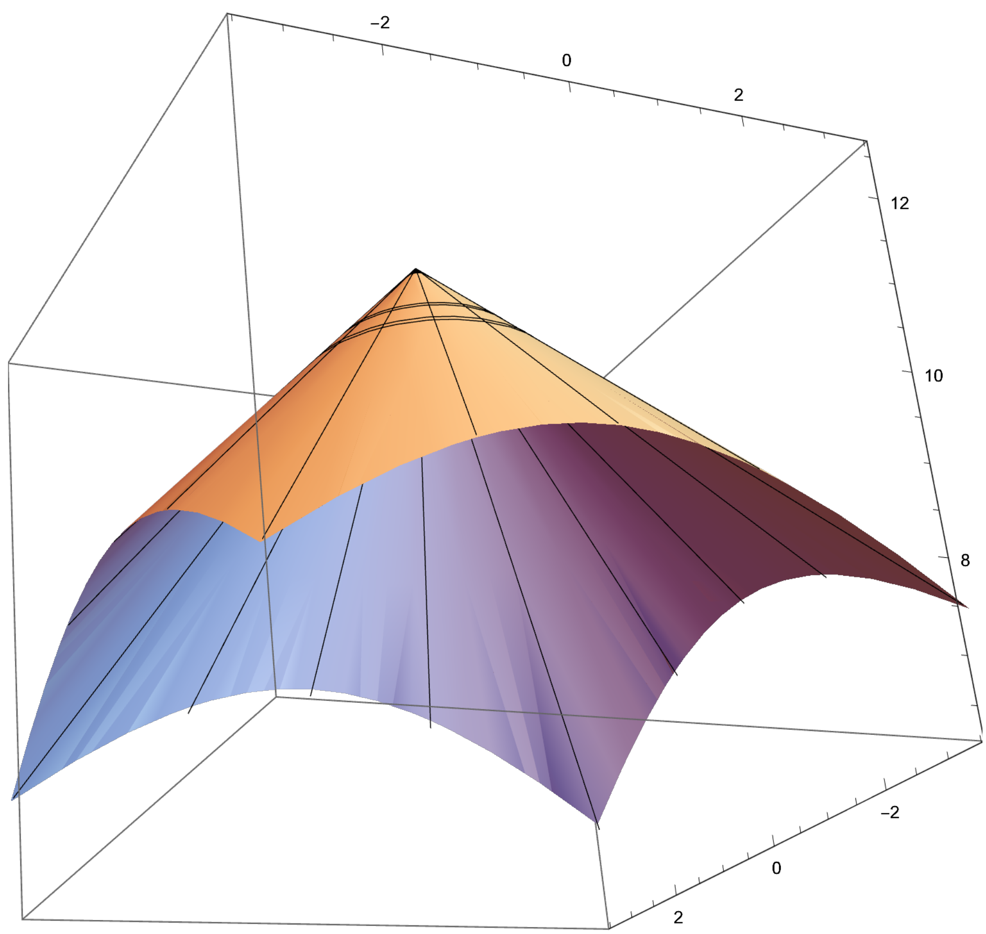


RevolutionPlot3D$\Big[$

$$\frac{1}{2}\left(4\,\pi+\sqrt{\left(16\,\pi^2+4\,\pi^2\left(-8+12\,\mathrm{Sin}[\beta]^2-4\,\mathrm{Sin}[\beta]^4-8\,\sqrt{-(-1+\mathrm{Sin}[\beta])\,(1+\mathrm{Sin}[\beta])}+8\,\mathrm{Sin}[\beta]^2\,\sqrt{-(-1+\mathrm{Sin}[\beta])\,(1+\mathrm{Sin}[\beta])}\right)\right)}\right),\ \{\beta,-\pi,\pi\}\Big]$$



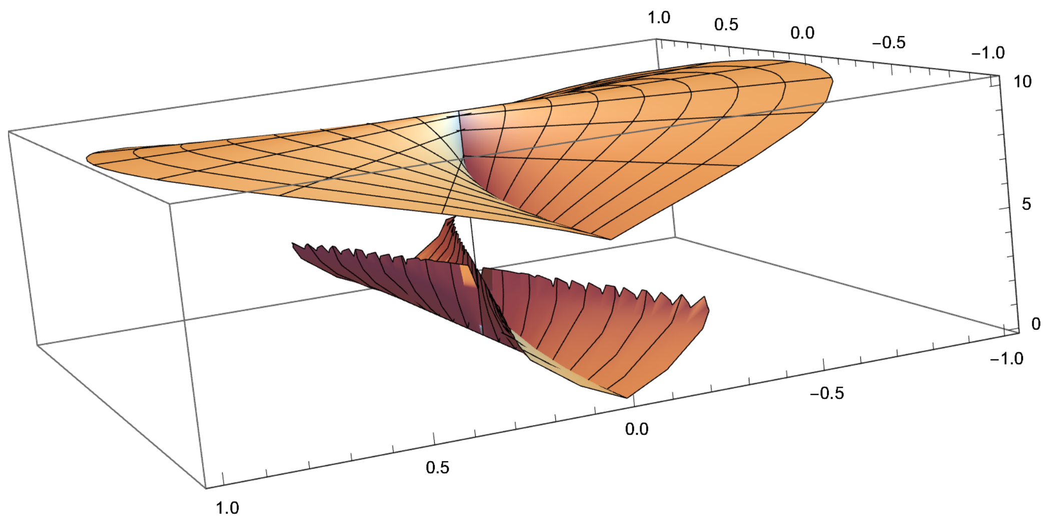
```
RevolutionPlot3D[
 {(1/2 (4 π - √(16 π^2 + 4 π^2 (-8 + 12 Sin[β]^2 - 4 Sin[β]^4 - 8 √(-(-1 + Sin[β]) (1 + Sin[β])) +
        8 Sin[β]^2 √(-(-1 + Sin[β]) (1 + Sin[β])))))),
  (1/2 (4 π + √(16 π^2 + 4 π^2 (-8 + 12 Sin[β]^2 - 4 Sin[β]^4 - 8 √(-(-1 + Sin[β]) (1 + Sin[β])) +
        8 Sin[β]^2 √(-(-1 + Sin[β]) (1 + Sin[β])))))))}, {β, -π, π}]
```



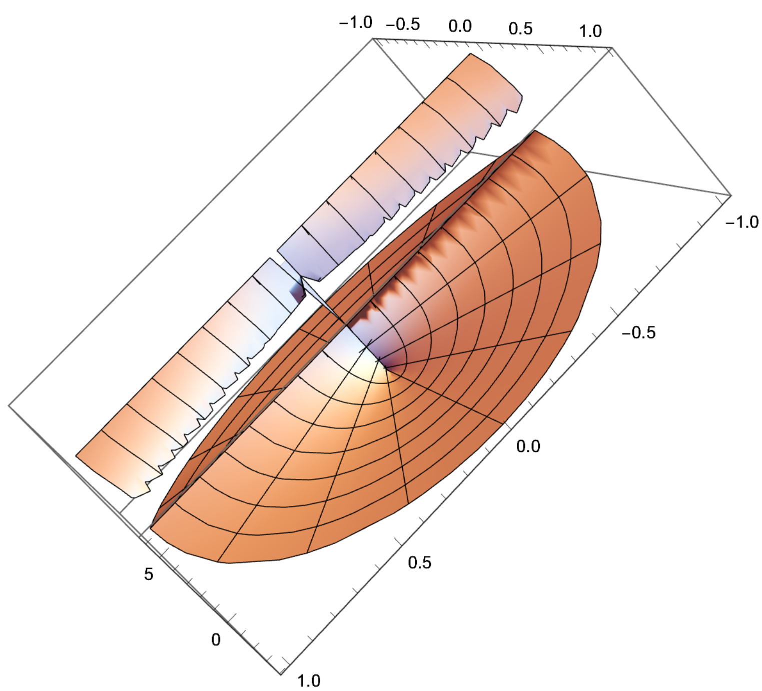

```
Solve[(4 π r^2 - 2 r^2 (θ)) / (2 √(4 π r^2 (2 π (1 + √(1 - Sin[β]^2))) - r^2 (2 π (1 + √(1 - Sin[β]^2)))^2)) == (2 π r)/(θ), θ]
```

$$\left\{\left\{\theta \to \frac{\pi\, r - \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \mathrm{Sin}[\beta]^2}}}{r}\right\}, \left\{\theta \to \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \mathrm{Sin}[\beta]^2}}}{r}\right\}\right\}$$

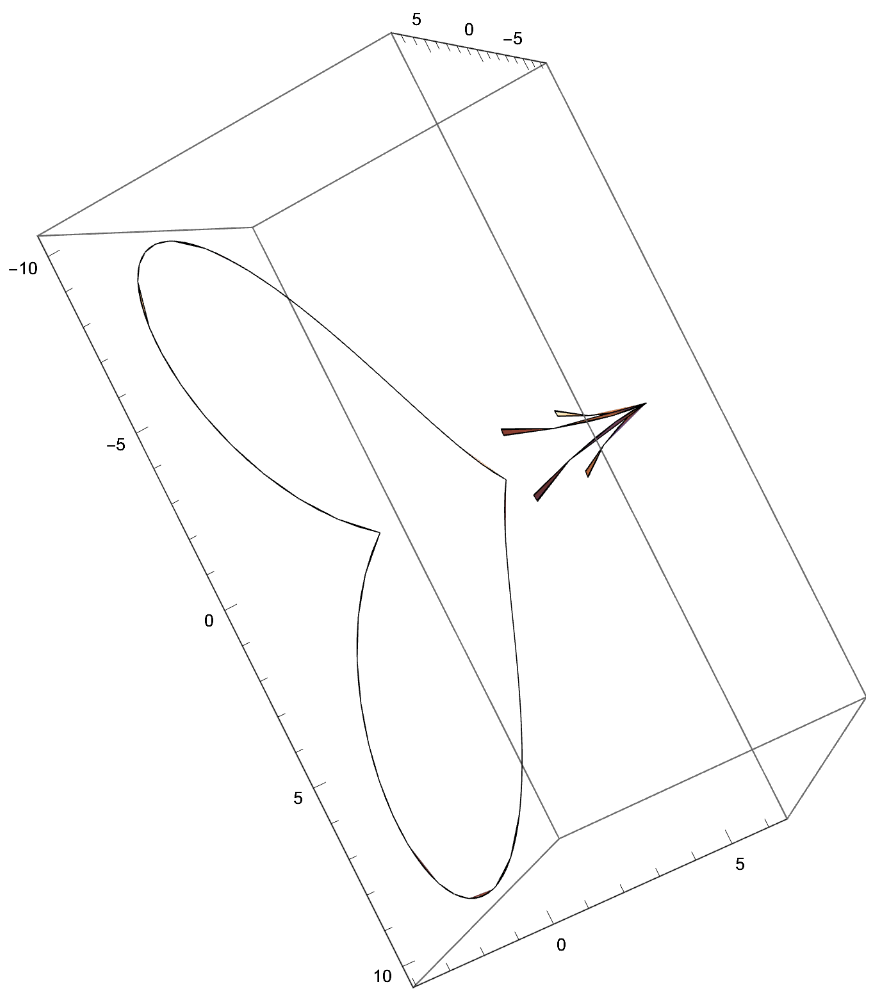
RevolutionPlot3D$\left[\dfrac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$



RevolutionPlot3D$\left[\dfrac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$



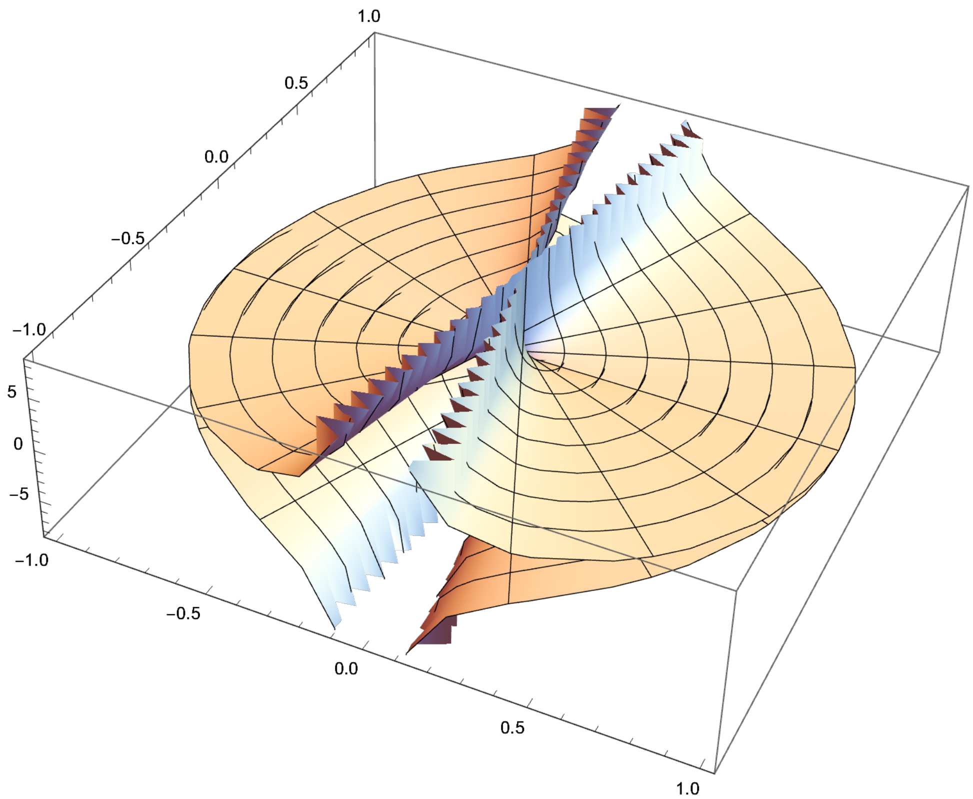
$$\texttt{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2\, \texttt{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2\, \texttt{Sin}[\beta]^2}}}{r}\right\}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



$$\texttt{Solve}\left[\frac{4\pi r^2 - 2 r^2 \left(2\pi\left(1 + \sqrt{1 - \texttt{Sin}[\beta]^2}\right)\right)}{2\sqrt{4\pi r^2\left(2\pi\left(1+\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right) - r^2\left(2\pi\left(1+\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)^2}} == \frac{2\pi r}{2\pi\,(\theta)}, \theta\right]$$

$$\left\{\left\{\theta \to -\frac{\sqrt{r^2\, \texttt{Sin}[\beta]^2}}{r\sqrt{1 - \texttt{Sin}[\beta]^2}}\right\}\right\}$$

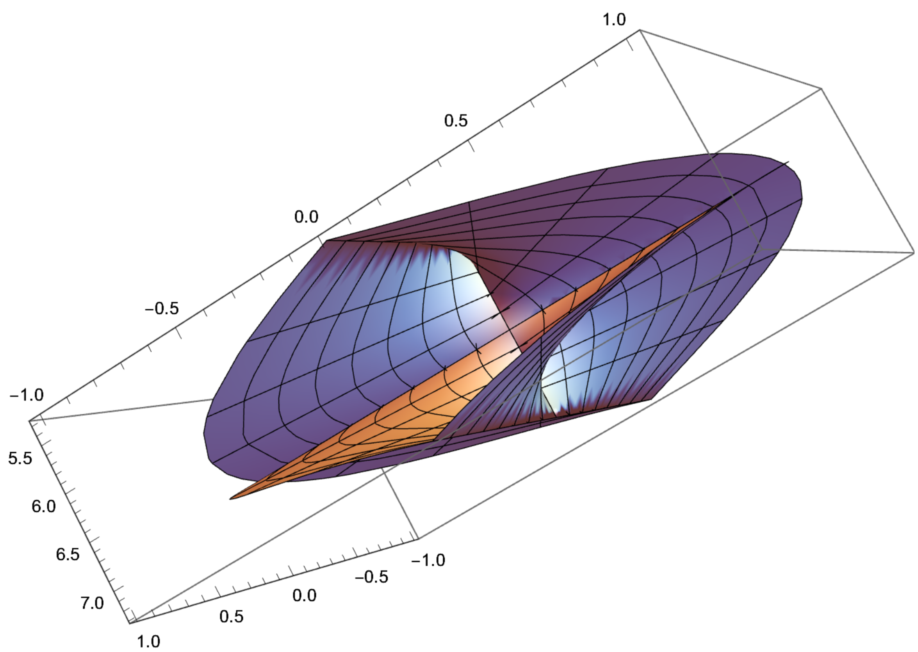
$$\text{RevolutionPlot3D}\left[-\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{r\,\sqrt{1-\text{Sin}[\beta]^2}},\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\right]$$



$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,(\theta)}{2\,\sqrt{4\,\pi\,r^2\,\left(2\,\pi\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)-r^2\,\left(2\,\pi\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)^2}}==\frac{2\,\pi\,r}{2\,\pi\,\left(2\,\pi\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)},\ \theta\right]$$

$$\left\{\left\{\theta\to-\frac{1}{r^2}\sqrt{8\,\pi^2\,r^2\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)-4\,\pi^2\,r^2\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)^2}\left(\frac{r}{2\,\pi\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)}-\frac{2\,\pi\,r^2}{\sqrt{8\,\pi^2\,r^2\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)-4\,\pi^2\,r^2\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)^2}}\right)\right\}\right\}$$

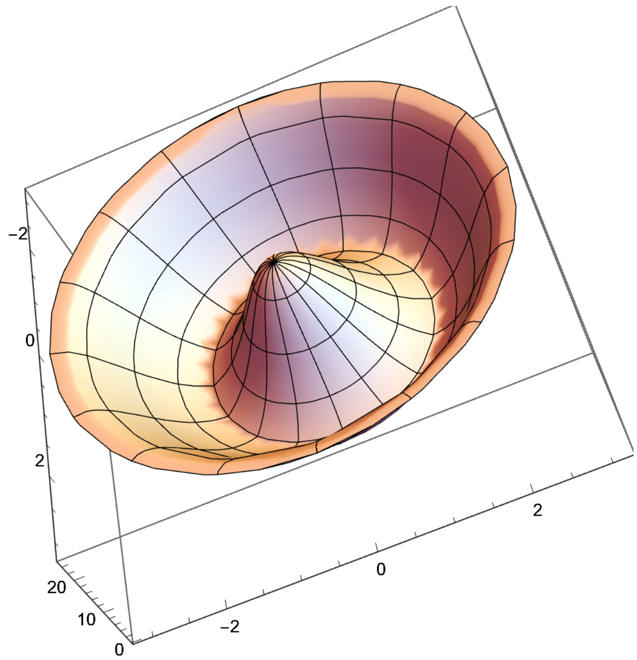
$$\text{RevolutionPlot3D}\left[-\frac{1}{r^2}\sqrt{8\,\pi^2\,r^2\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)-4\,\pi^2\,r^2\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)^2}\right.$$
$$\left(\frac{r}{2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)}-\frac{2\,\pi\,r^2}{\sqrt{8\,\pi^2\,r^2\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)-4\,\pi^2\,r^2\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)^2}}\right),$$
$$\left.\{r,-1,1\},\{\beta,-\pi,\pi\}\right]$$



$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\left(2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}{2\,\sqrt{4\,\pi\,r^2\,(\theta)-r^2\left(2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)^2}}==\frac{2\,\pi\,r}{\left(2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)},\theta\right]$$

$$\left\{\left\{\theta\to 4\,\pi-4\,\pi\,\text{Sin}[\beta]^2+\pi\,\text{Sin}[\beta]^4+4\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}-2\,\pi\,\text{Sin}[\beta]^2\,\sqrt{1-\text{Sin}[\beta]^2}\right\}\right\}$$

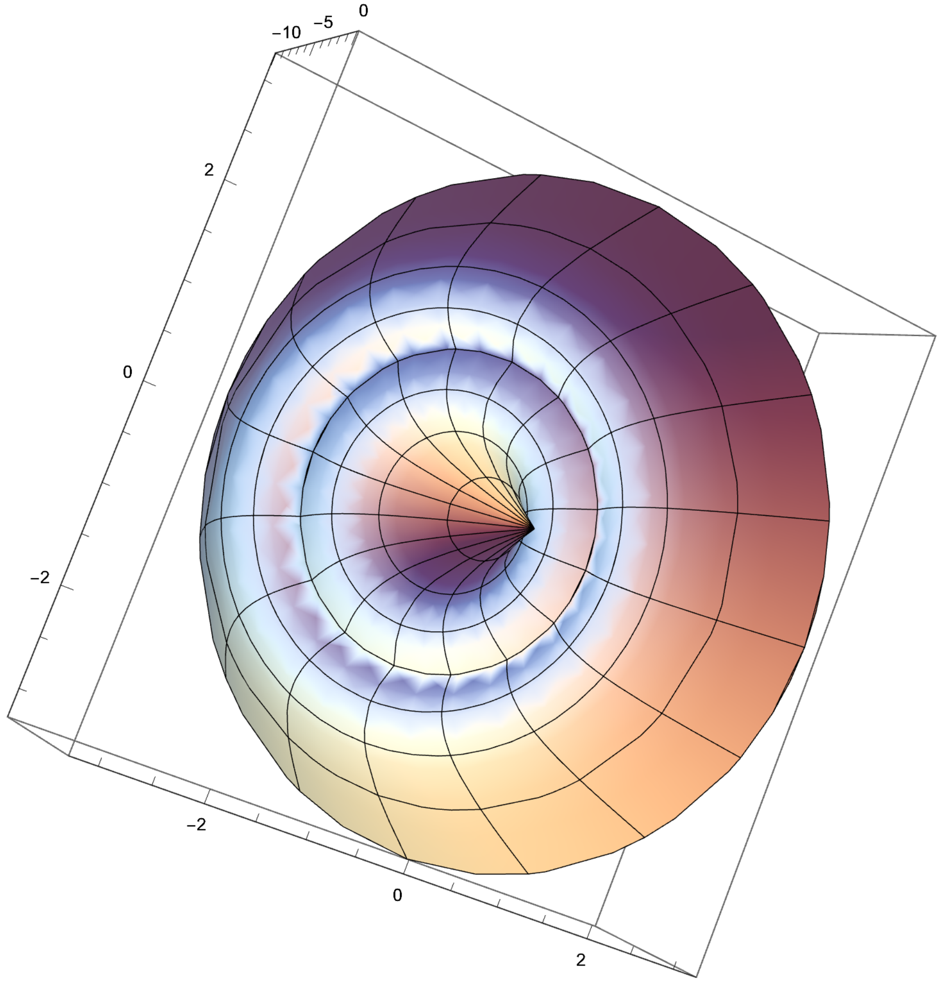
```
RevolutionPlot3D[
 4 π - 4 π Sin[β]^2 + π Sin[β]^4 + 4 π Sqrt[1 - Sin[β]^2] - 2 π Sin[β]^2 Sqrt[1 - Sin[β]^2], {β, -π, π}]
```



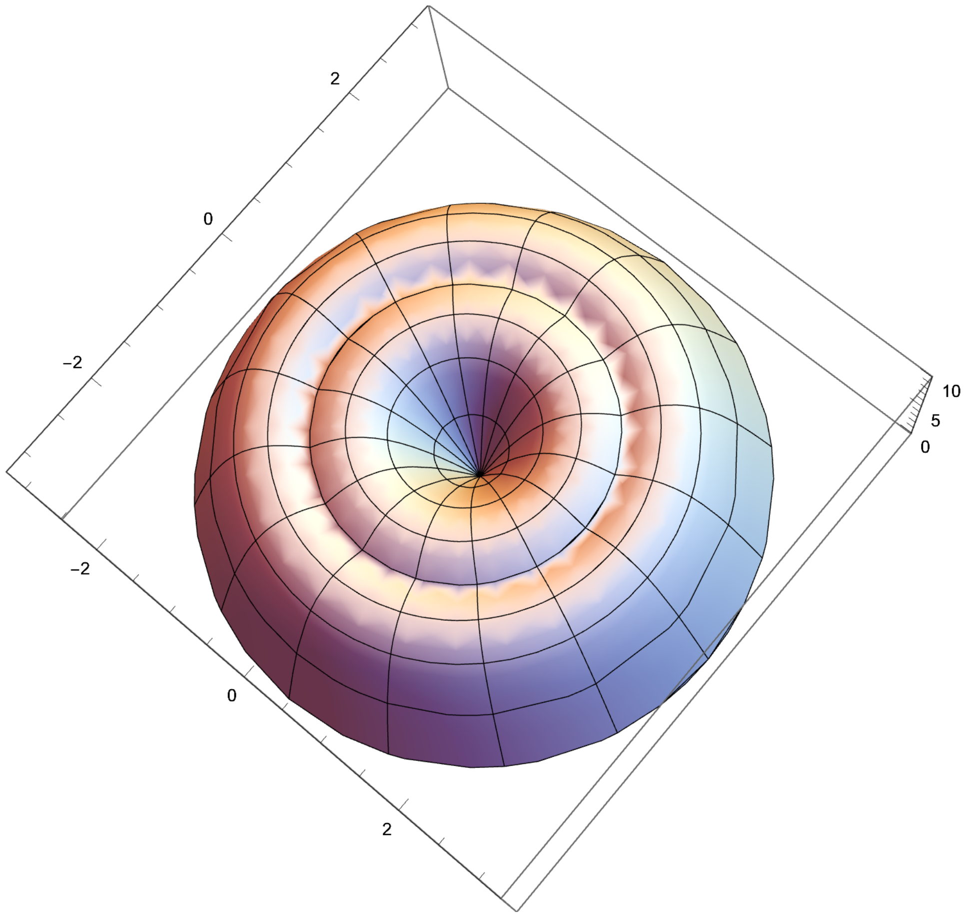
$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \left(2\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}{2\sqrt{4\pi r^2\left(2\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right) - r^2(\theta)^2}} == \frac{2\pi r}{\left(2\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}, \theta\right]$$

$$\left\{\left\{\theta \to -2\sqrt{3\pi^2\,\text{Sin}[\beta]^2 - \pi^2\,\text{Sin}[\beta]^4 + 2\pi^2\,\text{Sin}[\beta]^2\sqrt{1-\text{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{\theta \to 2\sqrt{3\pi^2\,\text{Sin}[\beta]^2 - \pi^2\,\text{Sin}[\beta]^4 + 2\pi^2\,\text{Sin}[\beta]^2\sqrt{1-\text{Sin}[\beta]^2}}\right\}\right\}$$

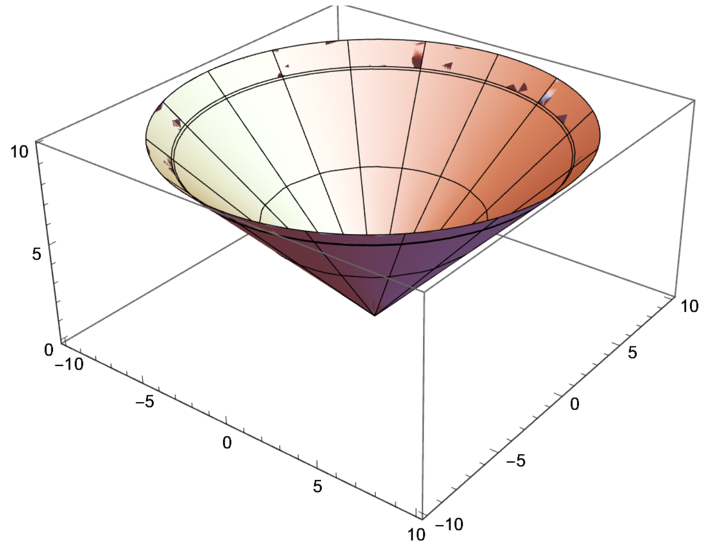
```
RevolutionPlot3D[-2 Sqrt[3 π^2 Sin[β]^2 - π^2 Sin[β]^4 + 2 π^2 Sin[β]^2 Sqrt[1 - Sin[β]^2]], {β, -π, π}]
```



$$\text{RevolutionPlot3D}\left[2\sqrt{3\pi^2\,\text{Sin}[\beta]^2-\pi^2\,\text{Sin}[\beta]^4+2\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{1-\text{Sin}[\beta]^2}},\ \{\beta,-\pi,\pi\}\right]$$

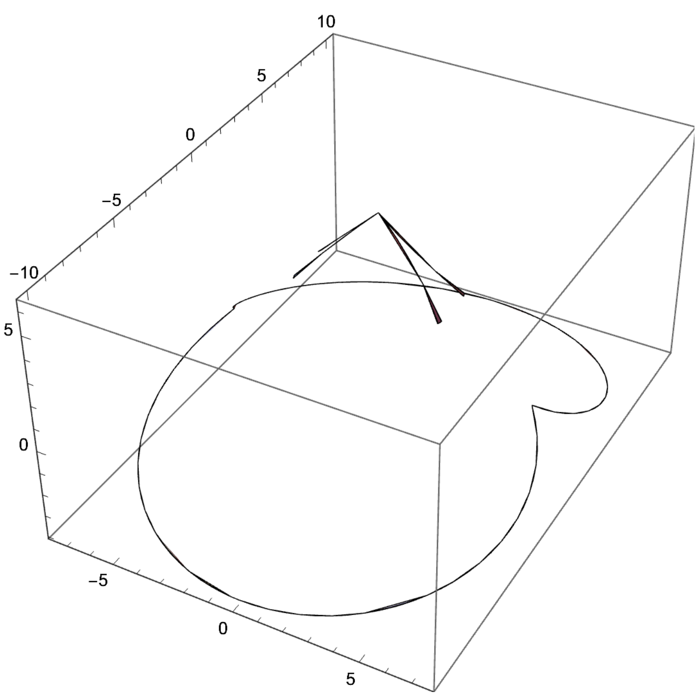


$$\text{RevolutionPlot3D}\left[\left\{-2\sqrt{3\pi^2\,\text{Sin}[\beta]^2-\pi^2\,\text{Sin}[\beta]^4+2\pi^2\,\text{Sin}[\beta]^2\sqrt{1-\text{Sin}[\beta]^2}}\,,\;2\sqrt{3\pi^2\,\text{Sin}[\beta]^2-\pi^2\,\text{Sin}[\beta]^4+2\pi^2\,\text{Sin}[\beta]^2\sqrt{1-\text{Sin}[\beta]^2}}\right\},\{\beta,-\pi,\pi\}\right]$$



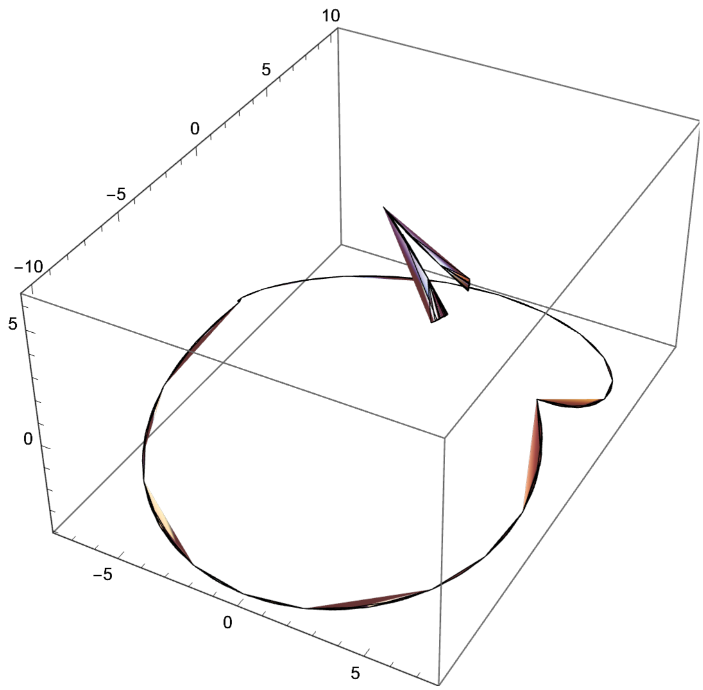
Of course, the above visualizations are all just a single potential scaling of the function. For instance, when we take the function :

$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\,r-\sqrt{\pi^2\,r^2-4\pi^2\,r\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r},\;\frac{\pi\,r+\sqrt{\pi^2\,r^2-4\pi^2\,r\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r}\right\},\{r,-1,1\},\{\beta,-\pi,\pi\}\right]$$

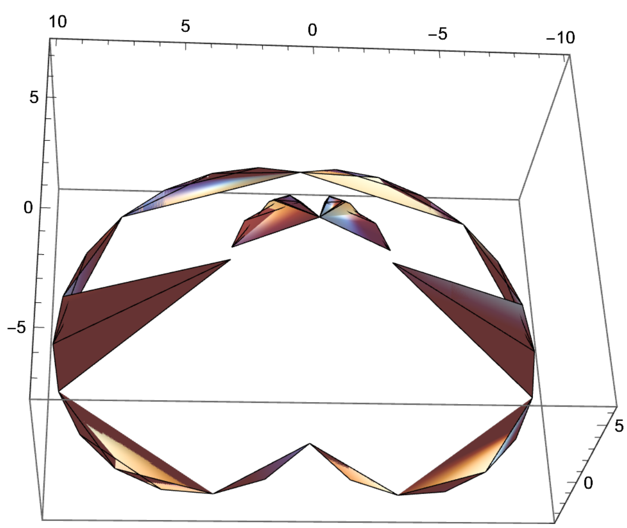


And scale it differently, we see a totally interconnected realm of designs.

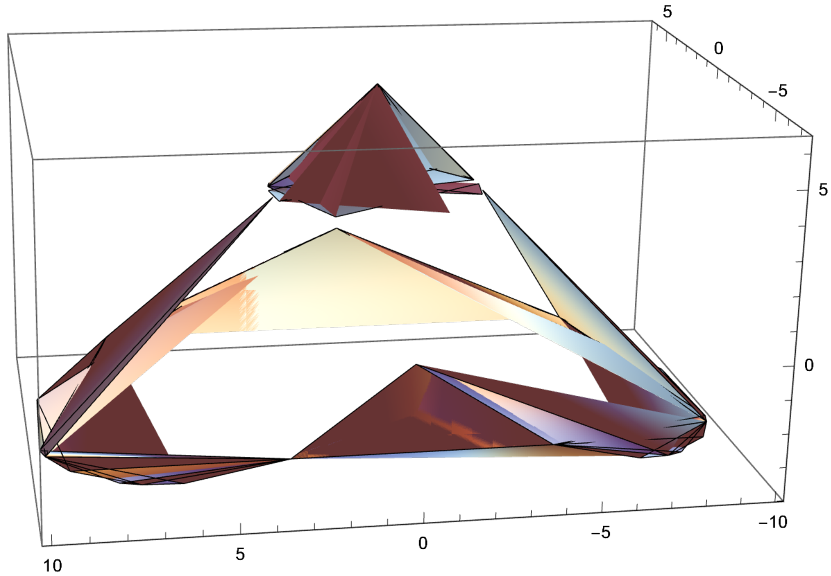
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\,r-\sqrt{\pi^2\,r^2-4\,\pi^2\,r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r},\ \frac{\pi\,r+\sqrt{\pi^2\,r^2-4\,\pi^2\,r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r}\right\},\ \{r,-1,1\},\ \{\beta,-2\,\pi,2\,\pi\}\right]$$



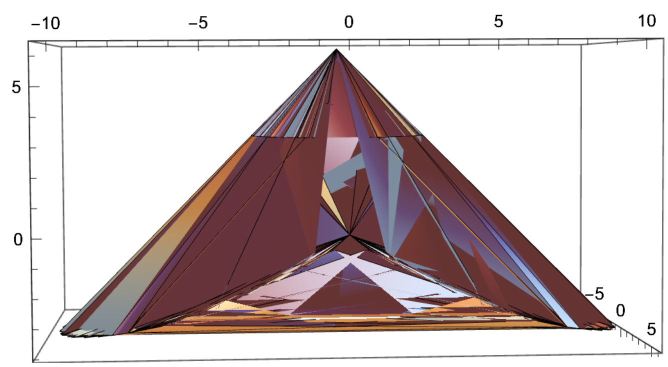
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\,r-\sqrt{\pi^2\,r^2-4\,\pi^2\,r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r},\ \frac{\pi\,r+\sqrt{\pi^2\,r^2-4\,\pi^2\,r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r}\right\},\ \{r,-1,1\},\ \{\beta,-4\,\pi,4\,\pi\}\right]$$



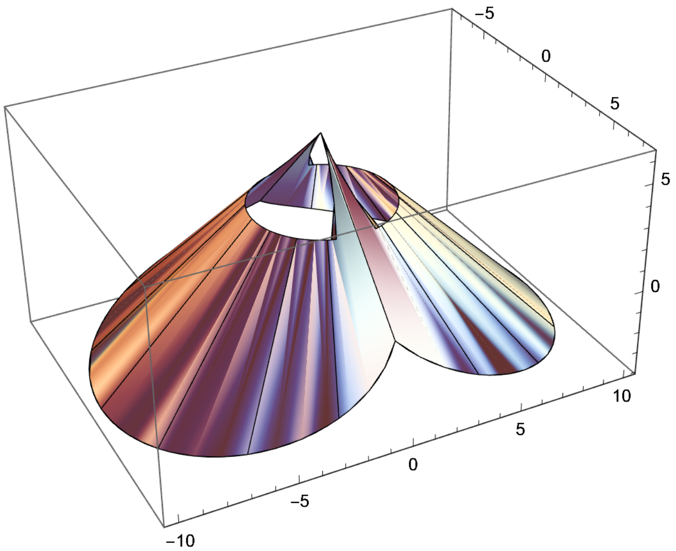
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -1, 1\}, \{\beta, -8\, \pi, 8\, \pi\}\right]$$



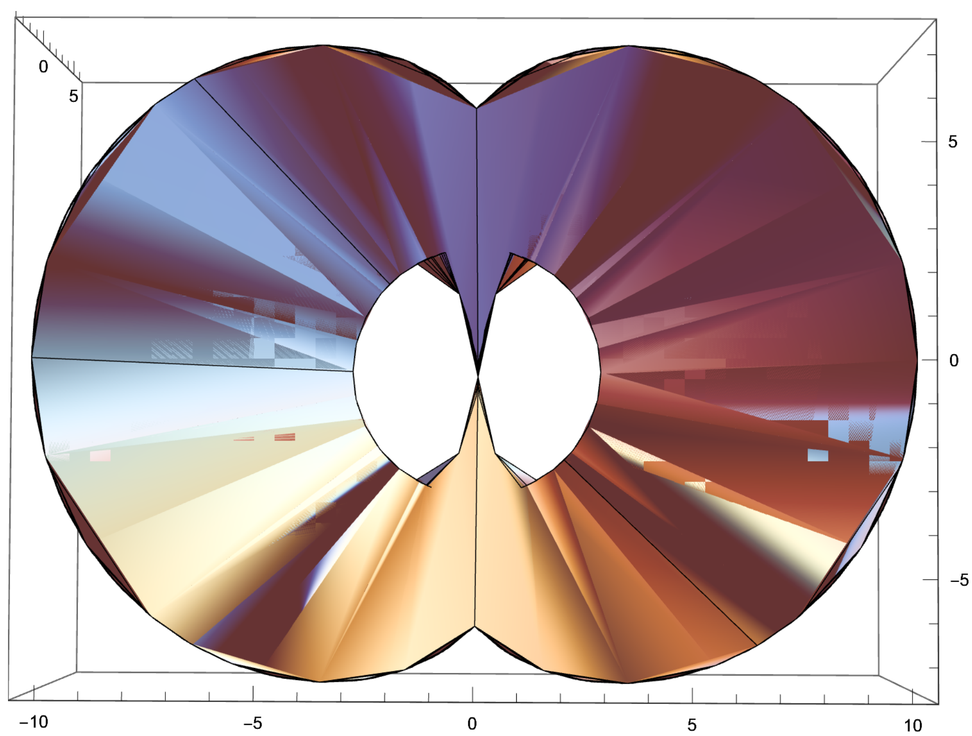
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -1, 1\}, \{\beta, -16\, \pi, 16\, \pi\}\right]$$



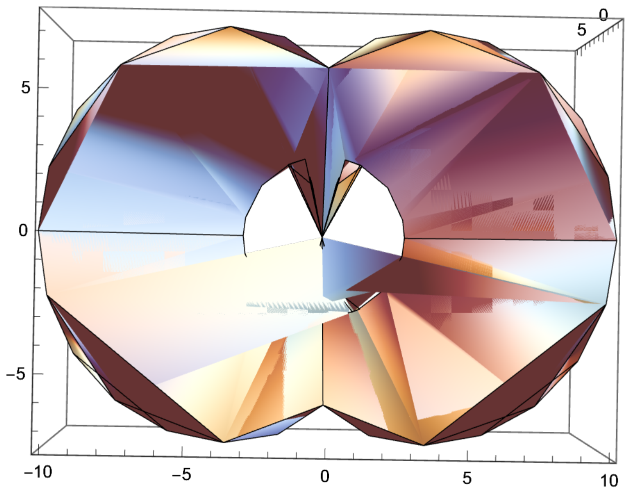
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r-\sqrt{\pi^2\, r^2-4\,\pi^2\, r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r},\ \frac{\pi\, r+\sqrt{\pi^2\, r^2-4\,\pi^2\, r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r}\right\},\ \{r,-10,10\},\{\beta,-\pi,\pi\}\right]$$



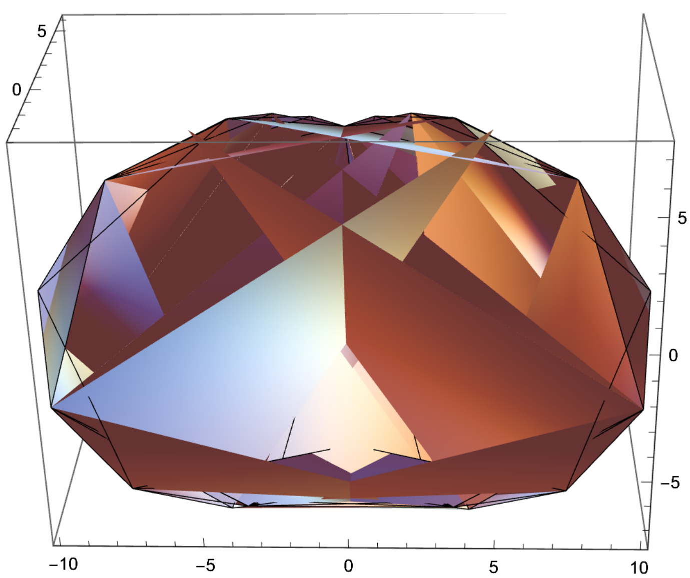
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r-\sqrt{\pi^2\, r^2-4\,\pi^2\, r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r},\ \frac{\pi\, r+\sqrt{\pi^2\, r^2-4\,\pi^2\, r\,\sqrt{r^2\,\text{Sin}[\beta]^2}}}{r}\right\},\ \{r,-10,10\},\{\beta,-2\,\pi,2\,\pi\}\right]$$



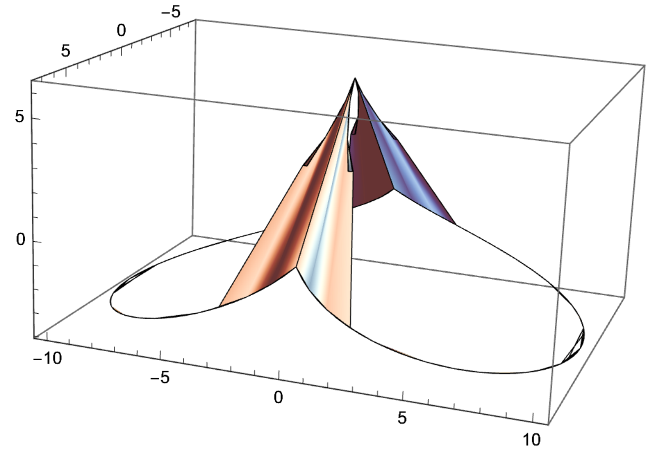
```
RevolutionPlot3D[{(π r - Sqrt[π^2 r^2 - 4 π^2 r Sqrt[r^2 Sin[β]^2]])/r, (π r + Sqrt[π^2 r^2 - 4 π^2 r Sqrt[r^2 Sin[β]^2]])/r},
 {r, -10, 10}, {β, -4 π, 4 π}]
```



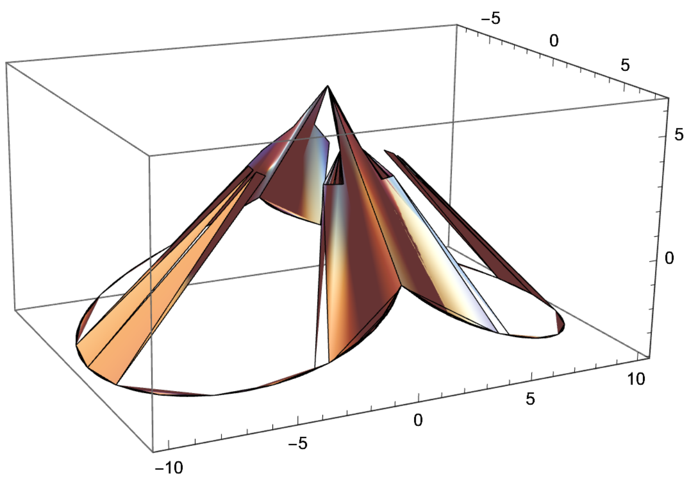

```
RevolutionPlot3D[{(π r - Sqrt[π^2 r^2 - 4 π^2 r Sqrt[r^2 Sin[β]^2]])/r, (π r + Sqrt[π^2 r^2 - 4 π^2 r Sqrt[r^2 Sin[β]^2]])/r},
 {r, -10, 10}, {β, -8 π, 8 π}]
```



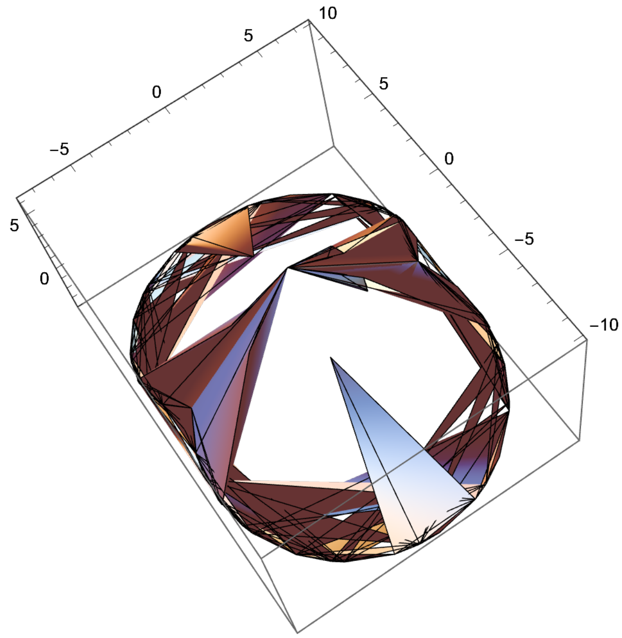
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \operatorname{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \operatorname{Sin}[\beta]^2}}}{r}\right\},\right.$$
$$\left.\{r, -100, 100\}, \{\beta, -\pi, \pi\}\right]$$



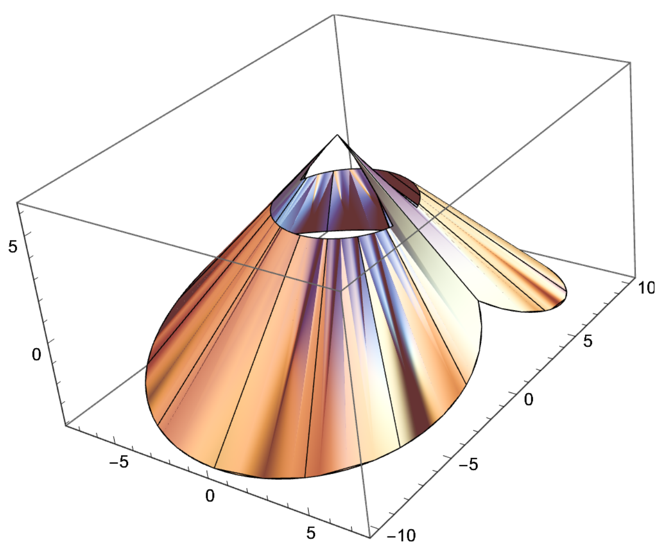
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \operatorname{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \operatorname{Sin}[\beta]^2}}}{r}\right\},\right.$$
$$\left.\{r, -100, 100\}, \{\beta, -2\pi, 2\pi\}\right]$$



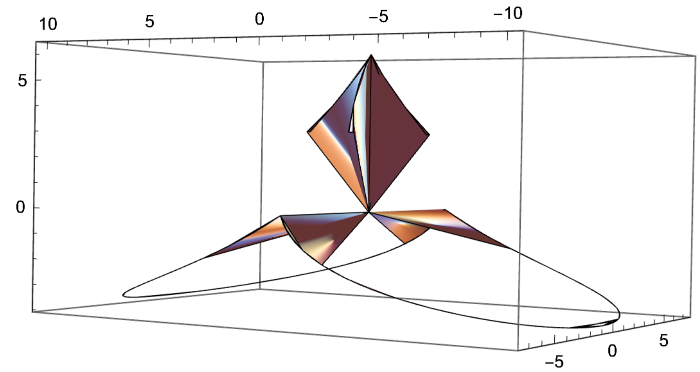
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -100, 100\}, \{\beta, -4\pi, 4\pi\}\right]$$



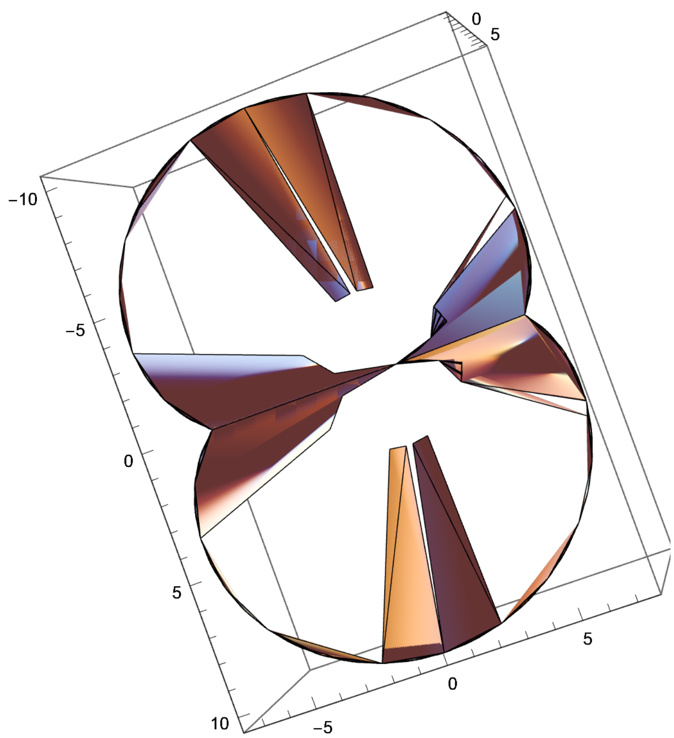
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4 \pi^2 r \sqrt{r^2 \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -1000, 1000\}, \{\beta, -\pi, \pi\}\right]$$



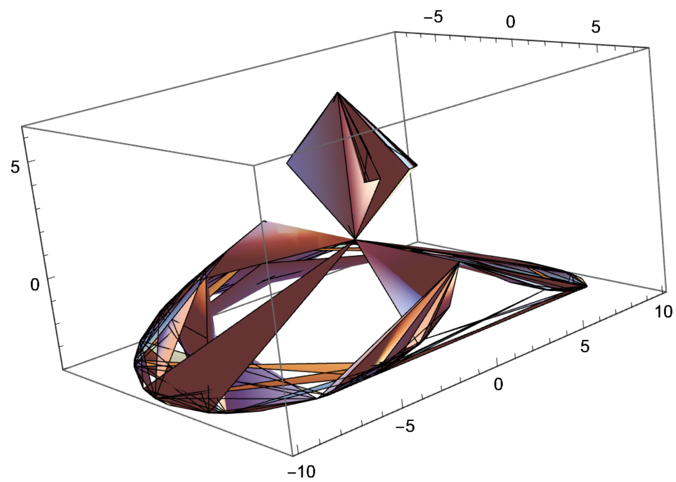
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -10\,000, 10\,000\}, \{\beta, -\pi, \pi\}\right]$$



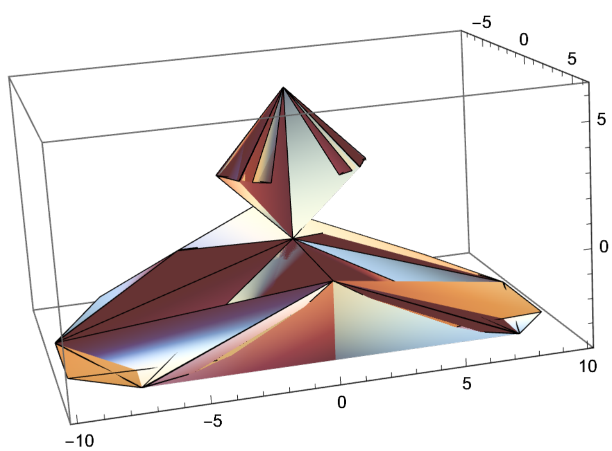
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\, \pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -10\,000, 10\,000\}, \{\beta, -2\,\pi, 2\,\pi\}\right]$$



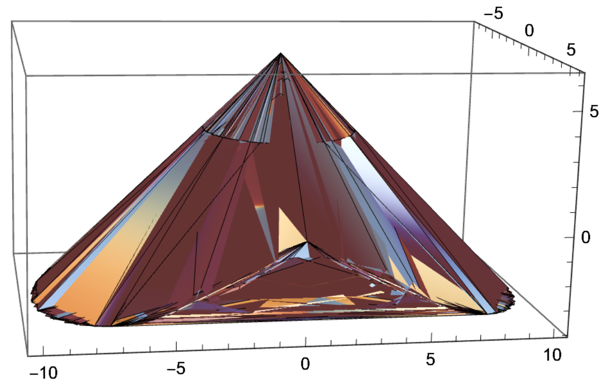
$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\,\pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\,\pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -10\,000, 10\,000\}, \{\beta, -4\,\pi, 4\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2\, r^2 - 4\,\pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2\, r^2 - 4\,\pi^2\, r\, \sqrt{r^2\, \text{Sin}[\beta]^2}}}{r}\right\}, \{r, -10\,000, 10\,000\}, \{\beta, -8\,\pi, 8\,\pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\left\{\frac{\pi\, r - \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \texttt{Sin}[\beta]^2}}}{r}, \frac{\pi\, r + \sqrt{\pi^2 r^2 - 4\pi^2 r \sqrt{r^2 \texttt{Sin}[\beta]^2}}}{r}\right\},\right.$$
$$\left.\{r, -10\,000, 10\,000\}, \{\beta, -16\pi, 16\pi\}\right]$$



$$\texttt{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == \frac{2\pi r}{\theta}, \theta\right]$$

$$\theta = \frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17 + 3\sqrt{33}\right)^{1/3}} + \left(17 + 3\sqrt{33}\right)^{1/3}\pi\right) \tag{23}$$

$$\texttt{Solve}\left[\frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right) == 2\pi\left(1 + \sqrt{1 - \texttt{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -\texttt{ArcSin}\left[\frac{1}{\sqrt{\frac{3\left(17+3\sqrt{33}\right)}{68+12\sqrt{33}+10\left(17+3\sqrt{33}\right)^{1/3}+2\sqrt{33}\left(17+3\sqrt{33}\right)^{1/3}-7\left(17+3\sqrt{33}\right)^{2/3}-\sqrt{33}\left(17+3\sqrt{33}\right)^{2/3}}}}\right]\right\},\right.$$
$$\left.\left\{\beta \to \texttt{ArcSin}\left[\frac{1}{\sqrt{\frac{3\left(17+3\sqrt{33}\right)}{68+12\sqrt{33}+10\left(17+3\sqrt{33}\right)^{1/3}+2\sqrt{33}\left(17+3\sqrt{33}\right)^{1/3}-7\left(17+3\sqrt{33}\right)^{2/3}-\sqrt{33}\left(17+3\sqrt{33}\right)^{2/3}}}}\right]\right\}\right\}$$

$$\theta = \frac{4\pi}{3} + \frac{2\left(1 + i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 - i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi \tag{24}$$

$$\texttt{Solve}\left[\frac{4\pi}{3} + \frac{2\left(1 + i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 - i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi == 2\pi\left(1 + \sqrt{1 - \texttt{Sin}[\beta]^2}\right), \beta\right]$$

$$\{\}$$

$$\theta = \frac{4\pi}{3} + \frac{2\left(1 - i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi \tag{25}$$

Addendum No. 1

Visualizing Multiple Possible Equations for Non-Relativisitc Velocity with Constant Initial Radius through a Transition.

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2 \operatorname{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2 \operatorname{Sin}[\beta]^2}\right)\right\}\right\} \tag{26}$$

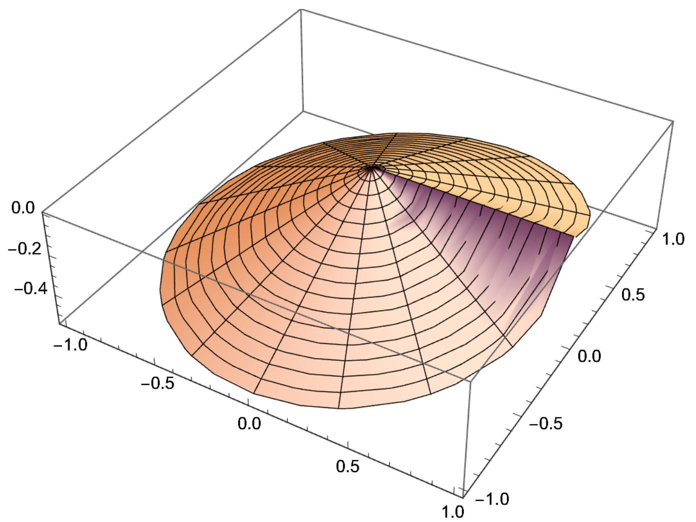
We will not apply these substitutions for every single possible variation of possible patterns, but please note that it is possible to do so. When you do this, you find many different possible visualizations of a given function.

η

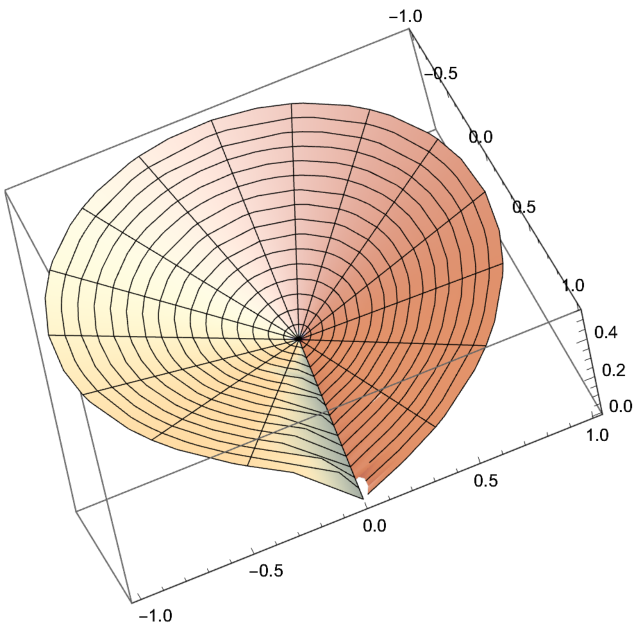
$$\text{Solve}\left[\frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2 - (\eta)^2}\right)}{\theta^2} == \frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}}, \eta\right]$$

$$\left\{\left\{\eta \to -\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi - \theta} + 16\pi^3 r^2 \theta + 4\pi^2 r^2 \theta^2 + r^2 \theta^4 + 16\pi^3 r\sqrt{r^2 (4\pi - \theta)\theta} - \frac{64\pi^4 r\sqrt{r^2 (4\pi - \theta)\theta}}{4\pi - \theta} + 8\pi^2 r\theta\sqrt{r^2 (4\pi - \theta)\theta}\right)}\right)\right\},\right.$$
$$\left.\left\{\eta \to \frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi - \theta} + 16\pi^3 r^2 \theta + 4\pi^2 r^2 \theta^2 + r^2 \theta^4 + 16\pi^3 r\sqrt{r^2 (4\pi - \theta)\theta} - \frac{64\pi^4 r\sqrt{r^2 (4\pi - \theta)\theta}}{4\pi - \theta} + 8\pi^2 r\theta\sqrt{r^2 (4\pi - \theta)\theta}\right)}\right)\right\}\right\} \tag{27}$$

$$\text{RevolutionPlot3D}\Big[-\frac{1}{4\,\pi^2}\left(\sqrt{\left(64\,\pi^4\,r^2-\frac{256\,\pi^5\,r^2}{4\,\pi-\theta}+16\,\pi^3\,r^2\,\theta+4\,\pi^2\,r^2\,\theta^2+r^2\,\theta^4+16\,\pi^3\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-\frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+8\,\pi^2\,r\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\right)}\right),\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\Big]$$



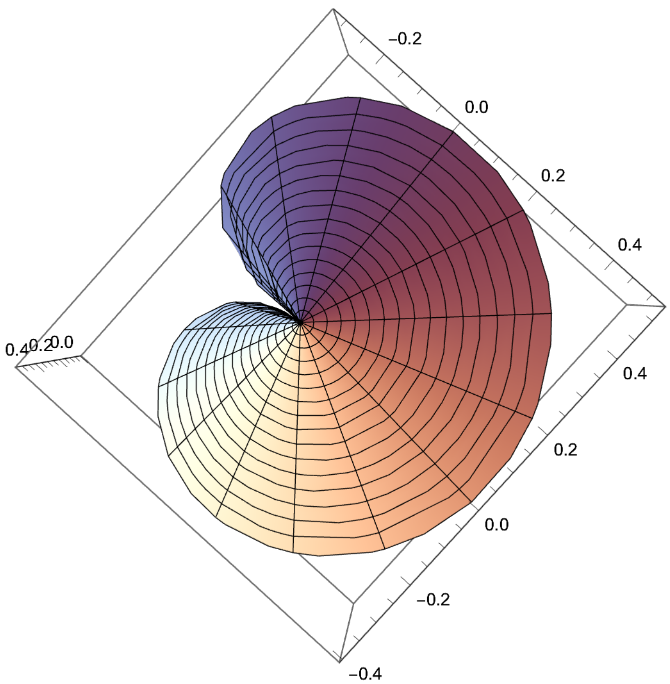
$$\texttt{RevolutionPlot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\Big]$$



RevolutionPlot3D[

$$\left\{-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right),\right.$$

$$\left.\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right\}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}]$$



r

$$\text{Solve}\left[\frac{2\,\pi\left(2\,\pi\,r - 2\,\pi\,\sqrt{r^2 - (\eta)^2}\right)}{\theta^2} == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\ r\right]$$

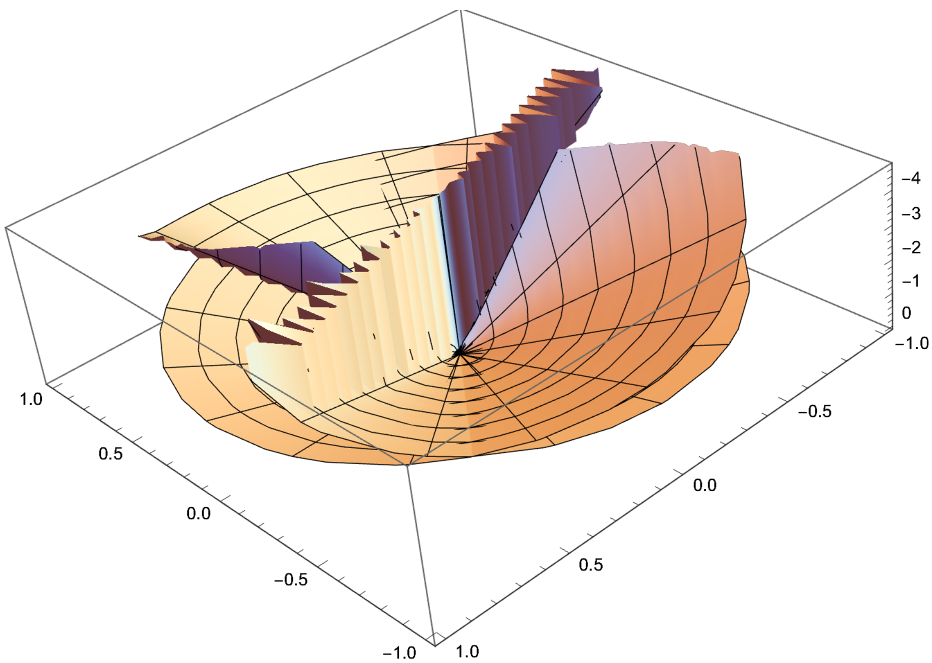
$$\Big\{\Big\{r \to -\sqrt{\Big(-\left(256 \pi^7 \eta^2 \theta^3\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(320 \pi^6 \eta^2 \theta^4\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^5 \eta^2 \theta^5\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(16 \pi^4 \eta^2 \theta^6\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^6 \sqrt{\left(256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8\right)}\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\Big)}\Big\},$$

$$\Big\{r \to \sqrt{\Big(-\left(\left(256 \pi^7 \eta^2 \theta^3\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\right) + \left(320 \pi^6 \eta^2 \theta^4\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^5 \eta^2 \theta^5\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(16 \pi^4 \eta^2 \theta^6\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^6 \sqrt{\left(256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8\right)}\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\Big)}\Big\},$$

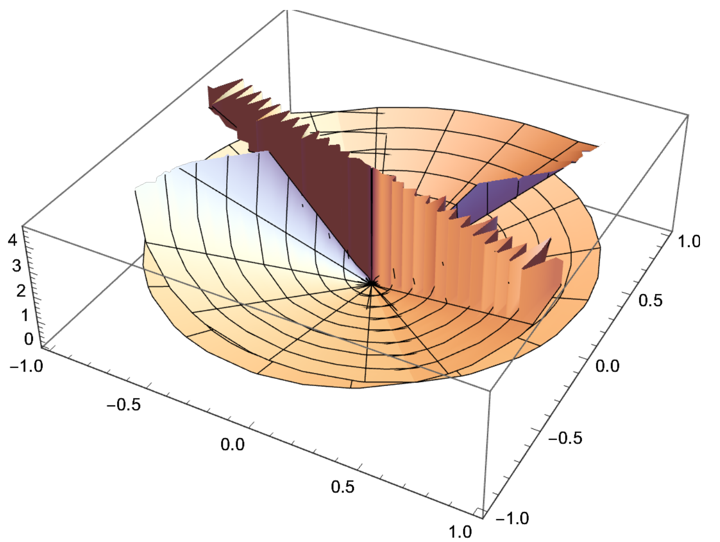
$$\Big\{r \to -\sqrt{\Big(-\left(256 \pi^7 \eta^2 \theta^3\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(320 \pi^6 \eta^2 \theta^4\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^5 \eta^2 \theta^5\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(16 \pi^4 \eta^2 \theta^6\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(128 \pi^6 \sqrt{\left(256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8\right)}\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\Big)}\Big\},$$

$$\Big\{r \to \sqrt{\Big(-\left(\left(256 \pi^7 \eta^2 \theta^3\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\right) + \left(320 \pi^6 \eta^2 \theta^4\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) - \left(128 \pi^5 \eta^2 \theta^5\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(16 \pi^4 \eta^2 \theta^6\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right) + \left(128 \pi^6 \sqrt{\left(256 \pi^5 \eta^4 \theta^3 - 448 \pi^4 \eta^4 \theta^4 + 304 \pi^3 \eta^4 \theta^5 - 100 \pi^2 \eta^4 \theta^6 + 16 \pi \eta^4 \theta^7 - \eta^4 \theta^8\right)}\right) / \left(-1024 \pi^7 \theta^3 + 1280 \pi^6 \theta^4 - 512 \pi^5 \theta^5 + 80 \pi^4 \theta^6 - 32 \pi^3 \theta^7 + 24 \pi^2 \theta^8 - 8 \pi \theta^9 + \theta^{10}\right)\Big)}\Big\}\Big\}$$

```
RevolutionPlot3D[
 {-√(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 (θ)^7 +
        24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 +
        24 π^2 θ^8 - 8 π θ^9 + θ^10))}, {η, -1, 1}, {θ, -2 π, 2 π}]
```

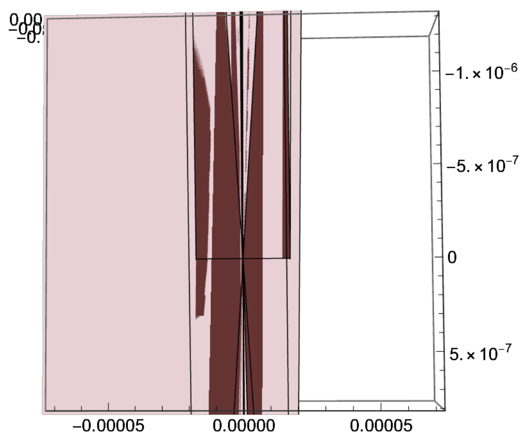


```
RevolutionPlot3D[
 √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
        8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
    (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
       32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
    (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
 {η, -1, 1}, {θ, -2 π, 2 π}]
```

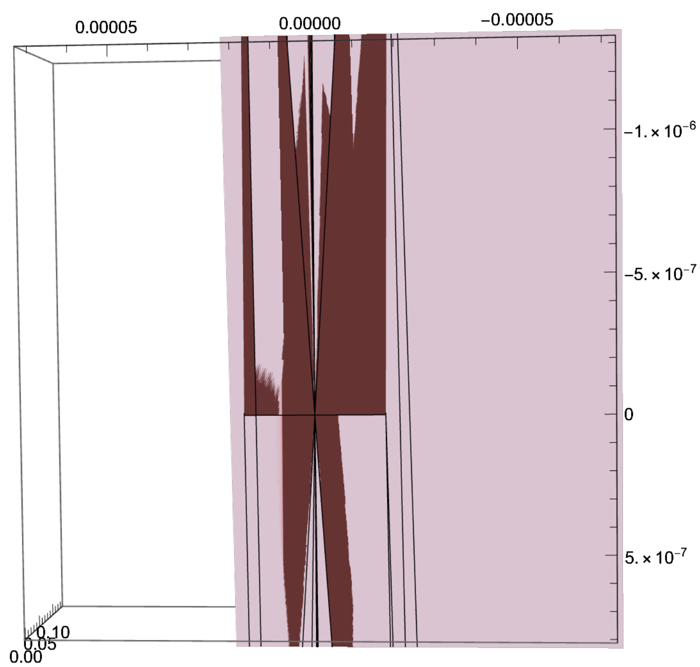


RevolutionPlot3D[

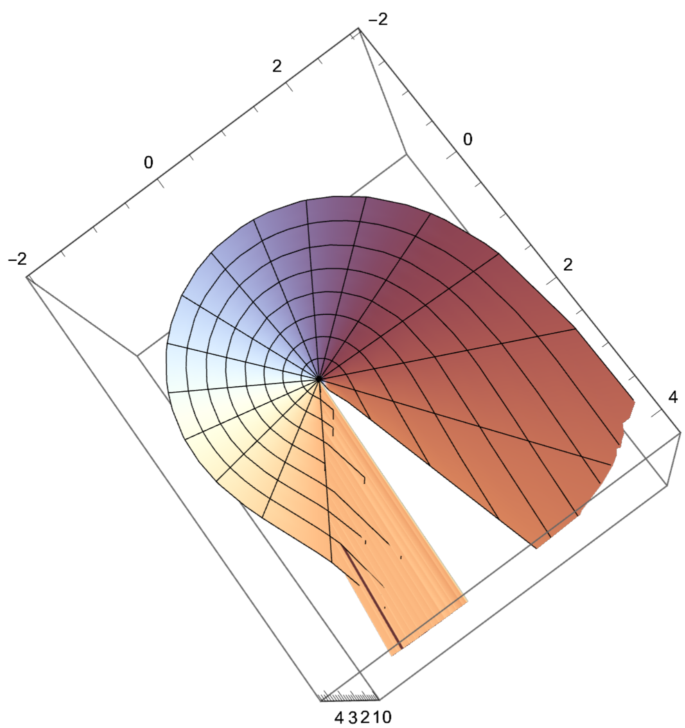
$$-\sqrt{\left(-\left(256\,\pi^7\,\eta^2\,\theta^3\right) / \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(320\,\pi^6\,\eta^2\,\theta^4\right) / \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) - \left(128\,\pi^5\,\eta^2\,\theta^5\right) / \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(16\,\pi^4\,\eta^2\,\theta^6\right) / \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right) + \left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3 - 448\,\pi^4\,\eta^4\,\theta^4 + 304\,\pi^3\,\eta^4\,\theta^5 - 100\,\pi^2\,\eta^4\,\theta^6 + 16\,\pi\,\eta^4\,\theta^7 - \eta^4\,\theta^8\right)}\right) / \left(-1024\,\pi^7\,\theta^3 + 1280\,\pi^6\,\theta^4 - 512\,\pi^5\,\theta^5 + 80\,\pi^4\,\theta^6 - 32\,\pi^3\,\theta^7 + 24\,\pi^2\,\theta^8 - 8\,\pi\,\theta^9 + \theta^{10}\right)\right)},\ \{\eta, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



```
RevolutionPlot3D[
 √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
        8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
 {η, -1, 1}, {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[
 {√(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 +
        24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
  √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 +
        24 π^2 θ^8 - 8 π θ^9 + θ^10))}, {η, -1, 1}, {θ, -2 π, 2 π}]
```

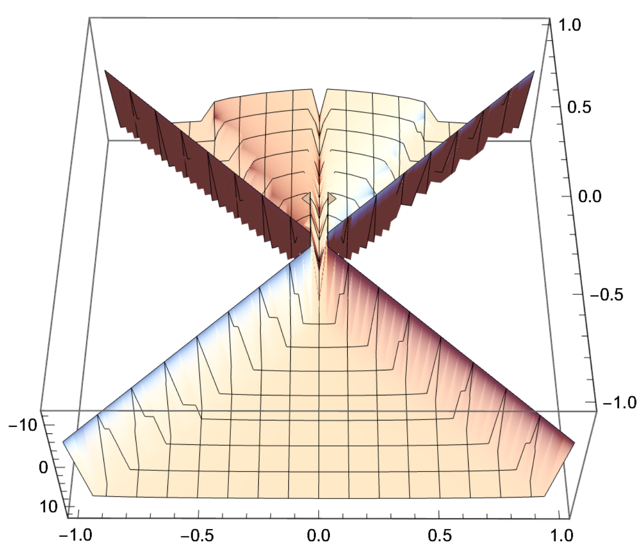


θ

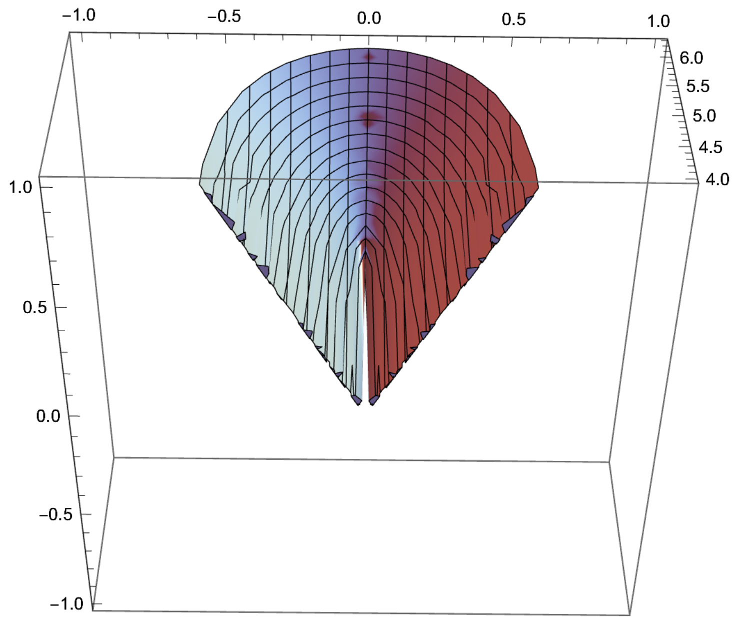
$$\text{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-(\eta)^2}\right)}{\theta^2}==\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\theta\right]$$

$$\left\{\left\{\theta\to\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,1\right]\right\},\right.$$
$$\left\{\theta\to\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,2\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,3\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,4\right]\right\},$$
$$\left.\left\{\theta\to\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,5\right]\right\}\right\}$$

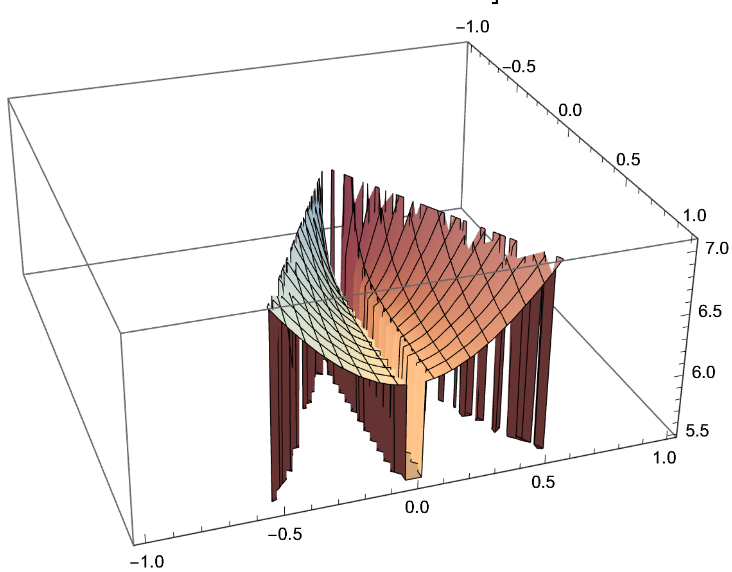
$$\text{Plot3D}\left[\text{Root}\left[-128\pi^5 r^2+64\pi^5\eta^2+128\pi^5 r\sqrt{r^2-\eta^2}+\left(32\pi^4 r^2-16\pi^4\eta^2-32\pi^4 r\sqrt{r^2-\eta^2}\right)\#1+4\pi^2 r^2\#1^3-4\pi r^2\#1^4+r^2\#1^5\,\&,1\right],\{r,-1,1\},\{\eta,-1,1\}\right]$$



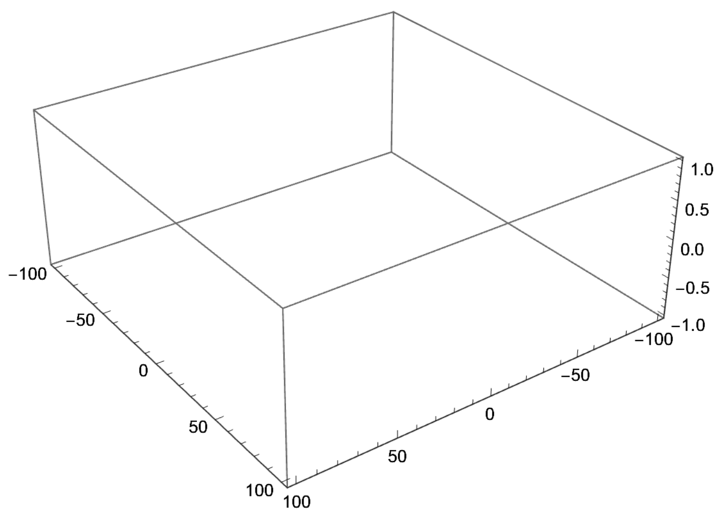
```
Plot3D[
 Root[-128 π^5 r^2 + 64 π^5 η^2 + 128 π^5 r Sqrt[r^2 - η^2] + (32 π^4 r^2 - 16 π^4 η^2 - 32 π^4 r Sqrt[r^2 - η^2]) #1 +
    4 π^2 r^2 #1^3 - 4 π r^2 #1^4 + r^2 #1^5 &, 2], {r, -1, 1}, {η, -1, 1}]
```



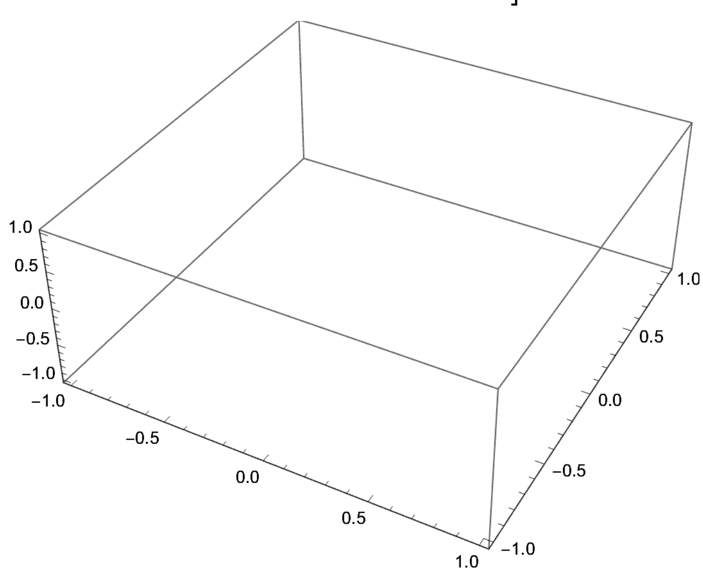

```
Plot3D[
 Root[-128 π^5 r^2 + 64 π^5 η^2 + 128 π^5 r Sqrt[r^2 - η^2] + (32 π^4 r^2 - 16 π^4 η^2 - 32 π^4 r Sqrt[r^2 - η^2]) #1 +
    4 π^2 r^2 #1^3 - 4 π r^2 #1^4 + r^2 #1^5 &, 3], {r, -1, 1}, {η, -1, 1}]
```



```
Plot3D[
 Root[-128 π^5 r^2 + 64 π^5 η^2 + 128 π^5 r Sqrt[r^2 - η^2] + (32 π^4 r^2 - 16 π^4 η^2 - 32 π^4 r Sqrt[r^2 - η^2]) #1 +
    4 π^2 r^2 #1^3 - 4 π r^2 #1^4 + r^2 #1^5 &, 4], {r, -100, 100}, {η, -100, 100}]
```




```
Plot3D[
 Root[-128 π^5 r^2 + 64 π^5 η^2 + 128 π^5 r Sqrt[r^2 - η^2] + (32 π^4 r^2 - 16 π^4 η^2 - 32 π^4 r Sqrt[r^2 - η^2]) #1 +
    4 π^2 r^2 #1^3 - 4 π r^2 #1^4 + r^2 #1^5 &, 5], {r, -1, 1}, {η, -1, 1}]
```



$$\text{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}\right)}{\theta^2}==\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\theta\right]$$

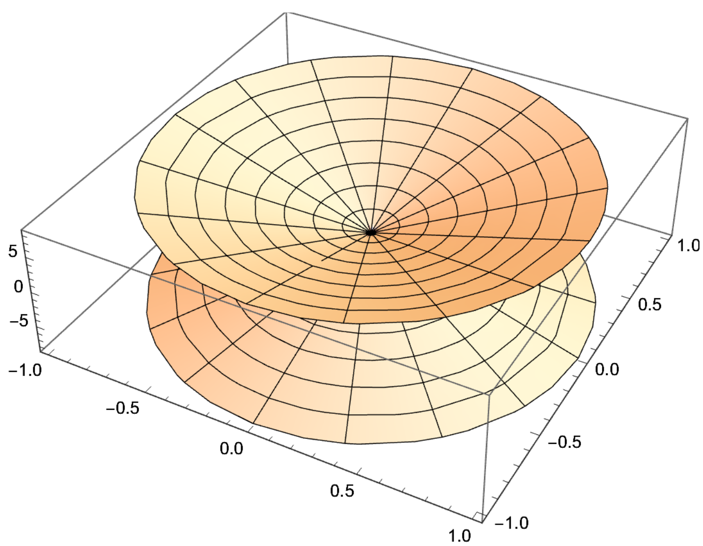
$$\left\{\left\{\theta\to\frac{4\pi}{3}+\frac{4\pi}{3\left(-17+3\sqrt{33}\right)^{1/3}}-\frac{2}{3}\left(-17+3\sqrt{33}\right)^{1/3}\pi\right\},\right.$$

$$\left\{\theta\to\frac{4\pi}{3}-\frac{2\left(1+\mathbb{i}\sqrt{3}\right)\pi}{3\left(-17+3\sqrt{33}\right)^{1/3}}+\frac{1}{3}\left(1-\mathbb{i}\sqrt{3}\right)\left(-17+3\sqrt{33}\right)^{1/3}\pi\right\},$$

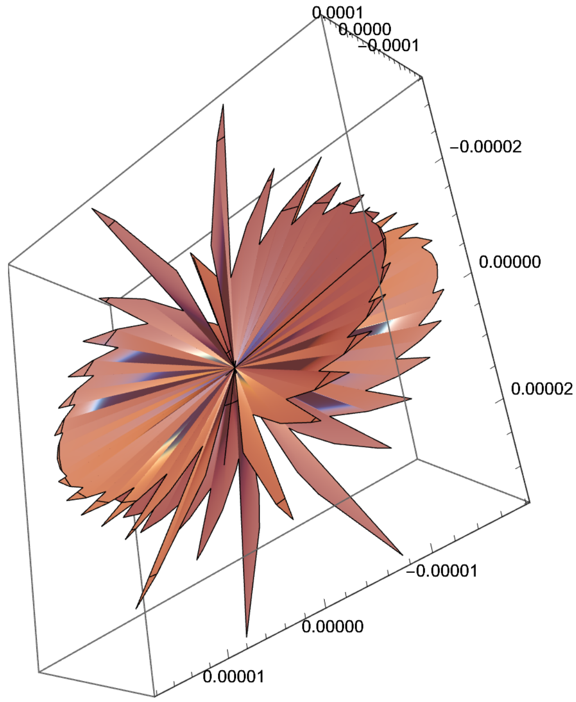
$$\left\{\theta\to\frac{4\pi}{3}-\frac{2\left(1-\mathbb{i}\sqrt{3}\right)\pi}{3\left(-17+3\sqrt{33}\right)^{1/3}}+\frac{1}{3}\left(1+\mathbb{i}\sqrt{3}\right)\left(-17+3\sqrt{33}\right)^{1/3}\pi\right\},$$

$$\{\theta\to\pi\,\text{Root}[-256+192\,\#1-48\,\#1^2+8\,\#1^3-4\,\#1^4+\#1^5\,\&,1]\},$$
$$\{\theta\to\pi\,\text{Root}[-256+192\,\#1-48\,\#1^2+8\,\#1^3-4\,\#1^4+\#1^5\,\&,2]\},$$
$$\{\theta\to\pi\,\text{Root}[-256+192\,\#1-48\,\#1^2+8\,\#1^3-4\,\#1^4+\#1^5\,\&,3]\},$$
$$\{\theta\to\pi\,\text{Root}[-256+192\,\#1-48\,\#1^2+8\,\#1^3-4\,\#1^4+\#1^5\,\&,4]\},$$
$$\left.\{\theta\to\pi\,\text{Root}[-256+192\,\#1-48\,\#1^2+8\,\#1^3-4\,\#1^4+\#1^5\,\&,5]\}\right\}$$

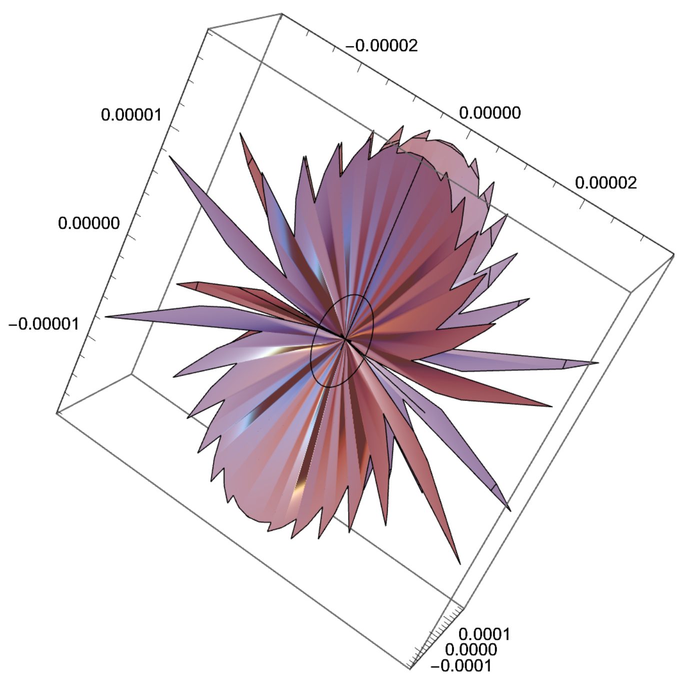
RevolutionPlot3D[r π Root[-256 + 192 #1 - 48 #1^2 + 8 #1^3 - 4 #1^4 + #1^5 &, 1], {r, -1, 1}]



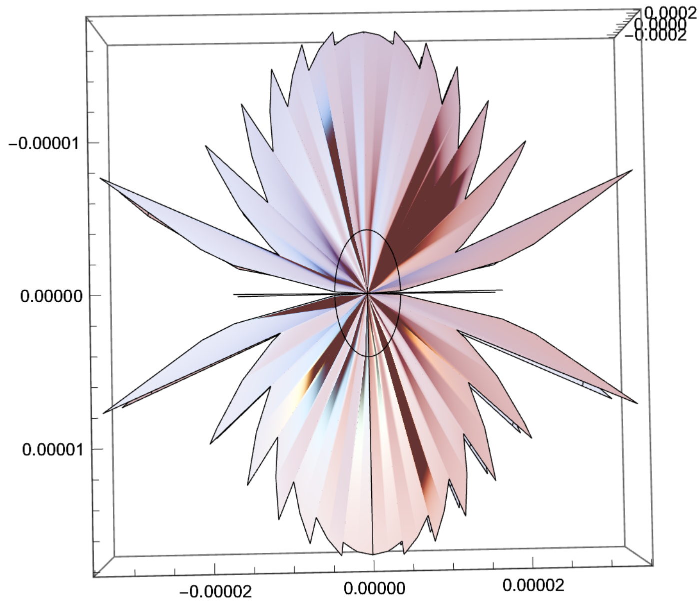
```
RevolutionPlot3D[r π Root[-256 + 192 #1 - 48 #1^2 + 8 #1^3 - 4 #1^4 + #1^5 &, 2], {r, -1, 1}]
```



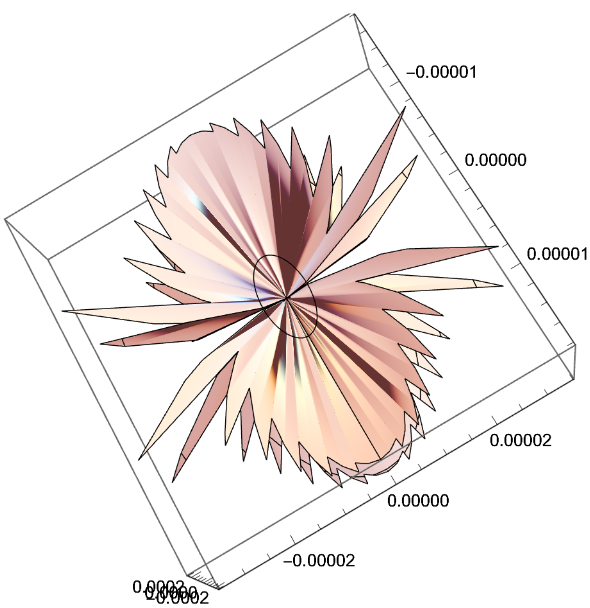

```
RevolutionPlot3D[r π Root[-256 + 192 #1 - 48 #1^2 + 8 #1^3 - 4 #1^4 + #1^5 &, 3], {r, -1, 1}]
```



```
RevolutionPlot3D[{r π Root[-256 + 192 #1 - 48 #1^2 + 8 #1^3 - 4 #1^4 + #1^5 &, 4]}, {r, -1, 1}]
```




```
RevolutionPlot3D[{r π Root[-256 + 192 #1 - 48 #1^2 + 8 #1^3 - 4 #1^4 + #1^5 &, 5]}, {r, -1, 1}]
```

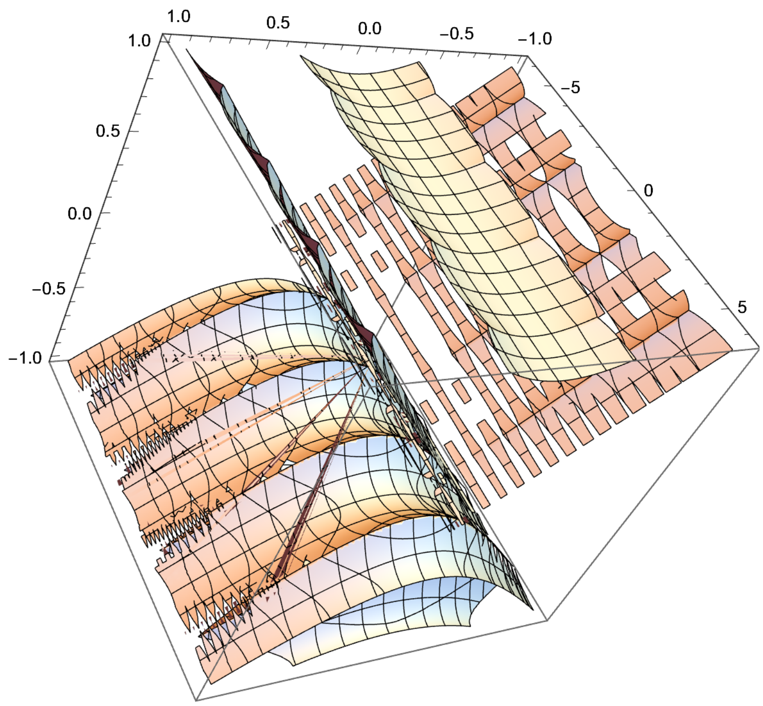


$$\text{Solve}\left[\frac{2\pi s}{\theta^2} == \frac{2\pi\,\frac{\left(2\pi r - 2\pi\sqrt{r^2-\eta^2}\right)}{\theta}}{\theta}, s\right]$$

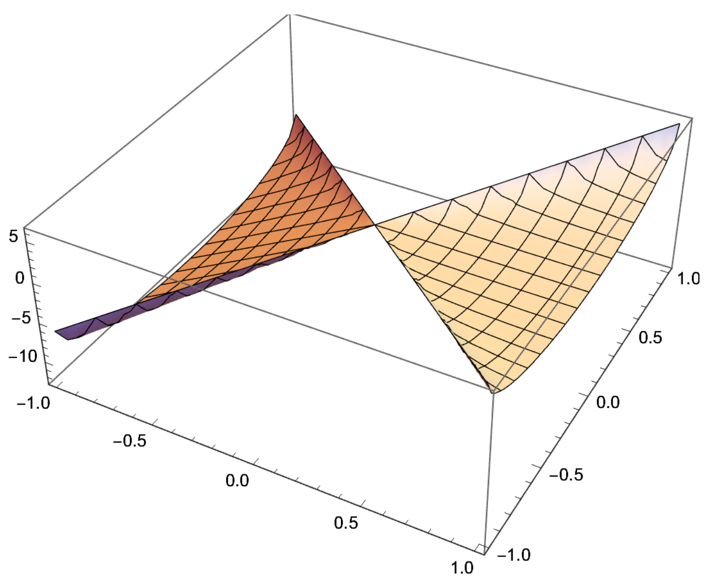
$$\left\{\left\{s \to -2\left(-\pi r + \pi\sqrt{r^2-\eta^2}\right)\right\}\right\}$$

$$\theta = \frac{2\pi\left(r^2 + \sqrt{r^4 - r^2\eta^2}\right)}{r^2} = 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)$$

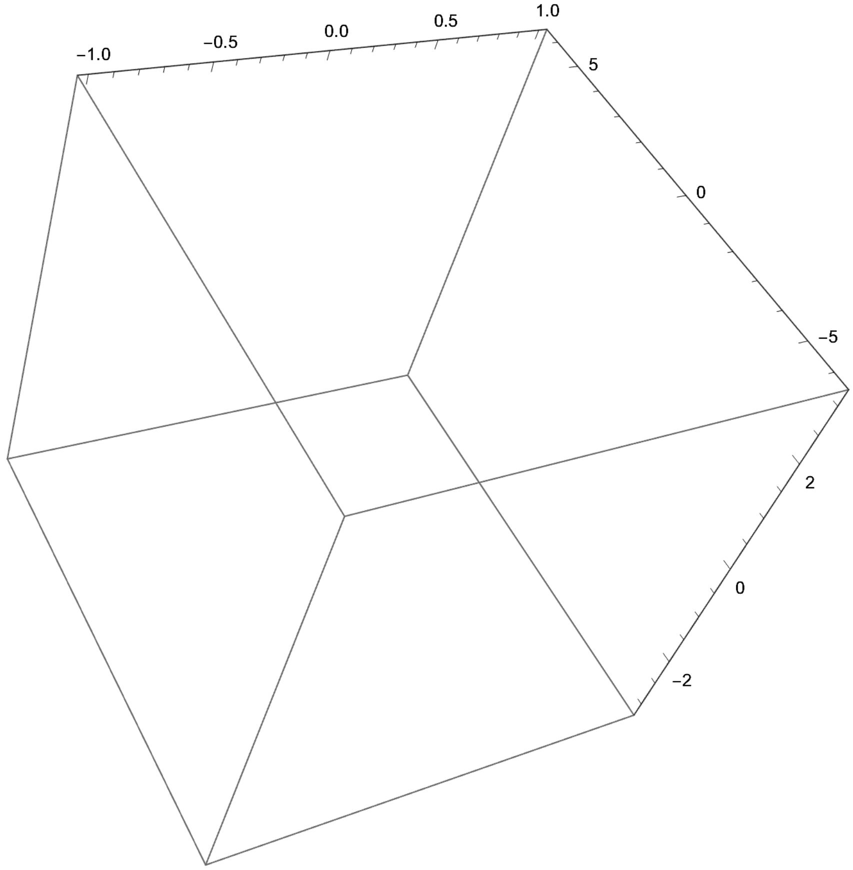
```
ContourPlot3D[-2 (-π ((2 π r - 2 π Sqrt[r^2 - η^2]) / (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))) + π Sqrt[r^2 - η^2]),
 {r, -1, 1}, {η, -1, 1}, {β, -2 π, 2 π}]
```




```
Plot3D[-2 (-π (r) + π Sqrt[r^2 - η^2]), {r, -1, 1}, {η, -1, 1}]
```



```
ContourPlot3D[-2 (-π ((2 π r - 2 π Sqrt[r^2 - r^2])/θ) + π Sqrt[((2 π r - 2 π Sqrt[r^2 - r^2])/(2 (π + Sqrt[π^2 - π^2 Sin[β]^2])))^2 - r^2]),
 {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```




```
Plot3D[-2 (-π r + π Sqrt[r^2 - η^2]), {r, -1, 1}, {η, -1, 1}]
```

Addendum No. 2

$$\theta \to \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2} \tag{28}$$

```
Solve[θ == (2 π (r^2 + Sqrt[r^4 - r^2 η^2]))/r^2, r]
```

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\},\left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}\right\}$$

$$\Theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right) \tag{29}$$

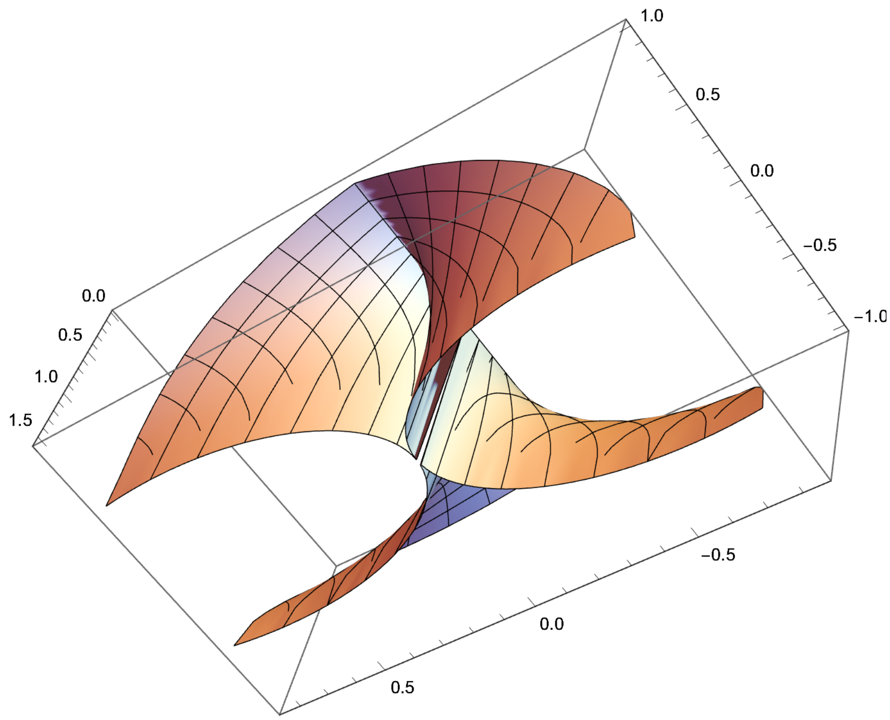
$$\frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2} == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right) \tag{30}$$

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\Theta - r^2\,\Theta^2}}{2\,\pi} \tag{31}$$

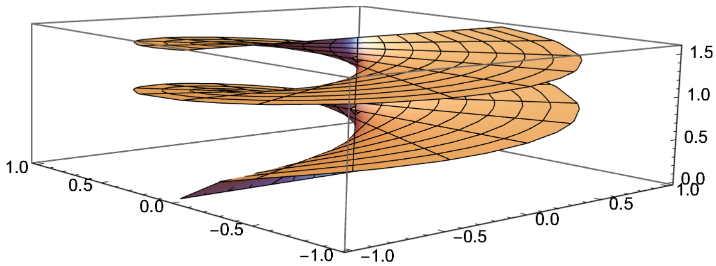
$$\mathbf{Solve}\left[\frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2} == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right),\ \beta\right]$$

$$\left\{\left\{\beta \to -\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\},\ \left\{\beta \to \mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}\right\}$$

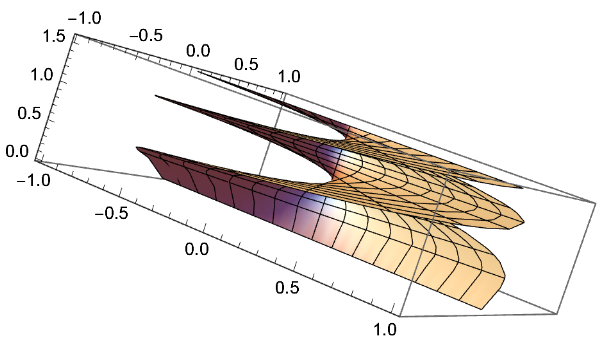
$$\mathbf{RevolutionPlot3D}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right],\ \{r,\ -1,\ 1\},\ \{\eta,\ -1,\ 1\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\texttt{ArcSin}\left[\sqrt{\frac{\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}{r^2}}\right],\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\texttt{ArcSin}\left[\sqrt{\frac{(\eta)^2}{\left(\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2}}\right],\ \{\eta,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



Addendum No. 3

Initial Values

$$\left\{\left\{\Theta_1 \to \frac{2}{3}\left(2\,\pi - \frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}} + \left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right)\right\},\right.$$
$$\left\{\Theta_2 \to \frac{4\,\pi}{3} + \frac{2\,\left(1+i\,\sqrt{3}\right)\,\pi}{3\,\left(17+3\,\sqrt{33}\right)^{1/3}} - \frac{1}{3}\,\left(1-i\,\sqrt{3}\right)\,\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right\}, \tag{32}$$
$$\left.\left\{\Theta_3 \to \frac{4\,\pi}{3} + \frac{2\,\left(1-i\,\sqrt{3}\right)\,\pi}{3\,\left(17+3\,\sqrt{33}\right)^{1/3}} - \frac{1}{3}\,\left(1+i\,\sqrt{3}\right)\,\left(17+3\,\sqrt{33}\right)^{1/3}\,\pi\right\}\right\}$$

$$\theta_1 := \frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right)$$

$$\theta_2 := \left(\frac{4\pi}{3} + \frac{2\left(1+\mathrm{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1-\mathrm{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)$$

$$\theta_3 := \left(\frac{4\pi}{3} + \frac{2\left(1-\mathrm{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1+\mathrm{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)$$

$$\eta \to \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

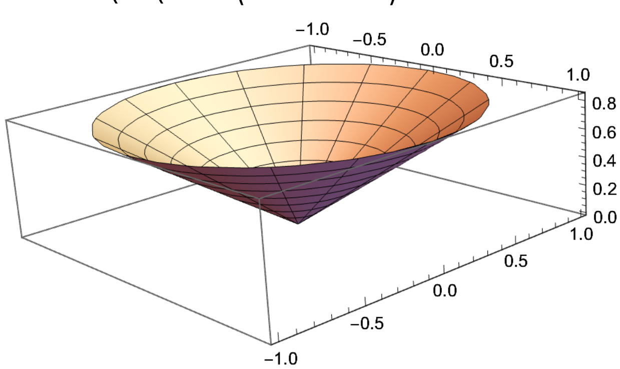
$$\text{Solve}\left[\eta == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}\right\}$$

$$r = \pm\frac{2\pi\eta}{\sqrt{4\pi\theta_1-\theta_1^2}}, \pm\frac{2\pi\eta}{\sqrt{4\pi\theta_2-\theta_2^2}}, \frac{2\pi\eta}{\sqrt{4\pi\theta_3-\theta_3^2}}$$

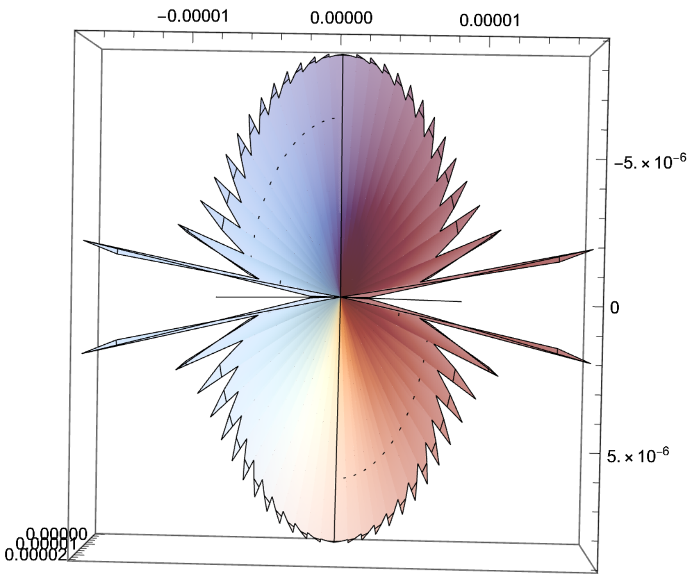
We will now see what the three theta values will show us for the height of the cone.

$$\text{RevolutionPlot3D}\left[\frac{1}{2\pi}\left(\sqrt{\left(\left(4\pi r^2\left(\frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)\right) - r^2\left(\frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)^2\right)}\right), \{r, -1, 1\}\right]$$



```
RevolutionPlot3D[
```

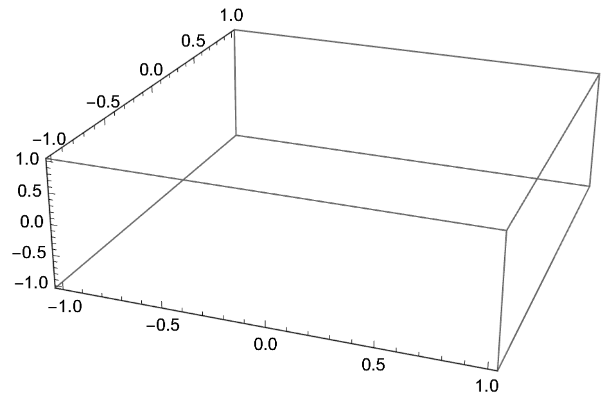
$$\frac{1}{2\pi}\left(\sqrt{\left(4\pi r^2\left(\frac{4\pi}{3}+\frac{2\left(1+\mathrm{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathrm{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)-r^2\left(\frac{4\pi}{3}+\frac{2\left(1+\mathrm{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathrm{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)^2\right)}\right), \{r, -1, 1\}]$$



RevolutionPlot3D[

$$\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\,r^2\left(\frac{4\,\pi}{3}+\frac{2\left(1-\mathbb{i}\,\sqrt{3}\right)\pi}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathbb{i}\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right)-r^2\left(\frac{4\,\pi}{3}+\frac{2\left(1-\mathbb{i}\,\sqrt{3}\right)\pi}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathbb{i}\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right)^2\right)}\right)$$

, {r, -1, 1}]



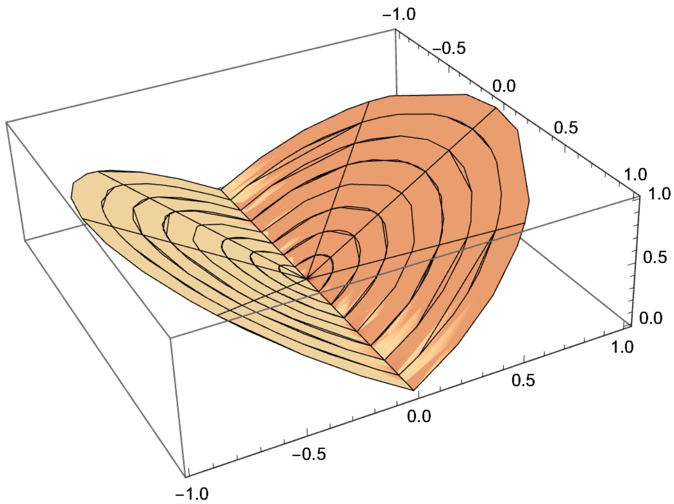
Additional Substitutions of a Known Formula

$$\left\{\left\{\Theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right\},\left\{\Theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right\}\right\} \quad (33)$$

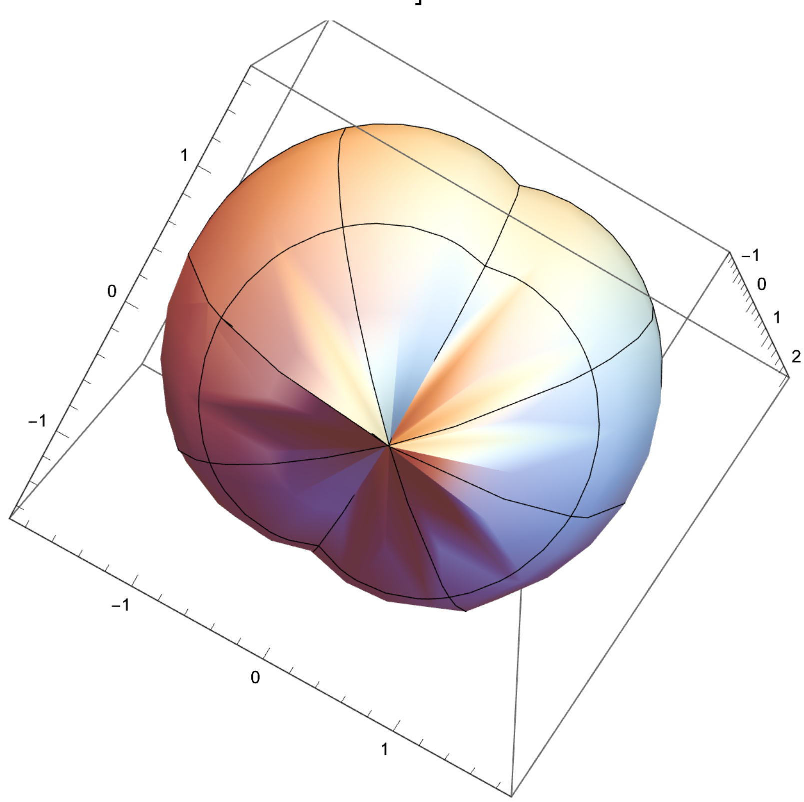
For this section, $r = 1$ (34)

$$\frac{2}{3}\left(2\,\pi-\frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}}+\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right)$$

$$\texttt{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,(r)^2\,\left(2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)-(r)^2\,\left(2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi},\right.$$
$$\left.\{r,-1,1\},\{\beta,-2\,\pi,2\,\pi\}\right]$$

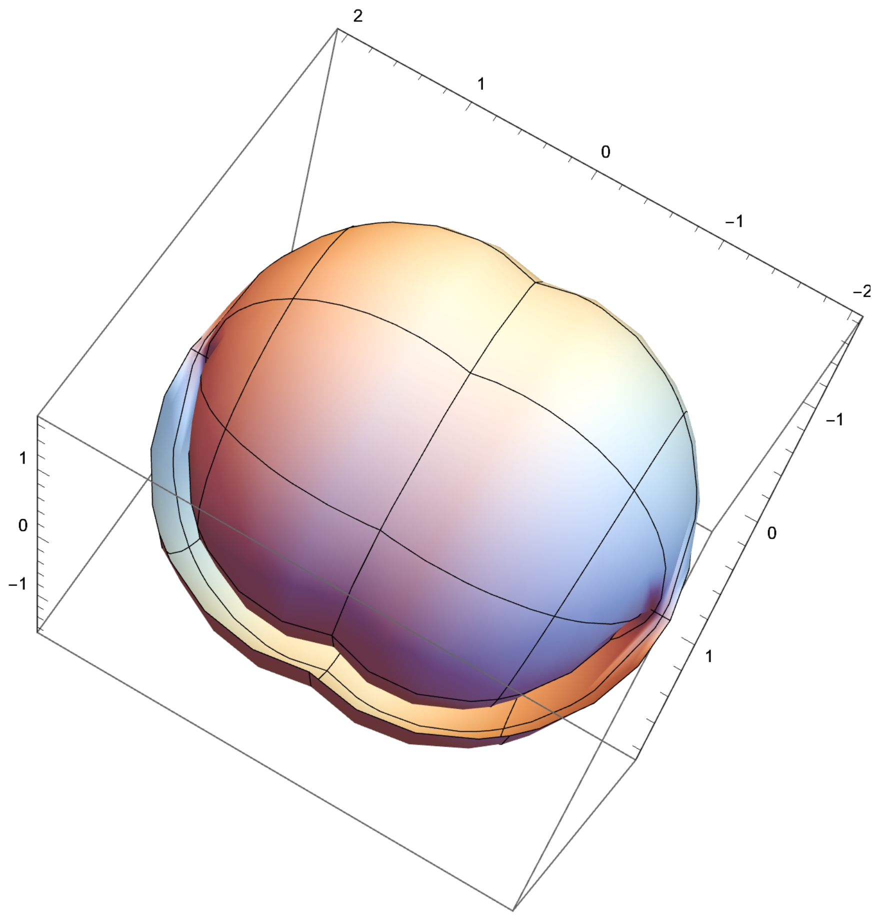


$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\,(1)^2\,(\theta)-(1)^2\,\left(2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi},\right.$$
$$\left.\{\theta,-4\,\pi,4\,\pi\},\{\beta,-2\,\pi,2\,\pi\}\right]$$

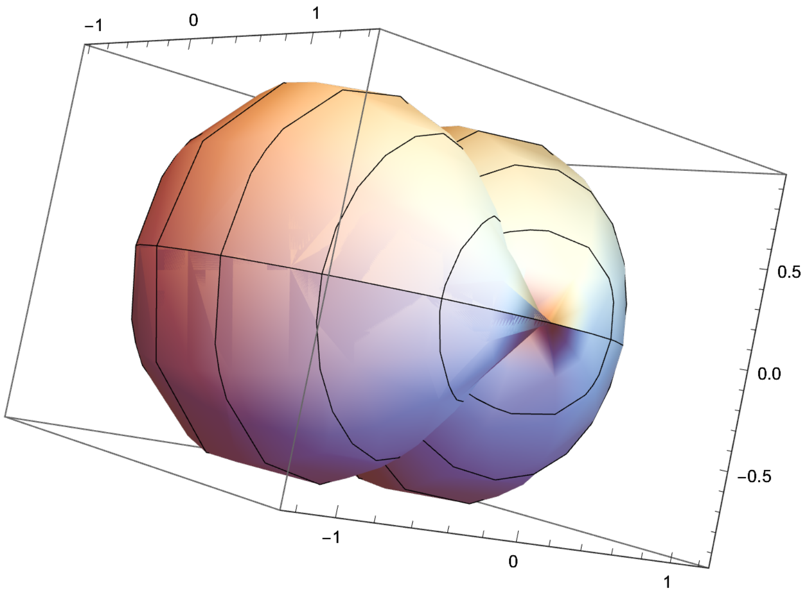


$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\,(1)^2\,(\theta) - (1)^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi},\right.$$

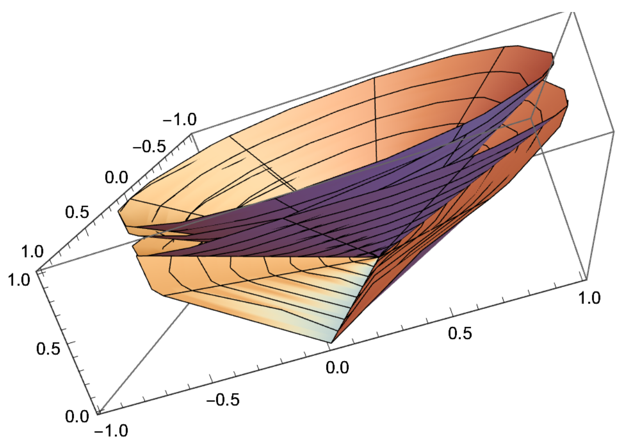
$$\left.\{\beta, -2\,\pi, 2\,\pi\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\,(1)^2\,(\theta) - (1)^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi},\right.$$
$$\left.\{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -4\,\pi, 4\,\pi\}\right]$$



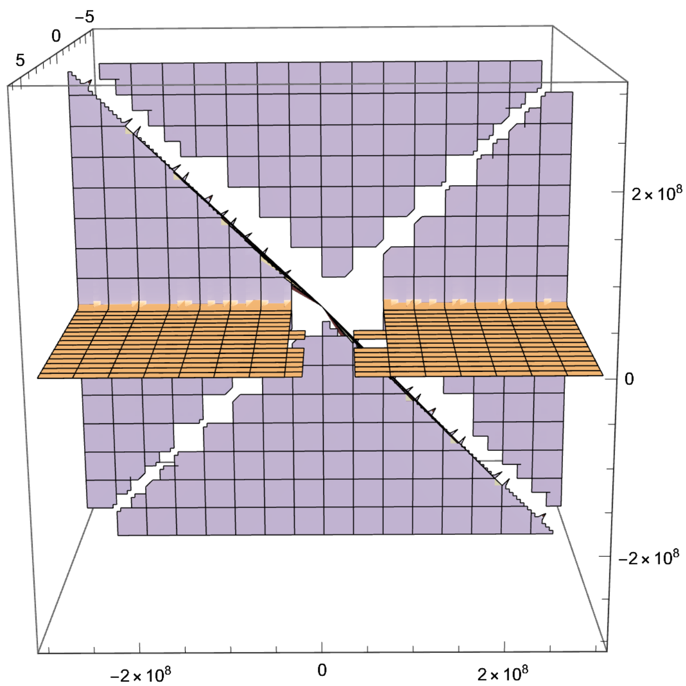
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



Addendum No. 5

Substitutions for θ in terms of β for the contour plot of radius in terms of the speed of light, angle, and velocity.

$$\text{ContourPlot3D}\left[\left\{-\frac{i\, c^3 \sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\pi+\theta}}, \frac{i\, c^3 \sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\pi+\theta}}\right\}, \{\theta, -2\pi, 2\pi\}, \{v, -((2.99792458*10\text{^}8)), ((2.99792458*10\text{^}8))\}, \{c, -(2.99792458*10\text{^}8), (2.99792458*10\text{^}8)\}\right]$$

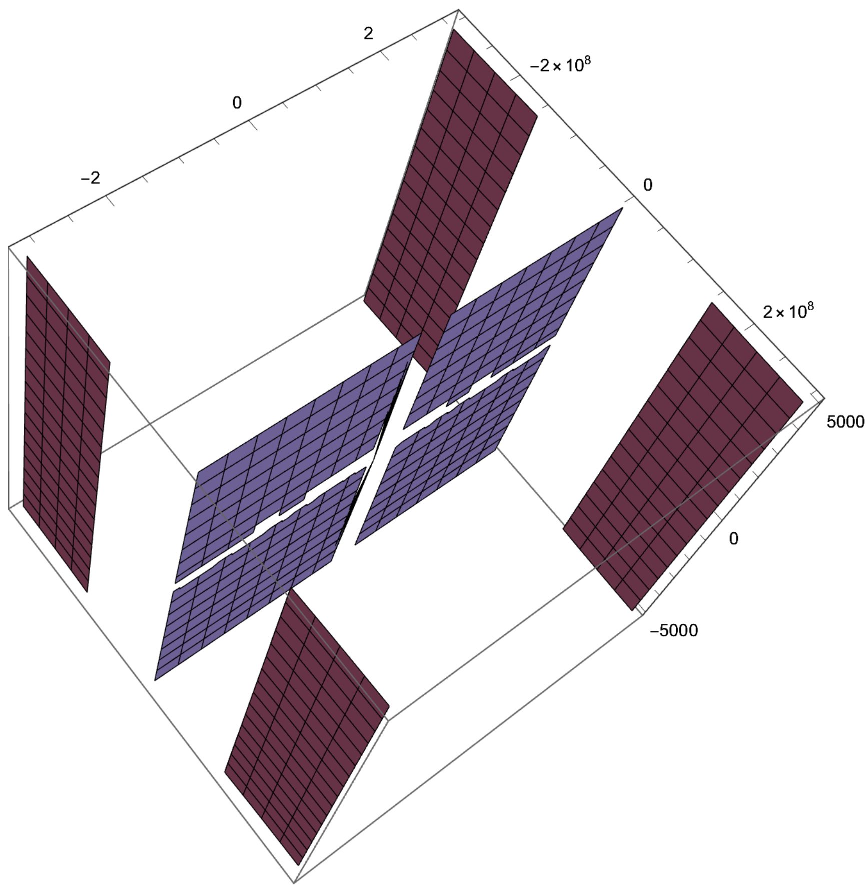


$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

```
c := (2.99792458 * 10 ^ 8)
```

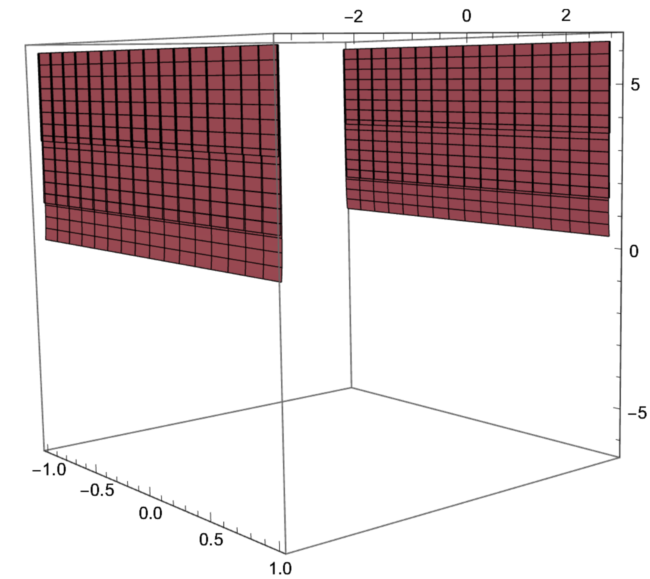
$$\text{ContourPlot3D}\left[\frac{\mathrm{i}\, c^3 \sqrt{2\left(\pi + \sqrt{\pi^2 - \pi^2 \,\text{Sin}[\beta]^2}\right)}}{(c - v)\ (c + v)\ \sqrt{-4\,\pi + 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}},\right.$$

$$\left.\{c, -(2.99792458 * 10\hat{}8), (2.99792458 * 10\hat{}8)\}, \{\beta, -\pi, \pi\}, \{v, -5000, 5000\}\right]$$



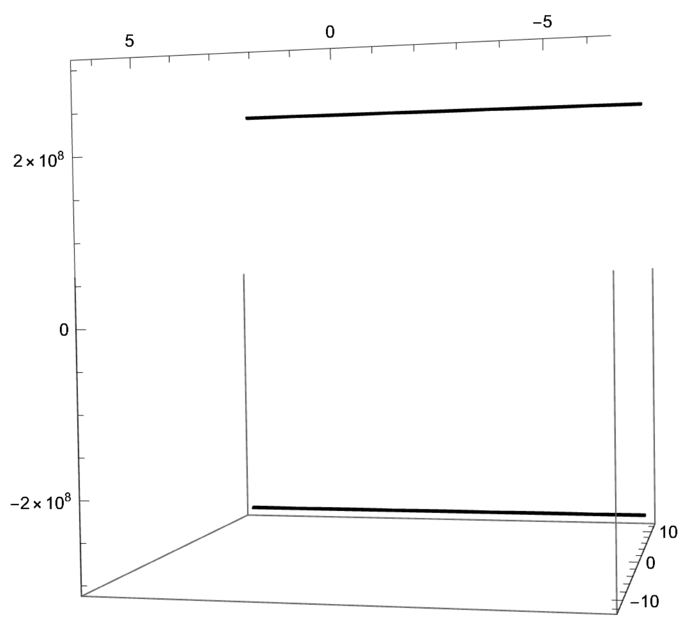
$$\text{ContourPlot3D}\left[\frac{\mathrm{i}\, c^3 \sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\pi+2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}},\right.$$

$$\left.\{v, -1, 1\}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{ContourPlot3D}\left[\frac{\mathrm{i}\, c^3 \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(c-v)\,(c+v)\,\sqrt{-4\pi+\theta}}, \{\theta, -4\pi, 4\pi\},\right.$$

$$\left.\{\beta, -2\pi, 2\pi\}, \{v, -(2.99792458 * 10\wedge 8), (2.99792458 * 10\wedge 8)\}\right]$$



Addendum No. 6

Application of cone theory to a change in volume of a sphere.

$$(4\,/\,3)\ \pi\ (\mathrm{r})\ \hat{}\ 3 = \text{Volume of Sphere} \tag{35}$$

$$\mathrm{r} \to \frac{4\,\pi^2\,\eta}{(2\,\pi - \Theta)\ \sqrt{(4\,\pi - \Theta)\ \Theta}} = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta - \Theta^2}} \tag{36}$$

D[(4 / 3) π r ^ 3, r]

$4\,\pi\ (\mathrm{r})^2 - 4\,\pi\,\mathrm{r}_1{}^2$ == (r ^ 2) (θ ^ 2) = change in surface area

$$\mathbf{Solve}\left[4\,\pi \left(\frac{2\,\pi\,\mathrm{r}\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}\right)^2 - 4\,\pi \left(\sqrt{\mathrm{r}\,\hat{}\,2 - \eta\,\hat{}\,2}\right)^2 == (\mathrm{r}\,\hat{}\,2)\ (\theta\,\hat{}\,2),\ \beta\right]$$

$$\left\{\left\{\beta \to -\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(4\,\pi-\Theta)\ \Theta\ \left(4\,\pi\,\mathrm{r}^2 - 4\,\pi\,\eta^2 + \mathrm{r}^2\,\Theta^2\right)}{\mathrm{r}^2}}}{4\,\pi^{3/2}}\right]\right\},\ \left\{\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{\frac{(4\,\pi-\Theta)\ \Theta\ \left(4\,\pi\,\mathrm{r}^2 - 4\,\pi\,\eta^2 + \mathrm{r}^2\,\Theta^2\right)}{\mathrm{r}^2}}}{4\,\pi^{3/2}}\right]\right\}\right\}$$

$$\mathbf{Solve}\left[4\,\pi \left(\frac{2\,\pi\,\mathrm{r}\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}\right)^2 - 4\,\pi \left(\sqrt{\mathrm{r}\,\hat{}\,2 - \left(\frac{\sqrt{4\,\pi\,\mathrm{r}^2\,\theta - \mathrm{r}^2\,\theta^2}}{2\,\pi}\right)\hat{}\,2}\right)^2 == (\mathrm{r}\,\hat{}\,2)\ (\theta\,\hat{}\,2),\ \theta\right]$$

$$\left\{\left\{\Theta \to \frac{2\,\pi + \pi^2}{1 + \pi} -\right.\right.$$

$$\frac{1}{2}\sqrt{\left(-\frac{40\,\pi^2}{3\ (1+\pi)} + \frac{4\ \left(2\,\pi + \pi^2\right)^2}{(1+\pi)^2} + \left(16 \times 2^{1/3}\ \left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\right/}$$

$$\left(3\ (1+\pi)\ \left(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi + \pi^2\right) - 23\,040\right.\right.$$

$$\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi + \pi^2\right)^2\ \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\left(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +\right.}$$

$$\left(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi + \pi^2\right) -\right.$$

$$\left.\left.\left.\left.23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi + \pi^2\right)^2\ \mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right) +$$

$$\frac{1}{3 \times 2^{1/3}\ (1+\pi)}\ \left(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi + \pi^2\right) -\right.$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi + \pi^2\right)^2\ \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\left(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +\right.}$$

$$\left(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi + \pi^2\right) -\right.$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Bigg) -$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)} + \frac{8\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} - \left(16\times 2^{1/3}\,\left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/}$$

$$\Big(3\,(1+\pi)\,\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3} -$$

$$\left(\frac{128\,\pi^3}{1+\pi} - \frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2} + \frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\ \Bigg(4\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} +}$$

$$\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} + \left(16\times 2^{1/3}\,\left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23040\,\pi^6$$

$$(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23040\,\pi^6$$

$$(1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{2\,\pi+\pi^2}{1+\pi}-\frac{1}{2}\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\Big(16\times2^{1/3}\left(\pi^4-12\,\pi^5+\right.\right.}$$

$$12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-23\,040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times2^{1/3}\,(1+\pi)}\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Bigg)+$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)}+\frac{8\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}-\Big(16\times2^{1/3}\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\Big)\Big/}$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-23\,040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{3\times2^{1/3}\,(1+\pi)}\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}-$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2}+\frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\left(4\,\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\right.}\right.$$

$$\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(3\,(1+\pi)\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\right.$$

$$\left.\left.\left.(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\right.$$

$$\left.\left.\left.\left.\left.(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)\right)\right)\Big\},$$

$$\Big\{\theta\to\frac{2\,\pi+\pi^2}{1+\pi}+\frac{1}{2}\,\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+\right.\right.\right.}$$

$$\left.\left.12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(3\,(1+\pi)\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\right.\right.$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$\left.\left.\left.23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)}+\frac{8\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}-\left(16\times2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/}$$

$$\Big(3\,(1+\pi)\,\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{3\times2^{1/3}\,(1+\pi)}\,\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}+$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2}+\frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\Bigg(4\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)}+}$$

$$\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\left(16\times2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23040\,\pi^6$$

$$(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times2^{1/3}\,(1+\pi)}\,\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+}$$

$$\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23040\,\pi^6$$

$$(1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2)^2))^{1/3}))))\},$$

$$\{\Theta \to \frac{2\,\pi+\pi^2}{1+\pi} + \frac{1}{2}\sqrt{(-\frac{40\,\pi^2}{3\ (1+\pi)} + \frac{4\ (2\,\pi+\pi^2)^2}{(1+\pi)^2} + (16\times 2^{1/3}\ (\pi^4 - 12\,\pi^5 +}$$

$$12\,\pi^4\ \text{Sin}[\beta]^2 + 12\,\pi^5\ \text{Sin}[\beta]^2))\Big/$$

$$(3\ (1+\pi)\ (16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) - 23\,040$$

$$\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2 +$$

$$\sqrt{(-4\ (16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \text{Sin}[\beta]^2 + 192\,\pi^5\ \text{Sin}[\beta]^2)^3 +}$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2)^2))^{1/3}) +$$

$$\frac{1}{3\times 2^{1/3}\ (1+\pi)}\ (16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2 +$$

$$\sqrt{(-4\ (16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \text{Sin}[\beta]^2 + 192\,\pi^5\ \text{Sin}[\beta]^2)^3 +}$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2)^2))^{1/3}) +$$

$$\frac{1}{2}\sqrt{(-\frac{80\,\pi^2}{3\ (1+\pi)} + \frac{8\ (2\,\pi+\pi^2)^2}{(1+\pi)^2} - (16\times 2^{1/3}\ (\pi^4 - 12\,\pi^5 + 12\,\pi^4\ \text{Sin}[\beta]^2 + 12\,\pi^5\ \text{Sin}[\beta]^2))\Big/}$$

$$(3\ (1+\pi)\ (16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) - 23\,040$$

$$\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2 +$$

$$\sqrt{(-4\ (16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \text{Sin}[\beta]^2 + 192\,\pi^5\ \text{Sin}[\beta]^2)^3 +}$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2)^2))^{1/3}) -$$

$$\frac{1}{3\times 2^{1/3}\ (1+\pi)}\ (16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2 +$$

$$\sqrt{(-4\ (16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \text{Sin}[\beta]^2 + 192\,\pi^5\ \text{Sin}[\beta]^2)^3 +}$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ (2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \text{Sin}[\beta]^2 + 6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \text{Sin}[\beta]^2)^2))^{1/3} +$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\,(2\,\pi+\pi^2)}{(1+\pi)^2}+\frac{64\,(2\,\pi+\pi^2)^3}{(1+\pi)^3}\right)\Big/\left(4\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\,(2\,\pi+\pi^2)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(3\,(1+\pi)\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2+\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}\,(1+\pi)}\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2+\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)}\right)^{1/3}\right)}\right)\}\}$$

$$\mathbf{SphericalPlot3D}\Big[\frac{2\,\pi+\pi^2}{1+\pi}-\frac{1}{2}\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\,(2\,\pi+\pi^2)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\right]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(3\,(1+\pi)\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2+\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\right]^2\right)^3+\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,(2\,\pi+\pi^2)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)}\right)^{1/3}\right)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\right.$$
$$(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+\right.\right.}$$
$$\left.192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\right]^2\right)^3+$$
$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\,(1+\pi)\right.$$
$$\left.\left.\left.\left.\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)-$$

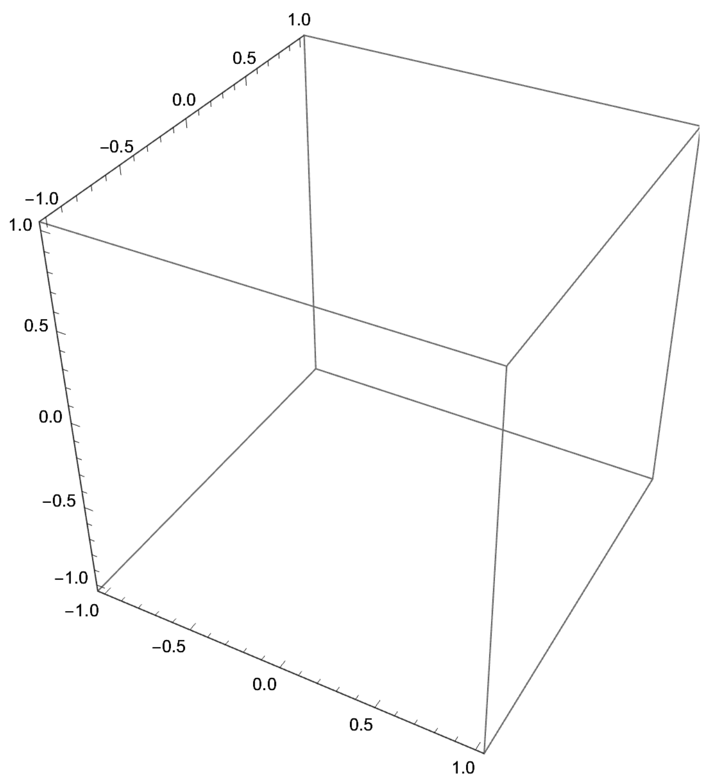
$$\frac{1}{2}\sqrt{\left(-\frac{80\,\pi^2}{3\,(1+\pi)}+\frac{8\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}-\left(16\times 2^{1/3}\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\right/}$$
$$\left(3\,(1+\pi)\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\,(1+\pi)\right.\right.$$
$$\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\right]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$
$$\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$
$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-\right.$$
$$\left.\left.\left.\left.23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)-$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-\right.$$
$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2+$$
$$\sqrt{\left(-4\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$
$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-\right.$$
$$\left.\left.\left.23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\left(2\,\pi+\pi^2\right)^2\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}-$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\left(2\,\pi+\pi^2\right)}{(1+\pi)^2}+\frac{64\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Bigg/\left(4\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\right.}\right.$$
$$\left(16\times 2^{1/3}\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$
$$\left(3\,(1+\pi)\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\left(2\,\pi+\pi^2\right)-\right.\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\text{Sin}[\beta]^2 + \sqrt{\left(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 + 192\,\pi^5\,\text{Sin}[\beta]^2\right)^3 + \left(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\text{Sin}[\beta]^2\right)^2\right)}\Bigg)^{1/3}\Bigg) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\Bigg(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\text{Sin}[\beta]^2 + \sqrt{\left(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 + 192\,\pi^5\,\text{Sin}[\beta]^2\right)^3 + \left(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\text{Sin}[\beta]^2\right)^2\right)}\Bigg)^{1/3}\Bigg)\Bigg)\Bigg),\ \{\beta,\,-10,\,10\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$



$$\text{Solve}\left[4\pi\left(\frac{2\pi\, r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2-4\pi\left(\sqrt{r\text{^}2-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)\text{^}2}\right)^2==(r\text{^}2)\,(\theta\text{^}2),\ \beta\right]$$

$$\left\{\left\{\beta\to-\text{ArcSin}\left[\frac{\sqrt{-\theta\,(-4\pi+\theta)\,\left(4\pi^2-4\pi\theta+\theta^2+\pi\theta^2\right)}}{4\pi^2}\right]\right\},\right.$$
$$\left.\left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{-\theta\,(-4\pi+\theta)\,\left(4\pi^2-4\pi\theta+\theta^2+\pi\theta^2\right)}}{4\pi^2}\right]\right\}\right\}$$

$$\text{Solve}\left[\text{ArcSin}\left[\frac{\sqrt{-\theta\,(-4\pi+\theta)\,\left(4\pi^2-4\pi\theta+\theta^2+\pi\theta^2\right)}}{4\pi^2}\right]==\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right],\ \theta\right]$$

$$
\begin{aligned}
&\{\{\theta\to 0\},\\
&\{\theta\to\frac{3\pi}{1+\pi}+\frac{2\pi^2}{1+\pi}+\frac{1}{2}\sqrt{\Big(-\frac{32\pi^2}{1+\pi}-\frac{32\pi^3}{3\,(1+\pi)}+\frac{4\,(3\pi+2\pi^2)^2}{(1+\pi)^2}+1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\pi^7+}\\
&\qquad 9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}\Big)+\\
&\qquad\frac{1}{3\,(1+\pi)}\,(192\pi^5+256\pi^6)\,\Big(2\Big/\Big(6912\pi^7+9216\pi^8+8192\pi^9+\\
&\qquad\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}\Big)-\\
&\quad\frac{1}{2}\sqrt{\Big(-\frac{64\pi^2}{1+\pi}-\frac{64\pi^3}{3\,(1+\pi)}+\frac{8\,(3\pi+2\pi^2)^2}{(1+\pi)^2}-1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\pi^7+9216\pi^8+}\\
&\qquad 8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}\Big)-\\
&\qquad\frac{1}{3\,(1+\pi)}\,(192\pi^5+256\pi^6)\,\Big(2\Big/\Big(6912\pi^7+9216\pi^8+8192\pi^9+\\
&\qquad\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}+\\
&\qquad\Big(\frac{1728\pi^3}{(1+\pi)^3}+\frac{3456\pi^4}{(1+\pi)^3}+\frac{2304\pi^5}{(1+\pi)^3}+\frac{512\pi^6}{(1+\pi)^3}-\frac{2304\pi^3}{(1+\pi)^2}-\frac{2304\pi^4}{(1+\pi)^2}-\frac{512\pi^5}{(1+\pi)^2}+\frac{640\pi^3}{1+\pi}\Big)\Big/\\
&\qquad\Big(4\sqrt{\Big(-\frac{32\pi^2}{1+\pi}-\frac{32\pi^3}{3\,(1+\pi)}+\frac{4\,(3\pi+2\pi^2)^2}{(1+\pi)^2}+1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\pi^7+9216\pi^8+}\\
&\qquad\quad 8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}\Big)+\\
&\qquad\quad\frac{1}{3\,(1+\pi)}\,(192\pi^5+256\pi^6)\,\Big(2\Big/\Big(6912\pi^7+9216\pi^8+8192\pi^9+\\
&\qquad\quad\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\Big)\Big)^{1/3}\Big)\Big)\Big)\},
\end{aligned}
$$

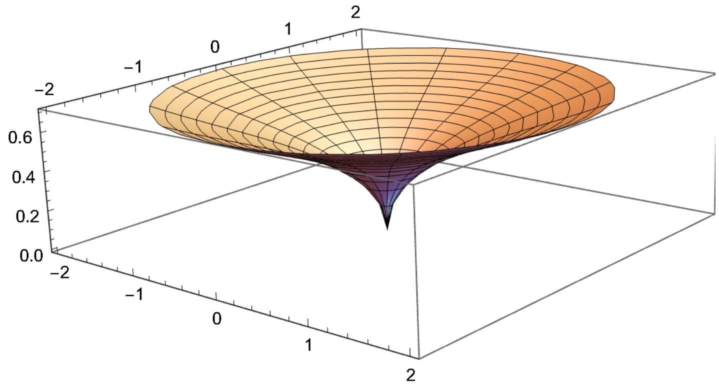
$$\Bigg\{\theta \to \frac{3\pi}{1+\pi}+\frac{2\pi^2}{1+\pi}+\frac{1}{2}\sqrt{\left(-\frac{32\pi^2}{1+\pi}-\frac{32\pi^3}{3(1+\pi)}+\frac{4\left(3\pi+2\pi^2\right)^2}{(1+\pi)^2}+1\Big/\left(3(1+\pi)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}\right)+\frac{1}{3(1+\pi)}\left(192\pi^5+256\pi^6\right)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}\right)}+$$

$$\frac{1}{2}\sqrt{\left(-\frac{64\pi^2}{1+\pi}-\frac{64\pi^3}{3(1+\pi)}+\frac{8\left(3\pi+2\pi^2\right)^2}{(1+\pi)^2}-1\Big/\left(3(1+\pi)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}\right)-\frac{1}{3(1+\pi)}\left(192\pi^5+256\pi^6\right)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}+\left(\frac{1728\pi^3}{(1+\pi)^3}+\frac{3456\pi^4}{(1+\pi)^3}+\frac{2304\pi^5}{(1+\pi)^3}+\frac{512\pi^6}{(1+\pi)^3}-\frac{2304\pi^3}{(1+\pi)^2}-\frac{2304\pi^4}{(1+\pi)^2}-\frac{512\pi^5}{(1+\pi)^2}+\frac{640\pi^3}{1+\pi}\right)\Big/\left(4\sqrt{\left(-\frac{32\pi^2}{1+\pi}-\frac{32\pi^3}{3(1+\pi)}+\frac{4\left(3\pi+2\pi^2\right)^2}{(1+\pi)^2}+1\Big/\left(3(1+\pi)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}\right)+\frac{1}{3(1+\pi)}\left(192\pi^5+256\pi^6\right)\left(2\Big/\left(6912\pi^7+9216\pi^8+8192\pi^9+\sqrt{47\,775\,744\pi^{14}+99\,090\,432\pi^{15}+84\,934\,656\pi^{16}}\right)\right)^{1/3}\right)}\right)\right)}\Bigg\}\Bigg\}$$

Solve$\left[\mathrm{ArcSin}\left[\frac{\sqrt{-\theta\,(-4\pi+\theta)\,\left(4\pi^2-4\pi\theta+\theta^2+\pi\theta^2\right)}}{4\pi^2}\right] == \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right],\ \theta\right]$

$$\left\{\{\theta\to 0\},\ \{\theta\to 4\pi\},\ \left\{\theta\to\frac{4\pi}{1+\pi}\right\}\right\}$$

$$\text{RevolutionPlot3D}\Big[\text{ArcSin}\Big[\frac{\sqrt{-\theta\,(-4\,\pi+\theta)\,\left(4\,\pi^2-4\,\pi\,\theta+\theta^2+\pi\,\theta^2\right)}}{4\,\pi^2}\Big],\ \{\theta,\ -2\,\pi,\ 2\}\Big]$$



$$\text{SphericalPlot3D}\Big[\Big(2\,\pi\,\theta\,2\,\pi\,\Big(\Big(\sqrt{}\,\big(-1.1294090667581471\text{`*^18}\,\theta+8.987551787368176\text{`*^16}\,\theta^2+$$

$$3.5481432270250993\text{`*^18}\,\text{Sin}[\beta]^2\big)\big)\Big/\Big(\sqrt{}\,\Big(-12.566370614359172\text{`}\,\theta+$$

$$\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Big(6\,\Big(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+$$

$$3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\Big)^{1/3}\Big)+\frac{2}{3}\,\Big(-\pi^3+18$$

$$\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\Big)^{1/3}\Big)^2+$$

$$39.47841760435743\text{`}\,\text{Sin}[\beta]^2\Big)\Big)\Big)\Big)\Big/\Big(\sqrt{4\,\pi\,\theta-\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}\Big)$$

$$\Bigg(\frac{3\,\pi}{1+\pi}+\frac{2\,\pi^2}{1+\pi}+\frac{1}{2}\,\sqrt{}\,\Bigg(-\frac{32\,\pi^2}{1+\pi}-\frac{32\,\pi^3}{3\,(1+\pi)}+\frac{4\,\left(3\,\pi+2\,\pi^2\right)^2}{(1+\pi)^2}+$$

$$1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+$$

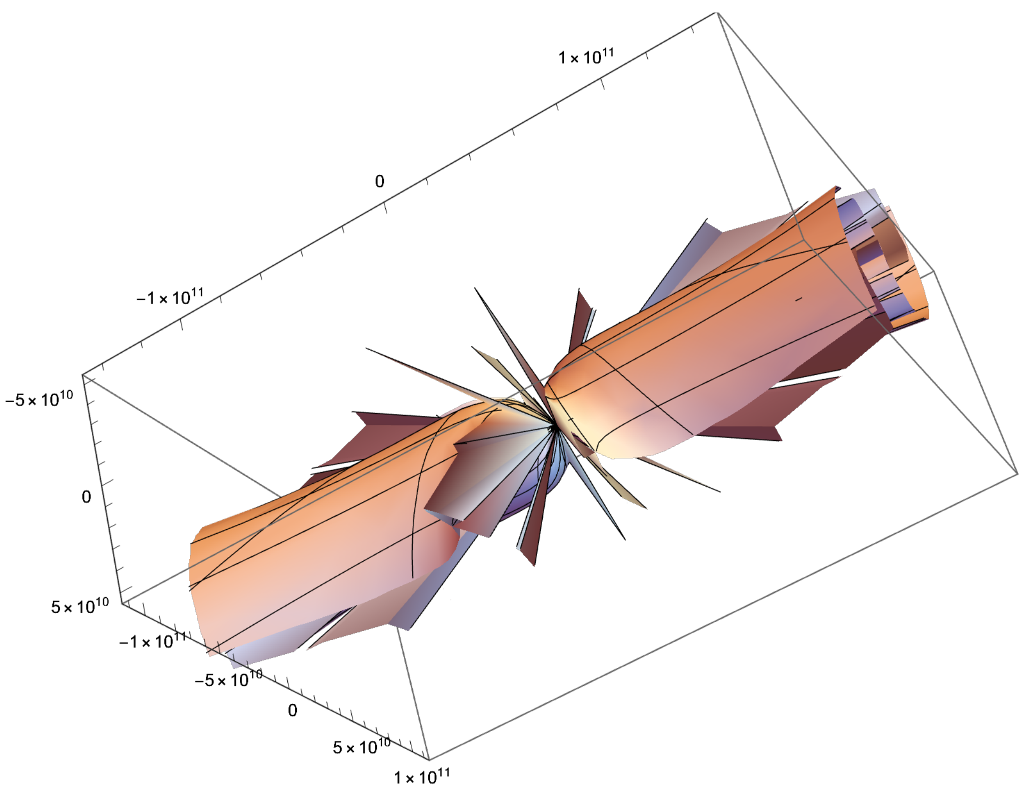
$$\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\,(1+\pi)}\,\left(192\,\pi^5+256\,\pi^6\right)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+$$

$$\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Bigg)-$$

$$\frac{1}{2}\sqrt{\left(-\frac{64\,\pi^2}{1+\pi}-\frac{64\,\pi^3}{3\,(1+\pi)}+\frac{8\,(3\,\pi+2\,\pi^2)^2}{(1+\pi)^2}-1\Big/\left(3\,(1+\pi)\,\left(2\Big/\left(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\right)\right)^{1/3}\right)-\frac{1}{3\,(1+\pi)}\,(192\,\pi^5+256\,\pi^6)\,\left(2\Big/\left(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\right)\right)^{1/3}+\left(\frac{1728\,\pi^3}{(1+\pi)^3}+\frac{3456\,\pi^4}{(1+\pi)^3}+\frac{2304\,\pi^5}{(1+\pi)^3}+\frac{512\,\pi^6}{(1+\pi)^3}-\frac{2304\,\pi^3}{(1+\pi)^2}-\frac{2304\,\pi^4}{(1+\pi)^2}-\frac{512\,\pi^5}{(1+\pi)^2}+\frac{640\,\pi^3}{1+\pi}\right)\Big/\left(4\sqrt{\left(-\frac{32\,\pi^2}{1+\pi}-\frac{32\,\pi^3}{3\,(1+\pi)}+\frac{4\,(3\,\pi+2\,\pi^2)^2}{(1+\pi)^2}+1\Big/\left(3\,(1+\pi)\,\left(2\Big/\left(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\right)\right)^{1/3}\right)+\frac{1}{3\,(1+\pi)}\,(192\,\pi^5+256\,\pi^6)\,\left(2\Big/\left(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\right)\right)^{1/3}\right)}\right)\right)},$$

$\{\beta,\,-\pi,\,\pi\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}]$



$$\texttt{SphericalPlot3D}\Big[\Big(2\,\pi\,\theta\,2\,\pi\,\Big(\Big(\sqrt{}\Big(-1.1294090667581471\text{`}*\text{^}18\,\theta+$$

$$8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\Big(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\Big)\Big)\Big)\Big/$$

$$\Big(\sqrt{4\,\pi\,\theta-\Big(2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\Big)\Big)^2}\Big)\,\Big(\frac{3\,\pi}{1+\pi}+\frac{2\,\pi^2}{1+\pi}+$$

$$\frac{1}{2}\sqrt{\Big(-\frac{32\,\pi^2}{1+\pi}-\frac{32\,\pi^3}{3\,(1+\pi)}+\frac{4\,(3\,\pi+2\,\pi^2)^2}{(1+\pi)^2}+1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+}$$

$$8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\,(1+\pi)}\,\big(192\,\pi^5+256\,\pi^6\big)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+$$

$$\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{2}\sqrt{\Big(-\frac{64\,\pi^2}{1+\pi}-\frac{64\,\pi^3}{3\,(1+\pi)}+\frac{8\,(3\,\pi+2\,\pi^2)^2}{(1+\pi)^2}-1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+}$$

$$8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{3\,(1+\pi)}\,\big(192\,\pi^5+256\,\pi^6\big)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+$$

$$\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}+$$

$$\Big(\frac{1728\,\pi^3}{(1+\pi)^3}+\frac{3456\,\pi^4}{(1+\pi)^3}+\frac{2304\,\pi^5}{(1+\pi)^3}+\frac{512\,\pi^6}{(1+\pi)^3}-\frac{2304\,\pi^3}{(1+\pi)^2}-\frac{2304\,\pi^4}{(1+\pi)^2}-\frac{512\,\pi^5}{(1+\pi)^2}+\frac{640\,\pi^3}{1+\pi}\Big)\Big/$$

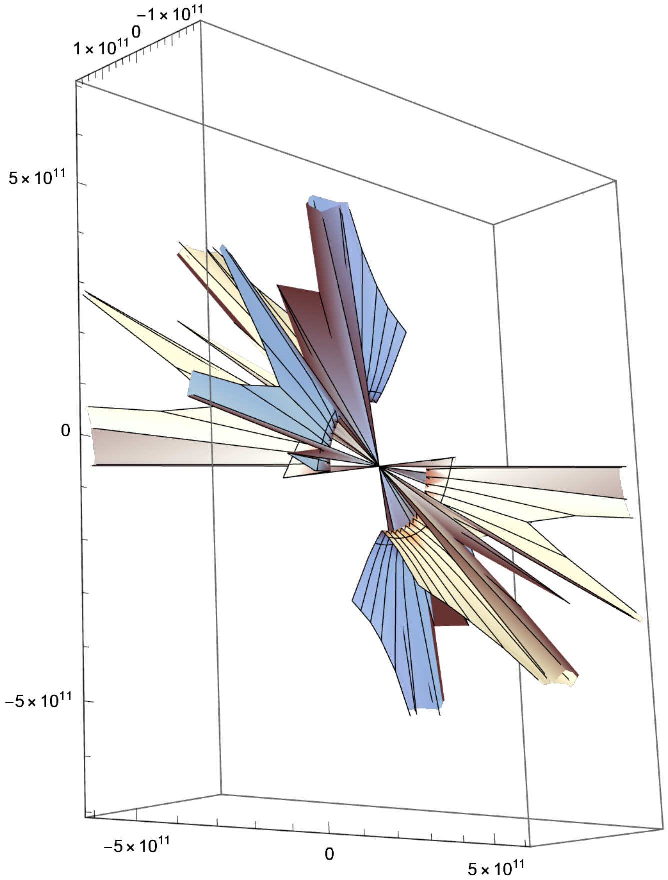
$$\Big(4\sqrt{\Big(-\frac{32\,\pi^2}{1+\pi}-\frac{32\,\pi^3}{3\,(1+\pi)}+\frac{4\,(3\,\pi+2\,\pi^2)^2}{(1+\pi)^2}+1\Big/\Big(3\,(1+\pi)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+}$$

$$8192\,\pi^9+\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\,(1+\pi)}\,\big(192\,\pi^5+256\,\pi^6\big)\,\Big(2\Big/\Big(6912\,\pi^7+9216\,\pi^8+8192\,\pi^9+$$

$$\sqrt{47\,775\,744\,\pi^{14}+99\,090\,432\,\pi^{15}+84\,934\,656\,\pi^{16}}\Big)\Big)^{1/3}\Big)\Big)\Big)\Big)\Big),$$

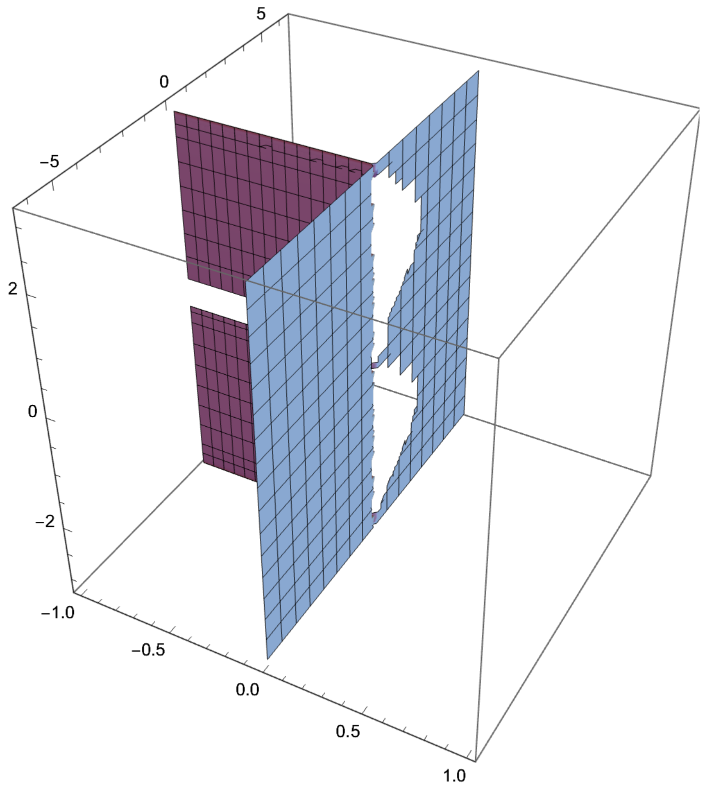
$$\{\beta,-\pi,\pi\},\{\theta,-2\,\pi,2\,\pi\}\Big]$$



$$\text{Solve}\left[4\,\pi\left(\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2-4\,\pi\left(\sqrt{r\,^\wedge 2-\eta\,^\wedge 2}\right)^2==(r\,^\wedge 2)\ (\theta\,^\wedge 2),\ r\right]$$

$$\left\{\left\{r\to-\frac{2\,\sqrt{\pi}\,\eta}{\sqrt{4\,\pi+\theta^2-\frac{16\,\pi^3\,\text{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}\right\},\left\{r\to\frac{2\,\sqrt{\pi}\,\eta}{\sqrt{4\,\pi+\theta^2-\frac{16\,\pi^3\,\text{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{2\sqrt{\pi}\,\eta}{\sqrt{4\pi+\theta^2-\frac{16\pi^3\,\text{Sin}[\beta]^2}{4\pi\theta-\theta^2}}},\ \{\eta,-1,1\},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$



$2\pi r - 2\pi r_1 = \theta r$

$(2\pi r - 2\pi r_1)\ (2\pi r - 2\pi r_1) = (\theta r)\ (\theta r)$

$(2\pi r - 2\pi r_1)\ (2\pi r - 2\pi r_1)$

$\text{Expand}\left[(2\pi r - 2\pi r_1)^2\right]$

$4\pi^2 r^2 - 8\pi^2 r\, r_1 + 4\pi^2 r_1^2 == (\theta r)\ (\theta r)$

$$\text{Solve}\left[4\pi^2\left(\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2 - 8\pi^2\,\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\sqrt{r\,^\wedge 2-\eta\,^\wedge 2} + 4\pi^2\left(\left(\sqrt{r\,^\wedge 2-\eta\,^\wedge 2}\right)^\wedge 2\right) == (\theta r)\ (\theta r),\ \eta\right]$$

$$\Big\{\Big\{\eta \to -\sqrt{\Big(\frac{16\,\pi^2\,r^2\,\theta^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{8\,\pi\,r^2\,\theta^3}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{3\,r^2\,\theta^4}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{2\,r^2\,\theta^5}{\pi\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{r^2\,\theta^6}{4\,\pi^2\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{16\,\pi^3\,r^2\,\theta\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{4\,\pi^2\,r^2\,\theta^2\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \left(2\,\sqrt{\left(64\,\pi^{11}\,r^4\,\theta^5\,\mathrm{Sin}[\beta]^2 - 48\,\pi^{10}\,r^4\,\theta^6\,\mathrm{Sin}[\beta]^2 + 12\,\pi^9\,r^4\,\theta^7\,\mathrm{Sin}[\beta]^2 - \pi^8\,r^4\,\theta^8\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\pi^4\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big)}\Big\},$$

$$\Big\{\eta \to \sqrt{\Big(\frac{16\,\pi^2\,r^2\,\theta^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{8\,\pi\,r^2\,\theta^3}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{3\,r^2\,\theta^4}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{2\,r^2\,\theta^5}{\pi\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{r^2\,\theta^6}{4\,\pi^2\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{16\,\pi^3\,r^2\,\theta\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{4\,\pi^2\,r^2\,\theta^2\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \left(2\,\sqrt{\left(64\,\pi^{11}\,r^4\,\theta^5\,\mathrm{Sin}[\beta]^2 - 48\,\pi^{10}\,r^4\,\theta^6\,\mathrm{Sin}[\beta]^2 + 12\,\pi^9\,r^4\,\theta^7\,\mathrm{Sin}[\beta]^2 - \pi^8\,r^4\,\theta^8\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\pi^4\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big)}\Big\},$$

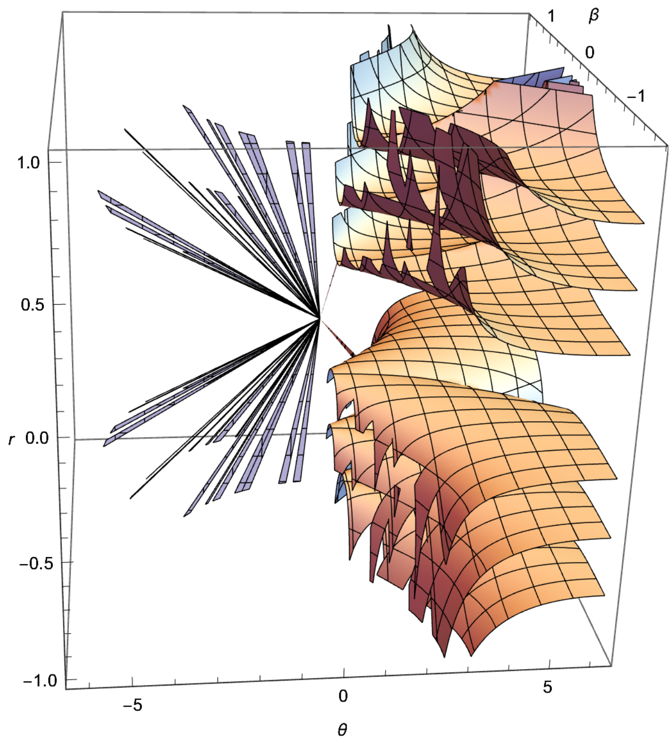
$$\Big\{\eta \to -\sqrt{\Big(\frac{16\,\pi^2\,r^2\,\theta^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{8\,\pi\,r^2\,\theta^3}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{3\,r^2\,\theta^4}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{2\,r^2\,\theta^5}{\pi\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{r^2\,\theta^6}{4\,\pi^2\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{16\,\pi^3\,r^2\,\theta\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{4\,\pi^2\,r^2\,\theta^2\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \left(2\,\sqrt{\left(64\,\pi^{11}\,r^4\,\theta^5\,\mathrm{Sin}[\beta]^2 - 48\,\pi^{10}\,r^4\,\theta^6\,\mathrm{Sin}[\beta]^2 + 12\,\pi^9\,r^4\,\theta^7\,\mathrm{Sin}[\beta]^2 - \pi^8\,r^4\,\theta^8\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\pi^4\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big)}\Big\},$$

$$\Big\{\eta \to \sqrt{\Big(\frac{16\,\pi^2\,r^2\,\theta^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{8\,\pi\,r^2\,\theta^3}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} - \frac{3\,r^2\,\theta^4}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{2\,r^2\,\theta^5}{\pi\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{r^2\,\theta^6}{4\,\pi^2\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)} - \frac{16\,\pi^3\,r^2\,\theta\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \frac{4\,\pi^2\,r^2\,\theta^2\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4} + \left(2\,\sqrt{\left(64\,\pi^{11}\,r^4\,\theta^5\,\mathrm{Sin}[\beta]^2 - 48\,\pi^{10}\,r^4\,\theta^6\,\mathrm{Sin}[\beta]^2 + 12\,\pi^9\,r^4\,\theta^7\,\mathrm{Sin}[\beta]^2 - \pi^8\,r^4\,\theta^8\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\pi^4\,\left(16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big)}\Big\}\Big\}$$

```
ContourPlot3D[
```

$$\sqrt{\left(\frac{16\,\pi^2\,r^2\,\theta^2}{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\frac{8\,\pi\,r^2\,\theta^3}{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\frac{3\,r^2\,\theta^4}{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}+\frac{2\,r^2\,\theta^5}{\pi\,\left(16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-\frac{r^2\,\theta^6}{4\,\pi^2\,\left(16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-\frac{16\,\pi^3\,r^2\,\theta\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}+\frac{4\,\pi^2\,r^2\,\theta^2\,\mathrm{Sin}[\beta]^2}{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}+\left(2\,\sqrt{\left(64\,\pi^{11}\,r^4\,\theta^5\,\mathrm{Sin}[\beta]^2-48\,\pi^{10}\,r^4\,\theta^6\,\mathrm{Sin}[\beta]^2+12\,\pi^9\,r^4\,\theta^7\,\mathrm{Sin}[\beta]^2-\pi^8\,r^4\,\theta^8\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\pi^4\,\left(16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)\right)},\ \{r,-1,1\},$$

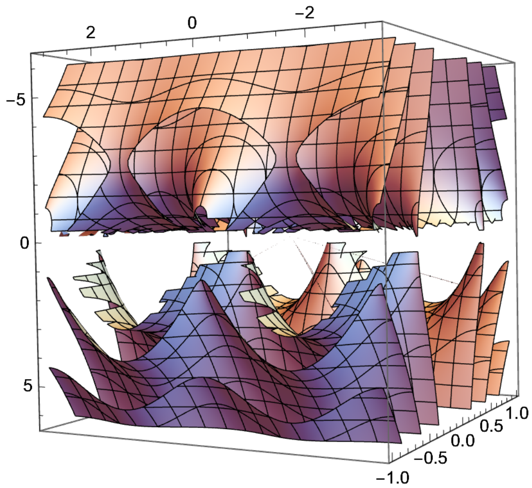
$$\{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\},\ \mathrm{AxesLabel}\rightarrow\mathrm{Automatic}]$$



$$\mathrm{Solve}\left[4\,\pi\,\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2-4\,\pi\,\left(\sqrt{r\,{}^\wedge 2-\eta\,{}^\wedge 2}\right)^2==(r\,{}^\wedge 2)\,(\theta\,{}^\wedge 2),\ \eta\right]$$

$$\left\{\left\{\eta\rightarrow-\frac{\sqrt{4\,\pi\,r^2+r^2\,\theta^2-\frac{16\,\pi^3\,r^2\,\mathrm{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}{2\,\sqrt{\pi}}\right\},\ \left\{\eta\rightarrow\frac{\sqrt{4\,\pi\,r^2+r^2\,\theta^2-\frac{16\,\pi^3\,r^2\,\mathrm{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}{2\,\sqrt{\pi}}\right\}\right\}$$

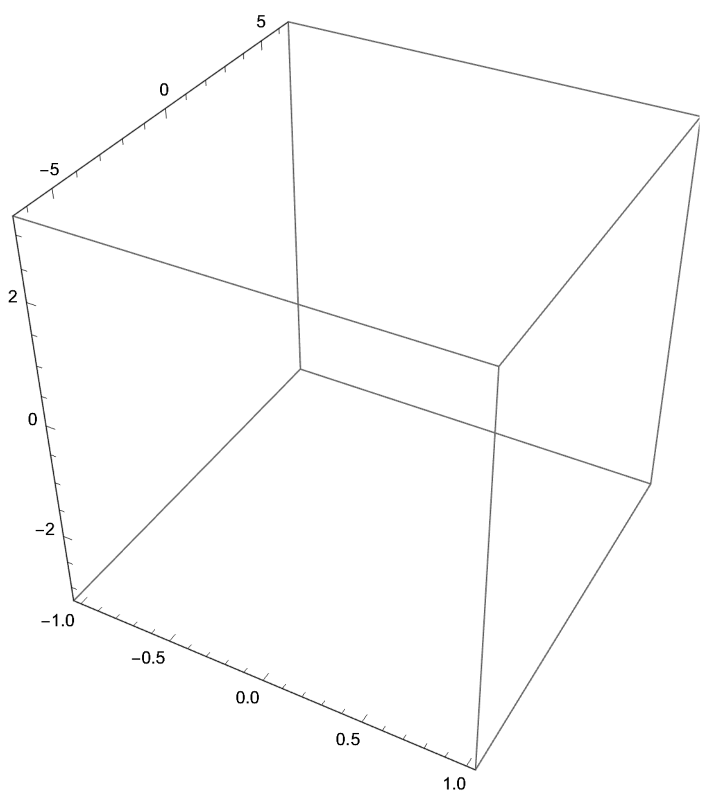
ContourPlot3D$\left[\frac{\sqrt{4\,\pi\,r^2+r^2\,\theta^2-\frac{16\,\pi^3\,r^2\,\text{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}{2\,\sqrt{\pi}}, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi, \pi\}\right]$



== (r ^ 2) (θ ^ 2)

ContourPlot3D$\left[4\,\pi\,(r)^2-4\,\pi\left(\frac{\sqrt{4\,\pi\,r^2+r^2\,\theta^2-\frac{16\,\pi^3\,r^2\,\text{Sin}[\beta]^2}{4\,\pi\,\theta-\theta^2}}}{2\,\sqrt{\pi}}\right)^2,\right.$

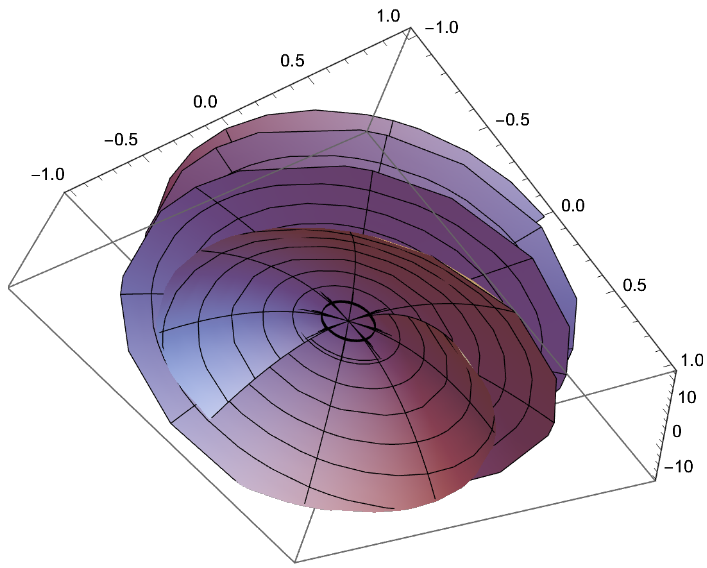
$\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi, \pi\}\right]$



$$\mathbf{Solve}\left[4\pi\left(\frac{2\pi\, r\, \mathrm{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2 - 4\pi\left(\frac{2\pi r - r\theta}{2\pi}\right)^2 == (r\,\hat{}\,2)\ (\theta\,\hat{}\,2),\ r\right]$$

$$\{\{r \to 0\},\ \{r \to 0\}\}$$

$$\mathbf{RevolutionPlot3D}\left[4\pi\,(r)^2 - 4\pi\left(\frac{2\pi r - r\theta}{2\pi}\right)^2,\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\pi,\ 2\pi\}\right]$$



$$\mathbf{Solve}\left[4\pi\left(\frac{2\pi\, r\, \mathrm{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2 - 4\pi\left(\frac{2\pi r - r\theta}{2\pi}\right)^2 == (r\,\hat{}\,2)\ (\theta\,\hat{}\,2),\ \theta\right]$$

$$\Big\{\Big\{\theta \to \frac{2\pi+\pi^2}{1+\pi} -$$

$$\frac{1}{2}\sqrt{\vphantom{X}}\Big(-\frac{40\pi^2}{3\,(1+\pi)} + \frac{4\,(2\pi+\pi^2)^2}{(1+\pi)^2} + \Big(16\times 2^{1/3}\,\big(\pi^4 - 12\pi^5 + 12\pi^4\,\mathrm{Sin}[\beta]^2 + 12\pi^5\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\pi+\pi^2) - 23\,040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\vphantom{X}}\Big(-4\,\big(16\pi^4 - 192\pi^5 + 192\pi^4\,\mathrm{Sin}[\beta]^2 + 192\pi^5\,\mathrm{Sin}[\beta]^2\big)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\vphantom{X}}\Big(-4\,\big(16\pi^4 - 192\pi^5 + 192\pi^4\,\mathrm{Sin}[\beta]^2 + 192\pi^5\,\mathrm{Sin}[\beta]^2\big)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{2}\,\sqrt{\;}\Bigg(\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)} + \frac{8\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} - \left(16\times 2^{1/3}\,\left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\;}\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\;}\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3} -$$

$$\left(\frac{128\,\pi^3}{1+\pi} - \frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2} + \frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\Bigg(4\,\sqrt{\;}\Bigg(\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} +$$

$$\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} + \left(16\times 2^{1/3}\,\left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\;}\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040\,\pi^6$$

$$(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\;}\Big(-4\,\left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right) - 23\,040\,\pi^6$$

$$(1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2\right)^2\Big)\Big)^{1/3}\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta \to \frac{2\,\pi+\pi^2}{1+\pi} - \frac{1}{2}\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} + \frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} + \Big(16\times 2^{1/3}\,\Big(\pi^4 - 12\,\pi^5 +}$$

$$12\,\pi^4\ \mathrm{Sin}[\beta]^2 + 12\,\pi^5\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\Big(3\ (1+\pi)\ \Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) - 23\,040$$

$$\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \mathrm{Sin}[\beta]^2 + 192\,\pi^5\ \mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\ (1+\pi)}\ \Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \mathrm{Sin}[\beta]^2 + 192\,\pi^5\ \mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Bigg) +$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)} + \frac{8\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2} - \Big(16\times 2^{1/3}\ \left(\pi^4 - 12\,\pi^5 + 12\,\pi^4\ \mathrm{Sin}[\beta]^2 + 12\,\pi^5\ \mathrm{Sin}[\beta]^2\right)\Big)\Big/}$$

$$\Big(3\ (1+\pi)\ \Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) - 23\,040$$

$$\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \mathrm{Sin}[\beta]^2 + 192\,\pi^5\ \mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{3\times 2^{1/3}\ (1+\pi)}\ \Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\ \left(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\ \mathrm{Sin}[\beta]^2 + 192\,\pi^5\ \mathrm{Sin}[\beta]^2\right)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\ (1+\pi) - 11\,520\,\pi^5\ \left(2\,\pi+\pi^2\right) -$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2 + 6912\,\pi^4\ \left(2\,\pi+\pi^2\right)^2 \mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3} -$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2}+\frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\left(4\,\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\right.}\right.$$

$$\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(3\,(1+\pi)\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\right.$$

$$\left.\left.\left.\left.(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\,\pi^6\right.$$

$$\left.\left.\left.\left.\left.\left.(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)\right)\right)\Big\},$$

$$\Big\{\Theta\to\frac{2\,\pi+\pi^2}{1+\pi}+\frac{1}{2}\,\sqrt{\left(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+\right.\right.\right.}$$

$$\left.\left.12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(3\,(1+\pi)\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-23\,040\right.\right.$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$\left.\left.\left.\left.23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)^{1/3}\right)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\left(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\right)^3+\right.}$$

$$\left(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-\right.$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2)^2))^{1/3}) -$$

$$\frac{1}{2}\sqrt{}\Bigg(\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)} + \frac{8\,(2\,\pi+\pi^2)^2}{(1+\pi)^2} - (16\times 2^{1/3}\,(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2))\Big/$$

$$(3\,(1+\pi)\,(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040$$

$$\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{}\,(-4\,(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2)^3 +$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2)^2))^{1/3}) -$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{}\,(-4\,(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2)^3 +$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2)^2))^{1/3} +$$

$$\left(\frac{128\,\pi^3}{1+\pi} - \frac{320\,\pi^2\,(2\,\pi+\pi^2)}{(1+\pi)^2} + \frac{64\,(2\,\pi+\pi^2)^3}{(1+\pi)^3}\right)\Big/\Bigg(4\sqrt{}\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} +$$

$$\frac{4\,(2\,\pi+\pi^2)^2}{(1+\pi)^2} + (16\times 2^{1/3}\,(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\mathrm{Sin}[\beta]^2 + 12\,\pi^5\,\mathrm{Sin}[\beta]^2))\Big/$$

$$(3\,(1+\pi)\,(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{}\,(-4\,(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2)^3 +$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040\,\pi^6$$

$$(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2)^2))^{1/3}) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\mathrm{Sin}[\beta]^2 +$$

$$\sqrt{}\,(-4\,(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\mathrm{Sin}[\beta]^2 + 192\,\pi^5\,\mathrm{Sin}[\beta]^2)^3 +$$

$$(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040\,\pi^6$$

$$(1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2)^2))^{1/3}))))\},$$

$$\{\Theta\to\frac{2\,\pi+\pi^2}{1+\pi}+\frac{1}{2}\sqrt{}\Bigg(\Bigg(-\frac{40\,\pi^2}{3\ (1+\pi)}+\frac{4\ (2\,\pi+\pi^2)^2}{(1+\pi)^2}+(16\times2^{1/3}\ (\pi^4-12\,\pi^5+$$

$$12\,\pi^4\ \mathrm{Sin}[\beta]^2+12\,\pi^5\ \mathrm{Sin}[\beta]^2))\Big/$$

$$(3\ (1+\pi)\ (16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-23\,040$$

$$\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2+$$

$$\sqrt{}(-4\ (16\,\pi^4-192\,\pi^5+192\,\pi^4\ \mathrm{Sin}[\beta]^2+192\,\pi^5\ \mathrm{Sin}[\beta]^2)^3+$$

$$(16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2)^2))^{1/3})+$$

$$\frac{1}{3\times2^{1/3}\ (1+\pi)}\ (16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2+$$

$$\sqrt{}(-4\ (16\,\pi^4-192\,\pi^5+192\,\pi^4\ \mathrm{Sin}[\beta]^2+192\,\pi^5\ \mathrm{Sin}[\beta]^2)^3+$$

$$(16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2)^2))^{1/3}\Bigg)+$$

$$\frac{1}{2}\sqrt{}\Bigg(\Bigg(-\frac{80\,\pi^2}{3\ (1+\pi)}+\frac{8\ (2\,\pi+\pi^2)^2}{(1+\pi)^2}-(16\times2^{1/3}\ (\pi^4-12\,\pi^5+12\,\pi^4\ \mathrm{Sin}[\beta]^2+12\,\pi^5\ \mathrm{Sin}[\beta]^2))\Big/$$

$$(3\ (1+\pi)\ (16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-23\,040$$

$$\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2+$$

$$\sqrt{}(-4\ (16\,\pi^4-192\,\pi^5+192\,\pi^4\ \mathrm{Sin}[\beta]^2+192\,\pi^5\ \mathrm{Sin}[\beta]^2)^3+$$

$$(16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2)^2))^{1/3})-$$

$$\frac{1}{3\times2^{1/3}\ (1+\pi)}\ (16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2+$$

$$\sqrt{}(-4\ (16\,\pi^4-192\,\pi^5+192\,\pi^4\ \mathrm{Sin}[\beta]^2+192\,\pi^5\ \mathrm{Sin}[\beta]^2)^3+$$

$$(16\,000\,\pi^6+6912\,\pi^6\ (1+\pi)-11\,520\,\pi^5\ (2\,\pi+\pi^2)-$$

$$23\,040\,\pi^6\ (1+\pi)\ \mathrm{Sin}[\beta]^2+6912\,\pi^4\ (2\,\pi+\pi^2)^2\ \mathrm{Sin}[\beta]^2)^2))^{1/3}+$$

$$\left(\frac{128\,\pi^3}{1+\pi} - \frac{320\,\pi^2\,(2\,\pi+\pi^2)}{(1+\pi)^2} + \frac{64\,(2\,\pi+\pi^2)^3}{(1+\pi)^3}\right) \Big/ \Bigg(4\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} +}$$

$$\frac{4\,(2\,\pi+\pi^2)^2}{(1+\pi)^2} + \Big(16\times 2^{1/3}\,\big(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\text{Sin}[\beta]^2 + 12\,\pi^5\,\text{Sin}[\beta]^2\big)\Big) \Big/$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\big(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 + 192\,\pi^5\,\text{Sin}[\beta]^2\big)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040\,\pi^6$$

$$(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\big(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 + 192\,\pi^5\,\text{Sin}[\beta]^2\big)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040\,\pi^6$$

$$(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Bigg)\Bigg)\Bigg)\}\}$$

$$\text{SphericalPlot3D}\Big[\frac{2\,\pi+\pi^2}{1+\pi} -$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)} + \frac{4\,(2\,\pi+\pi^2)^2}{(1+\pi)^2} + \Big(16\times 2^{1/3}\,\big(\pi^4 - 12\,\pi^5 + 12\,\pi^4\,\text{Sin}[\beta]^2 + 12\,\pi^5\,\text{Sin}[\beta]^2\big)\Big) \Big/}$$

$$\Big(3\,(1+\pi)\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) - 23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 +$$

$$6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2 + \sqrt{\Big(-4\,\big(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 +}$$

$$192\,\pi^5\,\text{Sin}[\beta]^2\big)^3 + \Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23\,040\,\pi^6\,(1+\pi)\,\text{Sin}[\beta]^2 + 6912\,\pi^4\,(2\,\pi+\pi^2)^2\,\text{Sin}[\beta]^2 +$$

$$\sqrt{\Big(-4\,\big(16\,\pi^4 - 192\,\pi^5 + 192\,\pi^4\,\text{Sin}[\beta]^2 + 192\,\pi^5\,\text{Sin}[\beta]^2\big)^3 +}$$

$$\Big(16\,000\,\pi^6 + 6912\,\pi^6\,(1+\pi) - 11\,520\,\pi^5\,(2\,\pi+\pi^2) -$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Bigg)-$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{80\,\pi^2}{3\,(1+\pi)}+\frac{8\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}-\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/}$$

$$\Bigg(3\,(1+\pi)\,\Bigg(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}\Big[\mathrm{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2$$

$$\mathrm{Sin}\Big[\mathrm{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2+\sqrt{\Big(-4\,\Big(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+}$$

$$192\,\pi^5\,\mathrm{Sin}[\beta]^2\Big)^3+\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Bigg)^{1/3}\Bigg)-$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\,\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Big(-4\,\Big(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+192\,\pi^5\,\mathrm{Sin}[\beta]^2\Big)^3+}$$

$$\Big(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}-$$

$$\left(\frac{128\,\pi^3}{1+\pi}-\frac{320\,\pi^2\,\left(2\,\pi+\pi^2\right)}{(1+\pi)^2}+\frac{64\,\left(2\,\pi+\pi^2\right)^3}{(1+\pi)^3}\right)\Big/\Bigg(4\sqrt{\Bigg(-\frac{40\,\pi^2}{3\,(1+\pi)}+\frac{4\,\left(2\,\pi+\pi^2\right)^2}{(1+\pi)^2}+}$$

$$\left(16\times 2^{1/3}\,\left(\pi^4-12\,\pi^5+12\,\pi^4\,\mathrm{Sin}[\beta]^2+12\,\pi^5\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\Bigg(3\,(1+\pi)\,\Bigg(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

$$23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}[\beta]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2+$$

$$\sqrt{\Bigg(-4\,\Bigg(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}\Big[\mathrm{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2+}$$

$$192\,\pi^5\,\mathrm{Sin}[\beta]^2\Bigg)^3+\Bigg(16000\,\pi^6+6912\,\pi^6\,(1+\pi)-11520\,\pi^5$$

$$\left(2\,\pi+\pi^2\right)-23040\,\pi^6\,(1+\pi)\,\mathrm{Sin}\Big[\mathrm{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^2+$$

$$6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,(1+\pi)}\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\left(2\,\pi+\pi^2\right)-$$

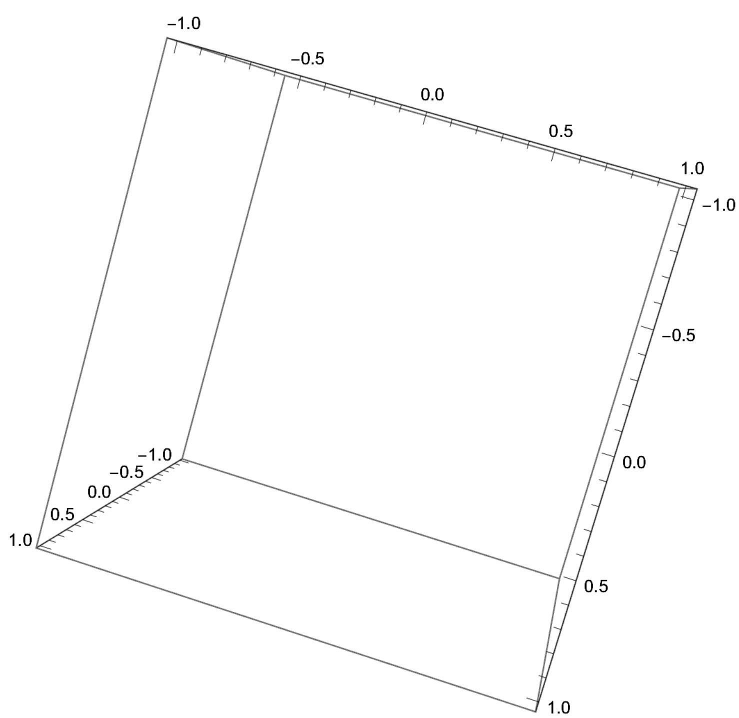
$$23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2+6912\,\pi^4\,\left(2\,\pi+\pi^2\right)^2$$

$$\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2+\sqrt{\Big(-4\,\left(16\,\pi^4-192\,\pi^5+192\,\pi^4\,\mathrm{Sin}[\beta]^2+\right.}$$

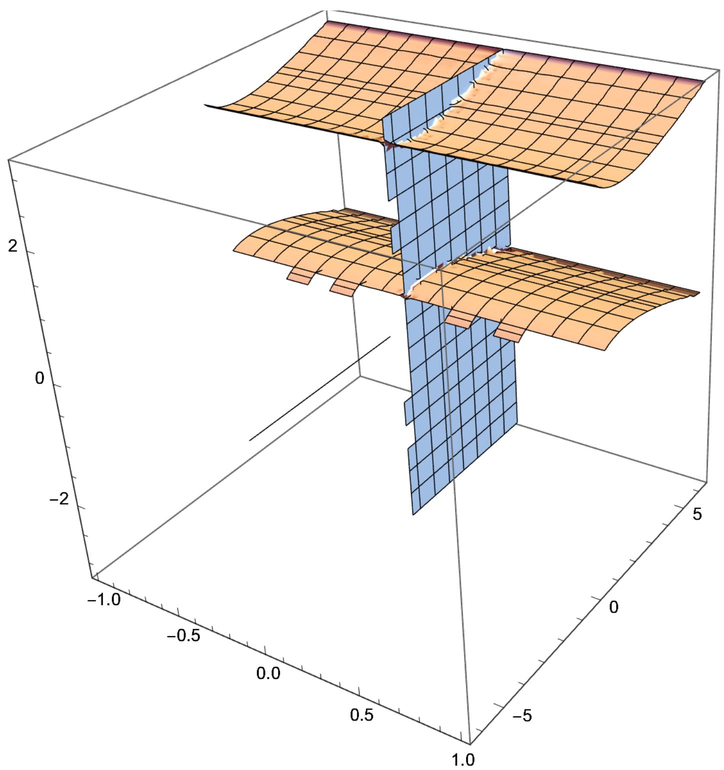
$$192\,\pi^5\,\mathrm{Sin}[\beta]^2\big)^3+\Big(16\,000\,\pi^6+6912\,\pi^6\,(1+\pi)-11\,520\,\pi^5\,\big(2\,\pi+$$

$$\pi^2\big)-23\,040\,\pi^6\,(1+\pi)\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2+6912\,\pi^4$$

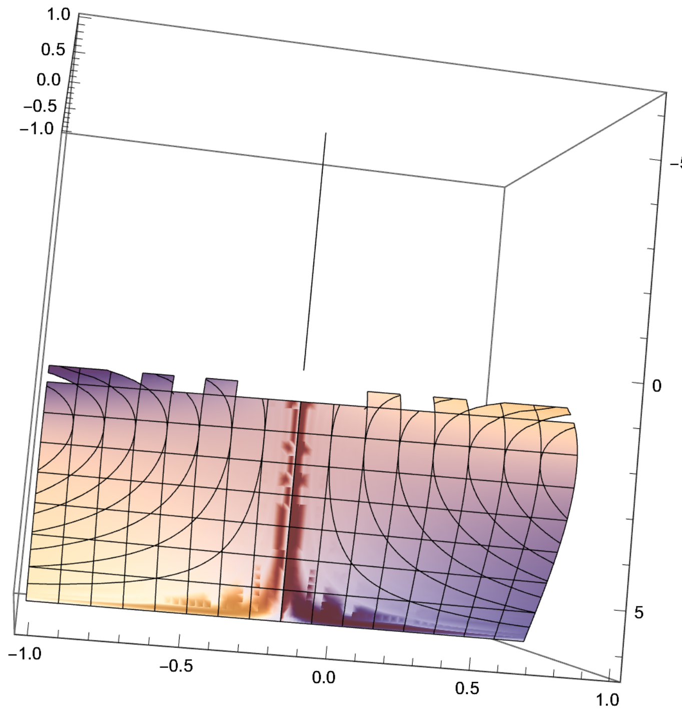
$$\left(2\,\pi+\pi^2\right)^2\,\mathrm{Sin}[\beta]^2\Big)^2\Big)\Big)^{1/3}\Big)\Big)\Big)\Big),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi,\,\pi\}\Big]$$



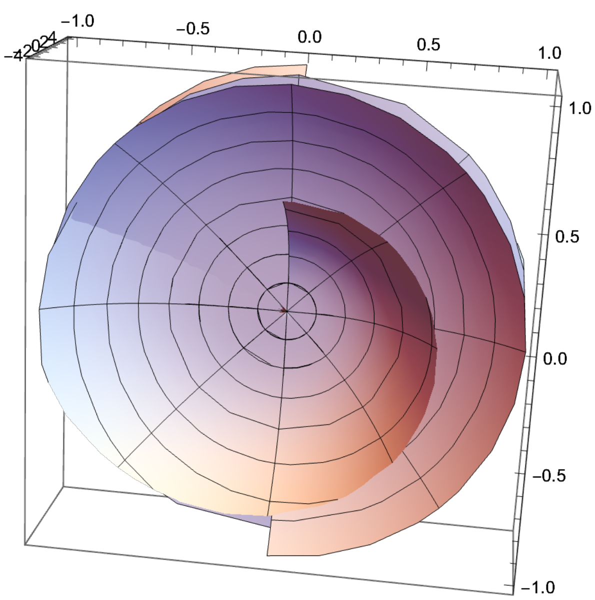
```
ContourPlot3D[((4/3) π (2 π r Sin[β]/Sqrt[4 π θ - θ^2])^3 - (4/3) π ((2 π r - r θ)/(2 π))^3) = 4 π r^2 θ,
 {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
ContourPlot3D[((4/3) π (2 π r Sin[β]/Sqrt[4 π θ - θ^2])^3 - (4/3) π ((2 π r - r θ)/(2 π))^3),
 {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```



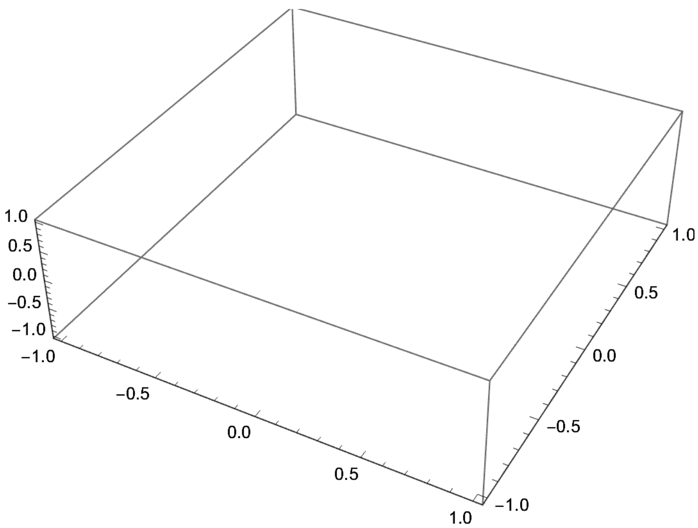
$$\text{ContourPlot3D}\left[\left((4/3)\,\pi\left(\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\text{^}3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\text{^}3\right),\right.$$
$$\left.\{r,-1,1\},\{\eta,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\left((4/3)\,\pi\,(r)\text{^}3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\text{^}3\right),\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\left((4/3)\,\pi\,(r)\,\hat{}\,3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right)\hat{}\,3\right),\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$

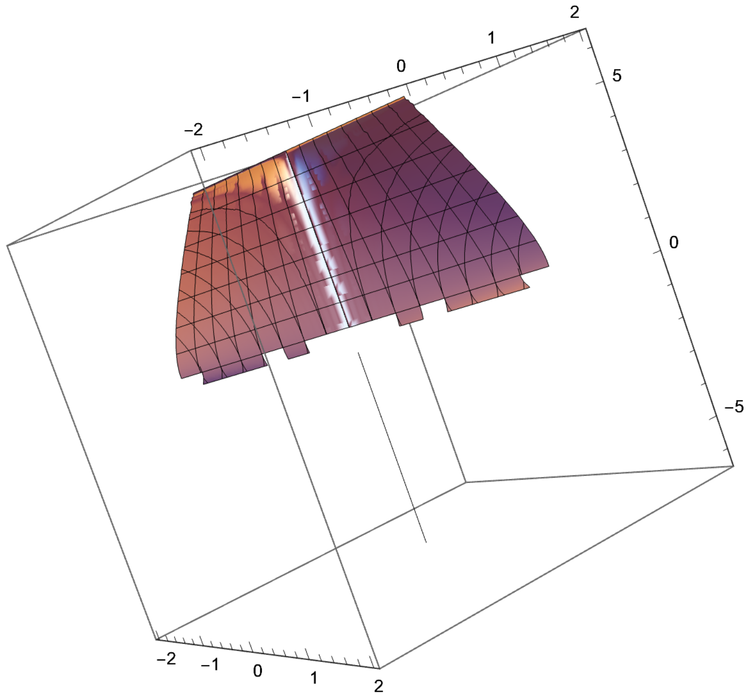


$$\int\left((4/3)\,\pi\left(\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\hat{}\,3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\hat{}\,3\right)d\theta$$

$$-\frac{-\frac{16\,\pi^4\,\eta^3\,(-2\,\pi+\theta)}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{1}{4}\,r^3\,(-2\,\pi+\theta)^4}{6\,\pi^2}$$

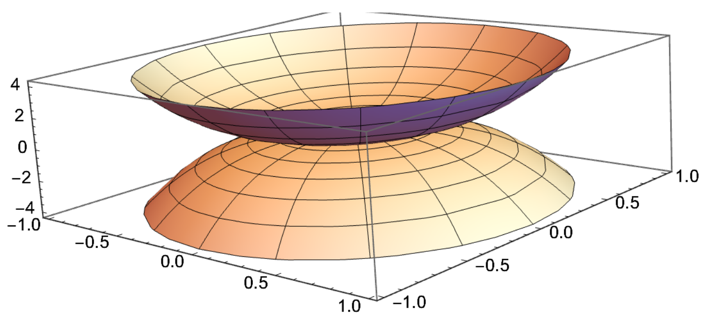
```
ContourPlot3D[-((-16 π^4 η^3 (-2 π + θ))/Sqrt[(4 π - θ) θ] - 1/4 r^3 (-2 π + θ)^4)/(6 π^2), {r, -2, 2}, {η, -2, 2}, {θ, -2 π, 2 π}]
```

$$\text{ContourPlot3D}\left[-\frac{-\frac{16\,\pi^4\,\eta^3\,(-2\,\pi+\theta)}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{1}{4}\,r^3\,(-2\,\pi+\theta)^4}{6\,\pi^2},\ \{r,-2,2\},\ \{\eta,-2,2\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

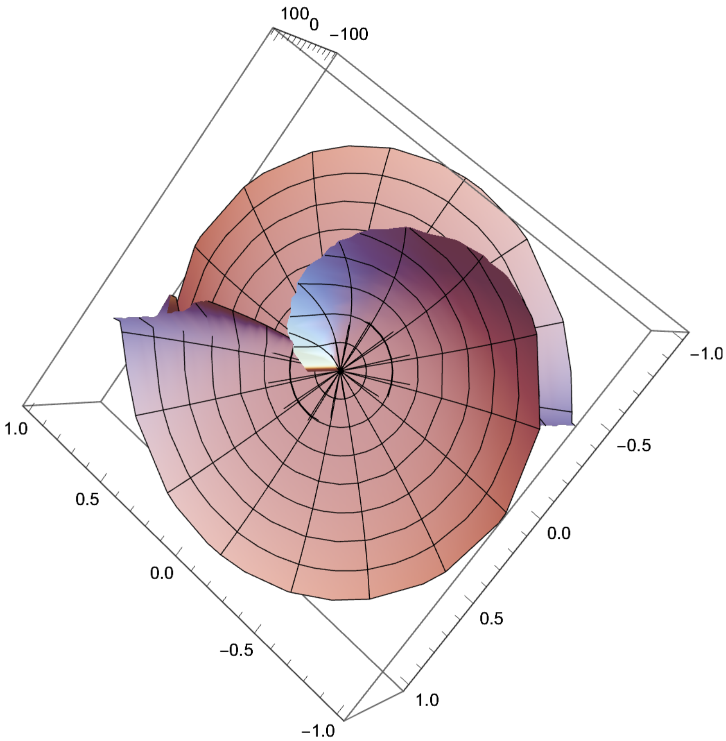


$$(4\,/\,3)\,\pi\left(\frac{4\,\pi^2\,\eta}{(2\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}\right)\text{^}3 = (4\,/\,3)\,\pi\,(r)\text{^}3 = \text{Volume of Sphere} \tag{37}$$

```
RevolutionPlot3D[(4 / 3) π (r) ^3, {r, -1, 1}]
```

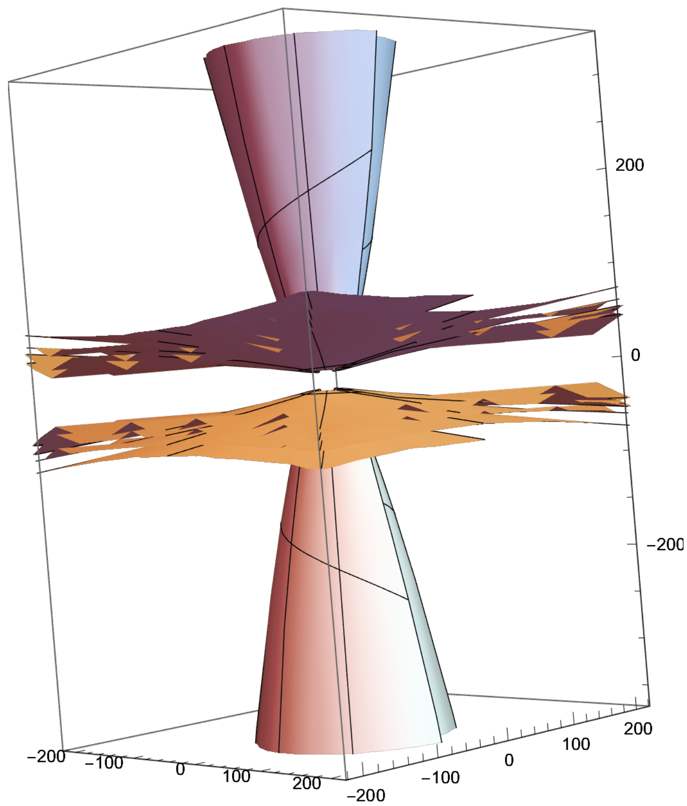


$$\text{RevolutionPlot3D}\left[(4/3)\,\pi\left(\frac{4\,\pi^2\,\eta}{(2\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}\right)\wedge 3,\ \{\eta,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

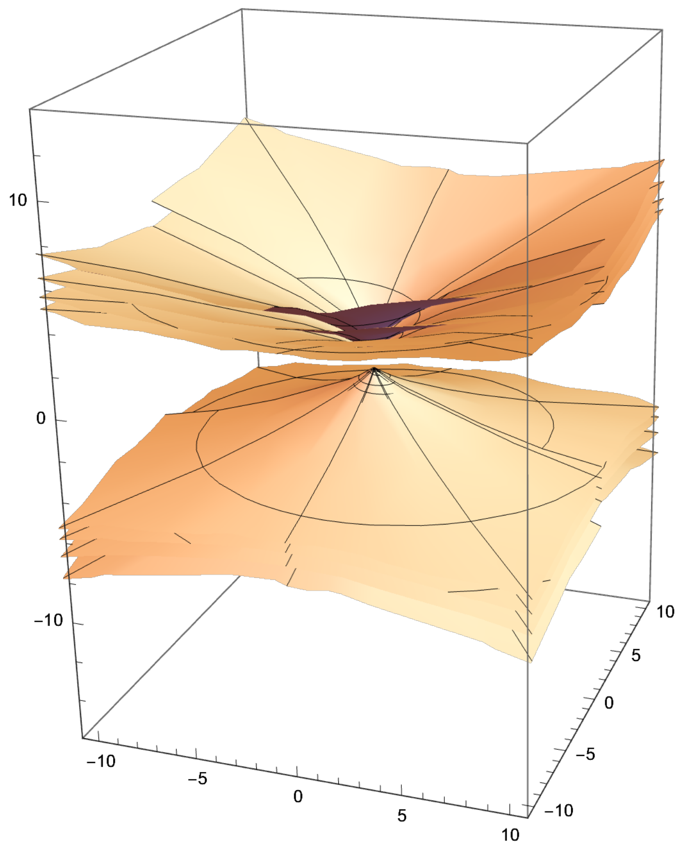


$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

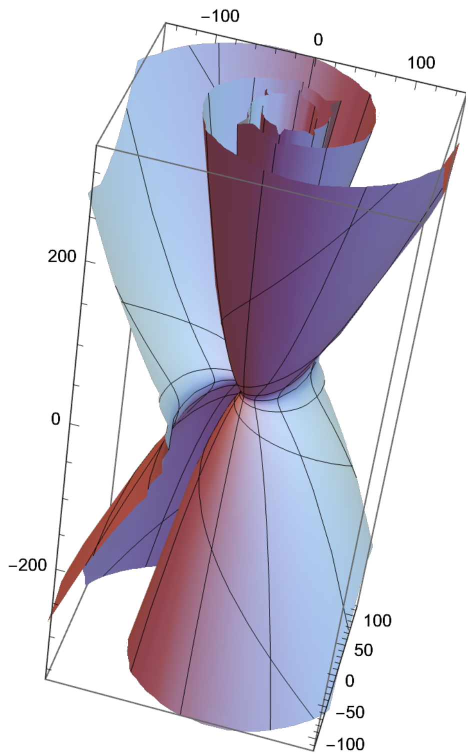
```
SphericalPlot3D[(4 / 3) π
  ((4 π^2) / ((2 π - 2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) Sqrt[(4 π - θ) (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))]))^3,
  {β, -π, π}, {θ, -2 π, 2 π}]
```



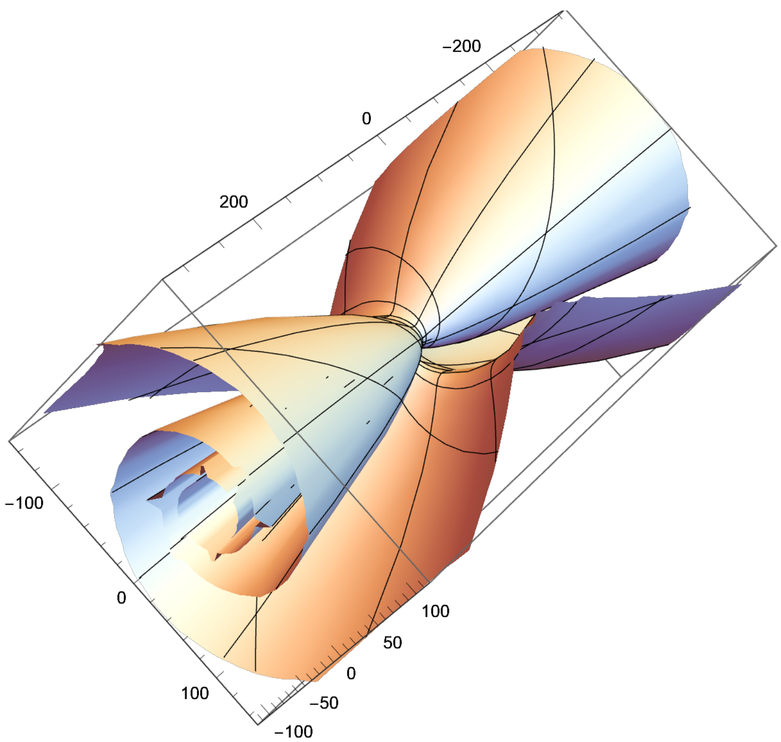
```
SphericalPlot3D[(4 / 3) π
 ((4 π^2) / ((2 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) Sqrt[(4 π - θ) (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))]))^3,
 {β, -π, π}, {θ, -2 π, 2 π}]
```



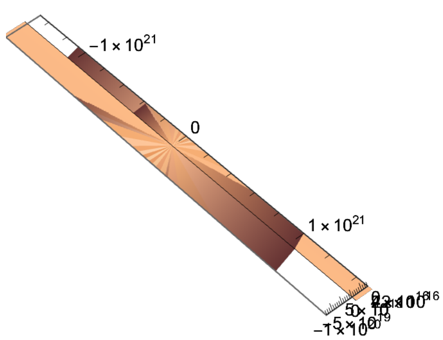
```
SphericalPlot3D[(4 / 3) π
  ((4 π^2) / ((2 π - θ) Sqrt[(4 π - 2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))]))^3,
 {β, -π, π}, {θ, -2 π, 2 π}]
```



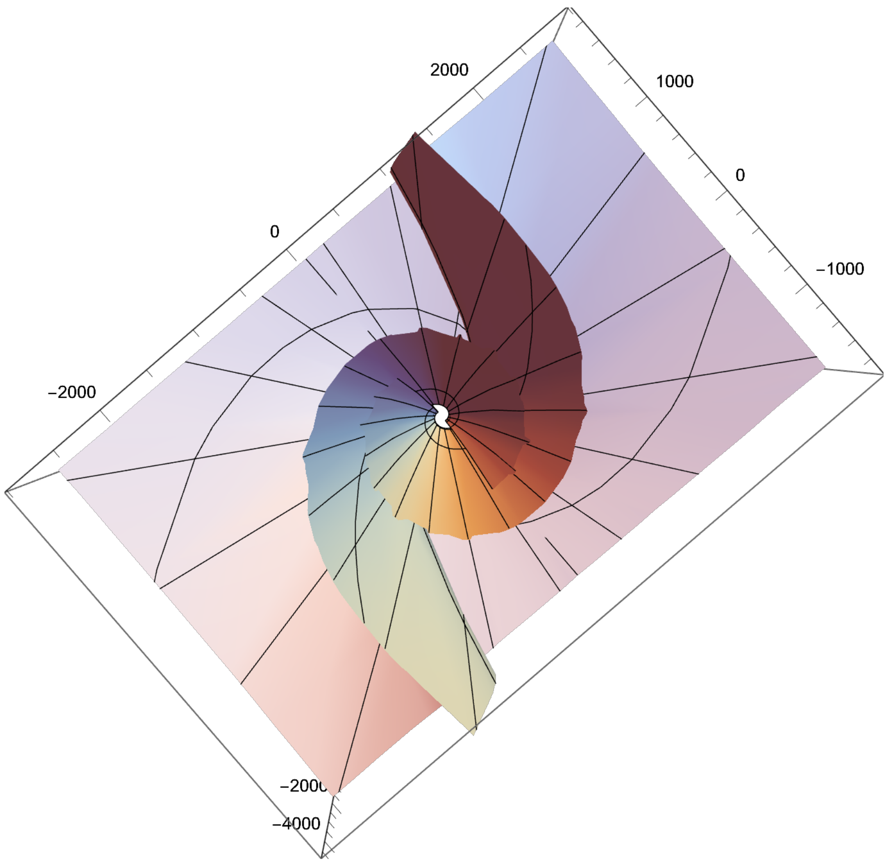
```
SphericalPlot3D[(4 / 3) π
  ((4 π^2) / ((2 π - θ) Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))]))^3,
  {β, -π, π}, {θ, -2 π, 2 π}]
```



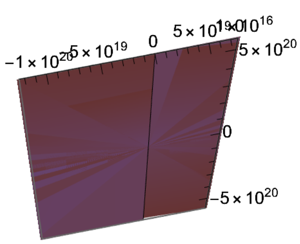

```
SphericalPlot3D[(4 / 3) π
  ((4 π^2) / ((2 π - 2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) Sqrt[(4 π - 2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) (θ)]))^3,
  {β, -π, π}, {θ, -2 π, 2 π}]
```



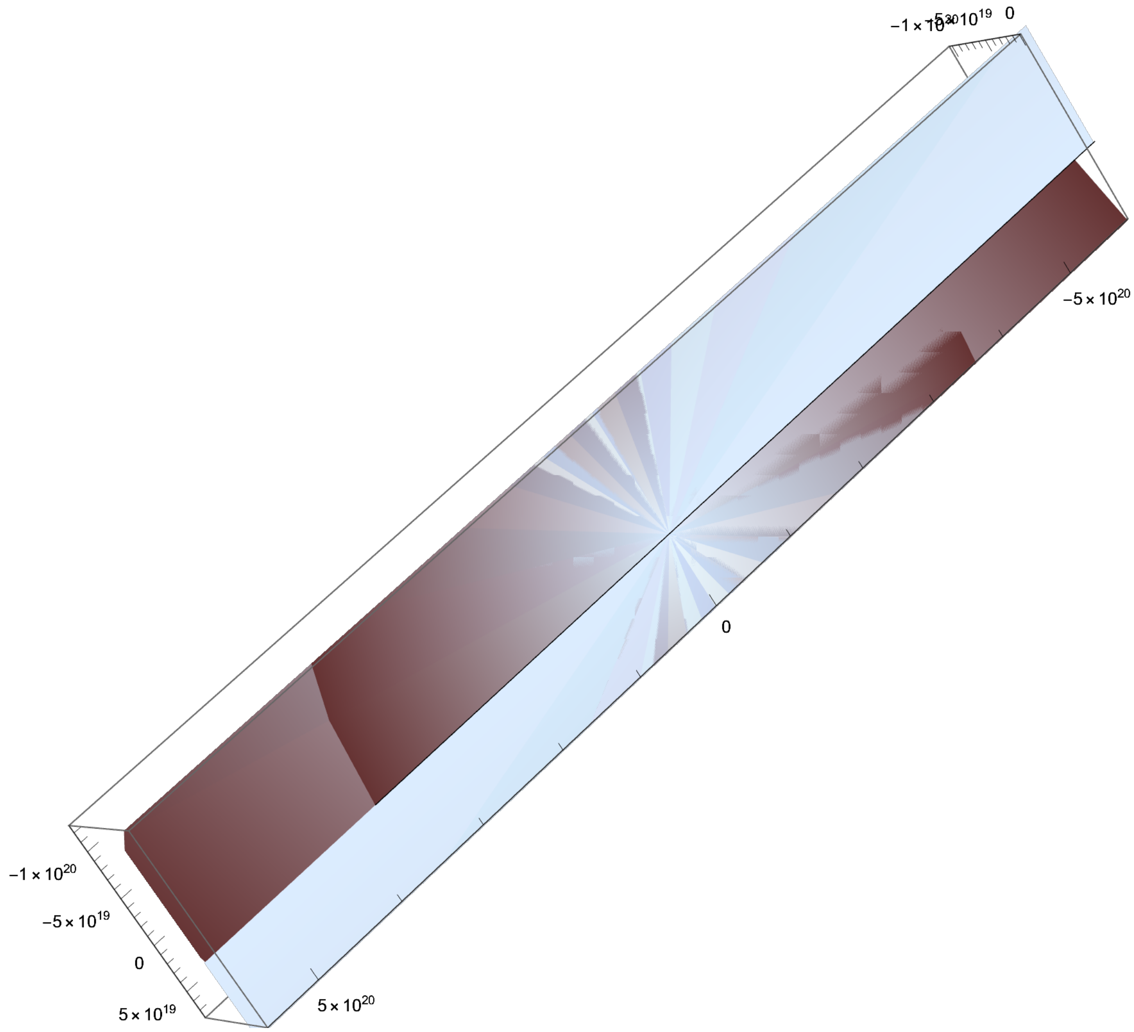
$$\text{SphericalPlot3D}\Big[(4/3)\,\pi \left(\left(4\,\pi^2\right) \Big/ \left(\left(2\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) \sqrt{\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)(\theta)}\right)\right)\text{^}3,$$
$$\{\beta, -.849\,\pi, .849\,\pi\}, \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



$$\text{SphericalPlot3D}\Big[(4/3)\,\pi \left(\frac{4\,\pi^2}{\left(2\,\pi - 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) \sqrt{(4\,\pi - \theta)\,(\theta)}}\right)\text{^}3,$$
$$\{\beta, -\pi, \pi\}, \{\theta, -2\,\pi, 2\,\pi\}\Big]$$

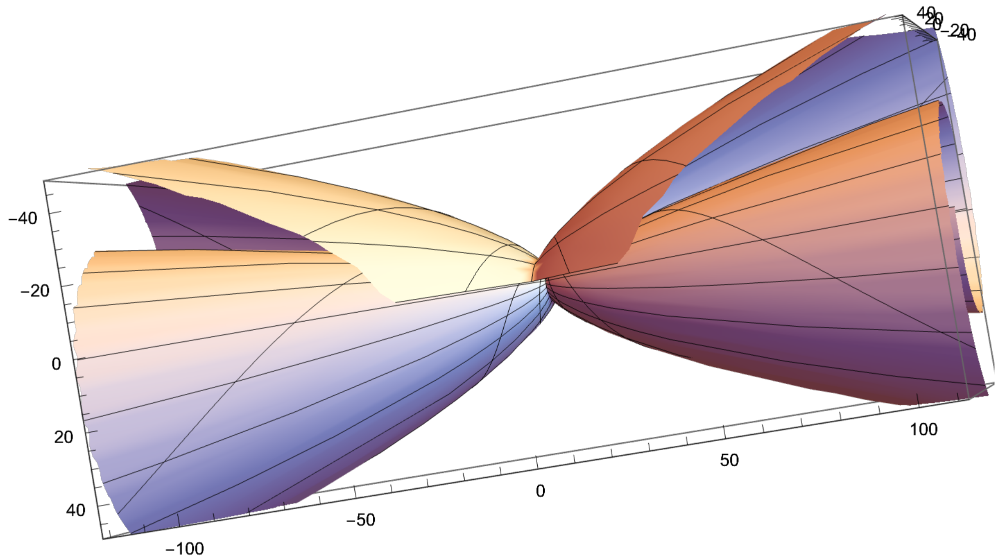


```
SphericalPlot3D[(4 / 3) π (4 π^2 / ((2 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) Sqrt[(4 π - θ) (θ)]))^3,
 {β, -π, π}, {θ, -2 π, 2 π}]
```

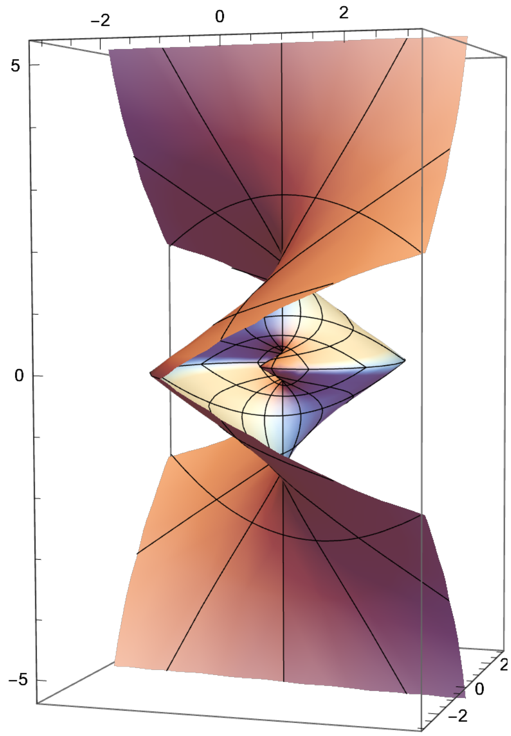


SphericalPlot3D[

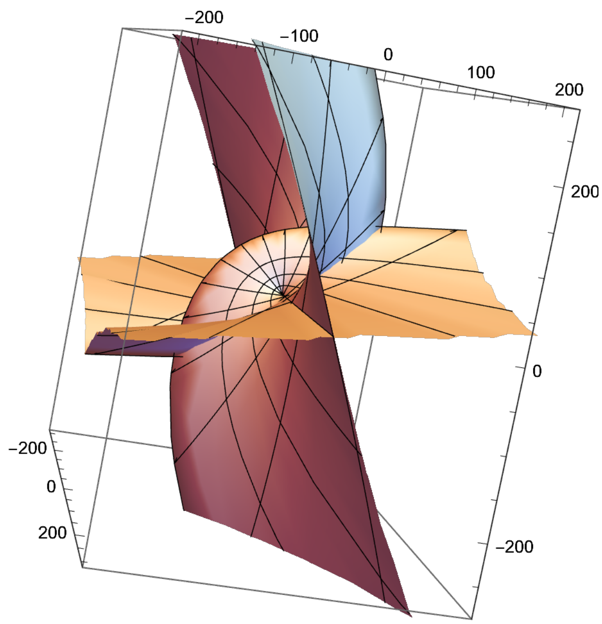
$$(4 / 3)\ \pi \left(\frac{4\ \pi^2}{(2\ \pi - \theta)\ \sqrt{(4\ \pi - \theta)\ \left(2\ \left(\pi - \sqrt{\pi^2 - \pi^2\ \text{Sin}[\beta]^2}\right)\right)}}\right)\text{^}3,\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -\pi,\ \pi\}]$$



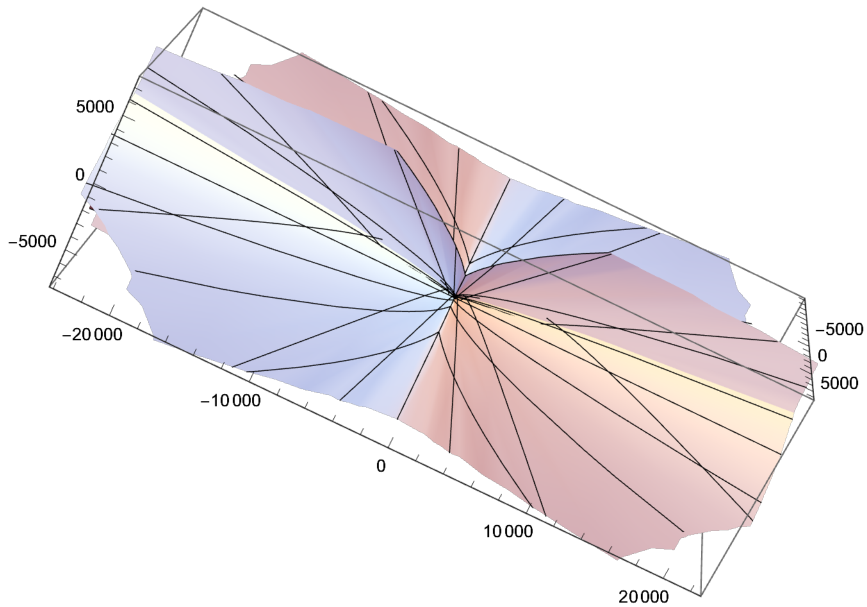
```
SphericalPlot3D[(4 / 3) π (4 π^2 / ((2 π - θ) Sqrt[(4 π - θ) (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))]))^3,
  {β, -π, π}, {θ, -2 π, 2 π}]
```



$$\text{SphericalPlot3D}\left[(4/3)\,\pi\left(\frac{4\,\pi^2}{(2\,\pi-\theta)\,\sqrt{\left(4\,\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}\right)\text{^}3,\ \{\beta,-\pi,\pi\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



```
SphericalPlot3D[(4 / 3) π (4 π^2 / ((2 π - θ) Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ]))^3,
  {β, -π, π}, {θ, -2 π, 2 π}]
```



$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}\right\} \quad (38)$$

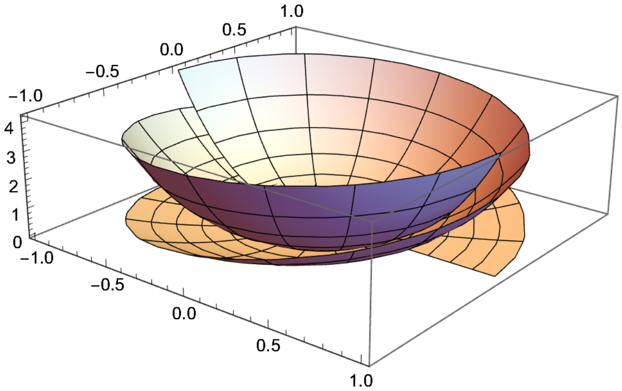
When $\eta = r$,

$$(4/3)\,\pi\,(r)^{\wedge}3 = (4/3)\,\pi\left(\frac{4\pi^2\eta}{(2\pi-\theta)\sqrt{(4\pi-\theta)\,\theta}}\right)^{\wedge}3 = \quad (39)$$

$$(4/3)\,\pi\,(\eta)^{\wedge}3 = (4/3)\,\pi\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^{\wedge}3 = \text{Volume of Sphere}$$

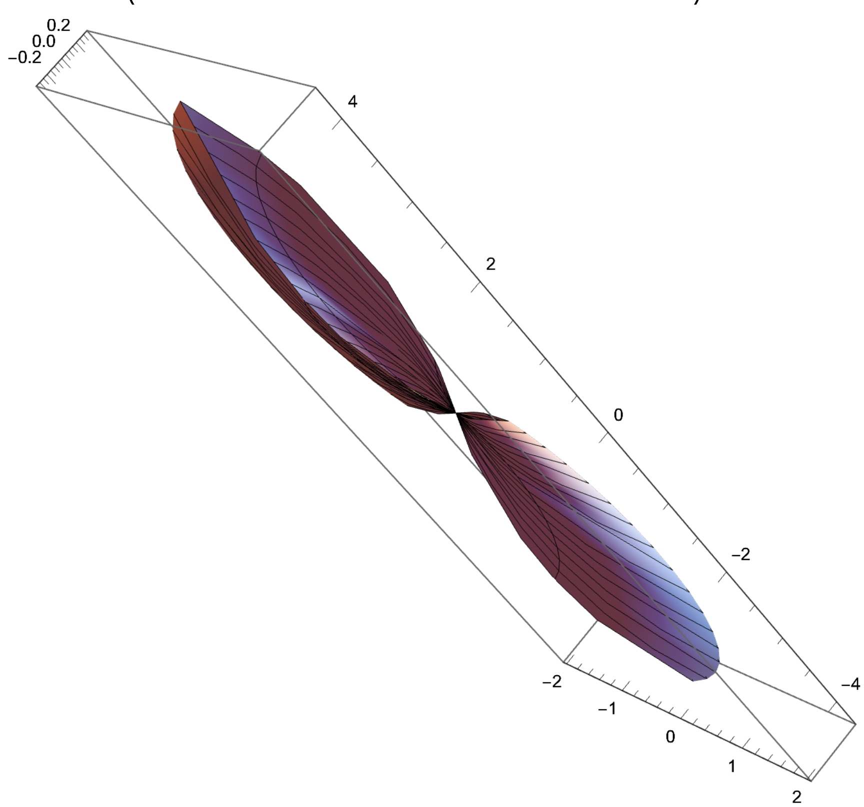
```
RevolutionPlot3D[(4 / 3) π (Sqrt[4 π r^2 θ - r^2 θ^2] / (2 π))^3, {r, -1, 1}, {θ, -2 π, 2 π}]
```

$$\text{RevolutionPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^{\wedge}3,\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



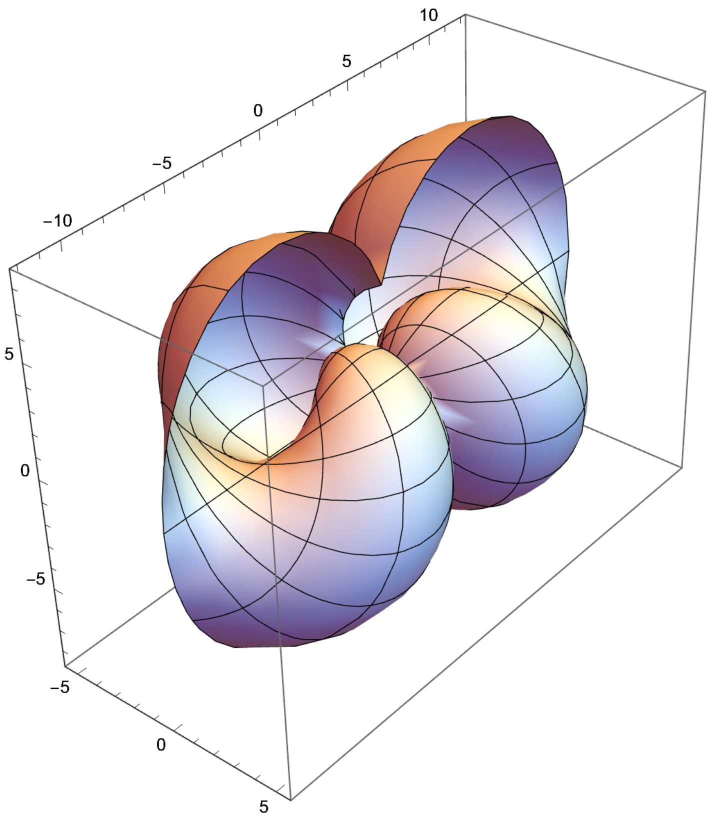
$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{SphericalPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,1^2\,\theta-1^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)^{\wedge}3,\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



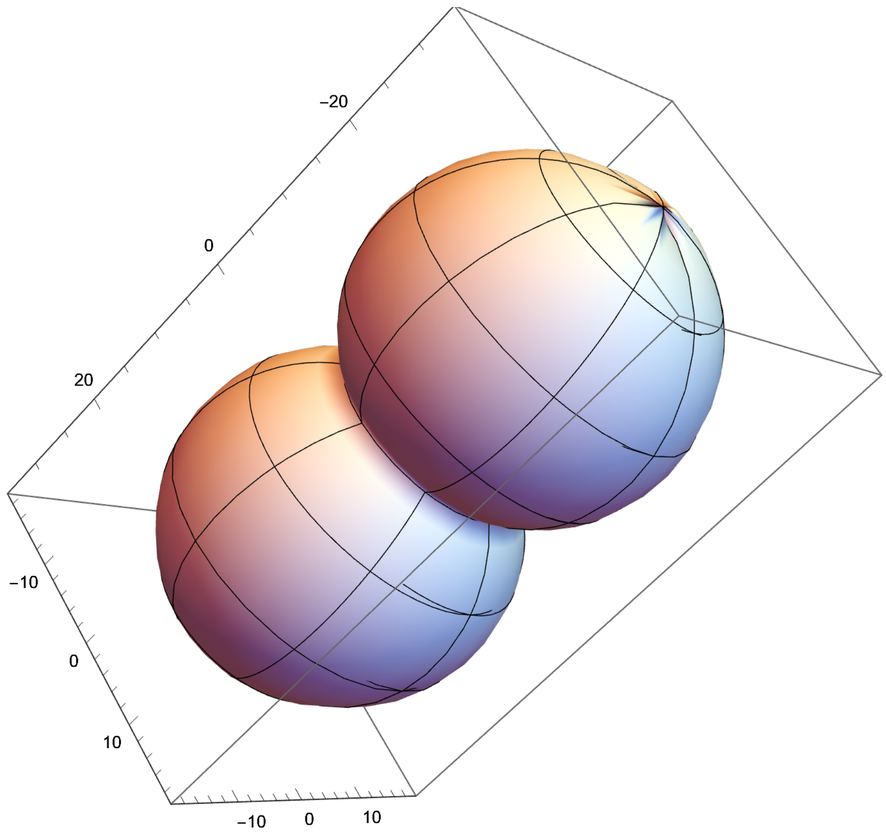
$$\text{SphericalPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,1^2\,\theta - 1^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\text{^}3,\right.$$

$$\left.\{\beta,\,-1\,\pi,\,1\,\pi\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



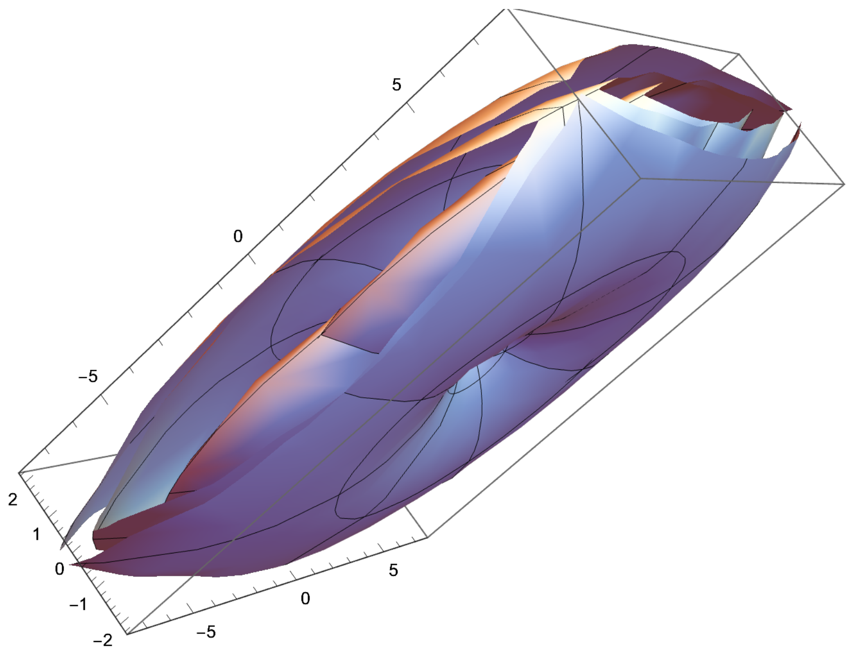
SphericalPlot3D[

$$(4/3)\,\pi \left(\frac{\sqrt{4\,\pi\,1^2 \times 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right) - 1^2\,\theta^2}}{2\,\pi}\right)\text{^}3,\ \{\beta, -\pi, \pi\},\ \{\theta, -2\,\pi, 2\,\pi\}]$$

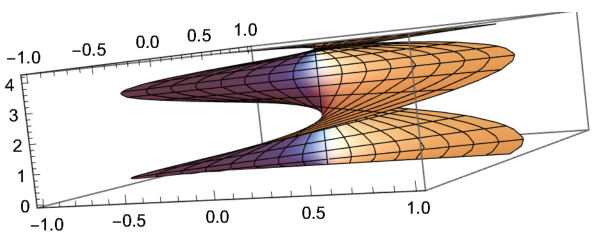


```
SphericalPlot3D[
 (4 / 3) π (Sqrt[4 π 1^2 × 2 (π - Sqrt[π^2 - π^2 Sin[β]^2]) - 1^2 θ^2] / (2 π))^3, {β, -π, π}, {θ, -2 π, 2 π}]
```

$$\text{SphericalPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,1^2\times 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-1^2\,\theta^2}}{2\,\pi}\right)^{\wedge}3,\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



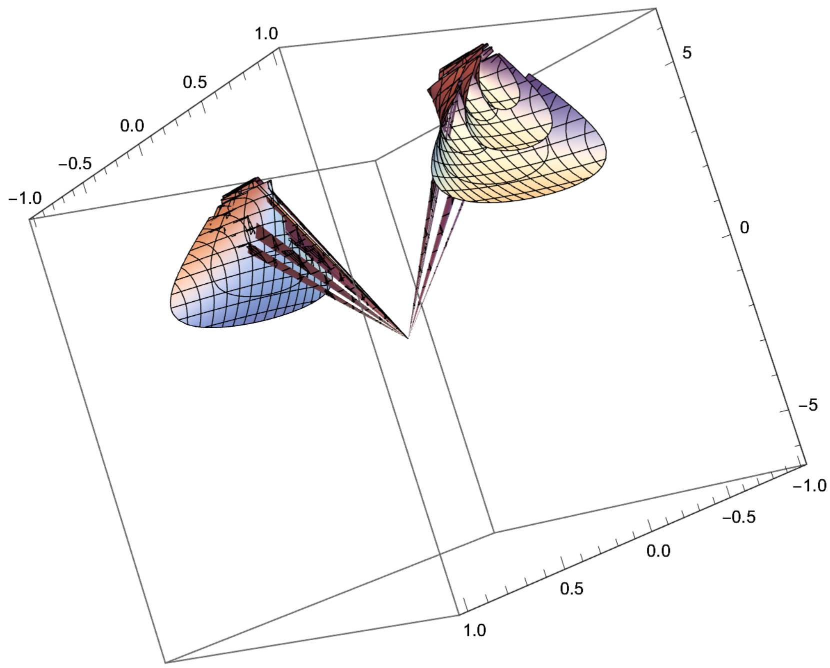
$$\text{RevolutionPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,1^2\,\theta-1^2\,\theta^2}}{2\,\pi}\right)^{\wedge}3,\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



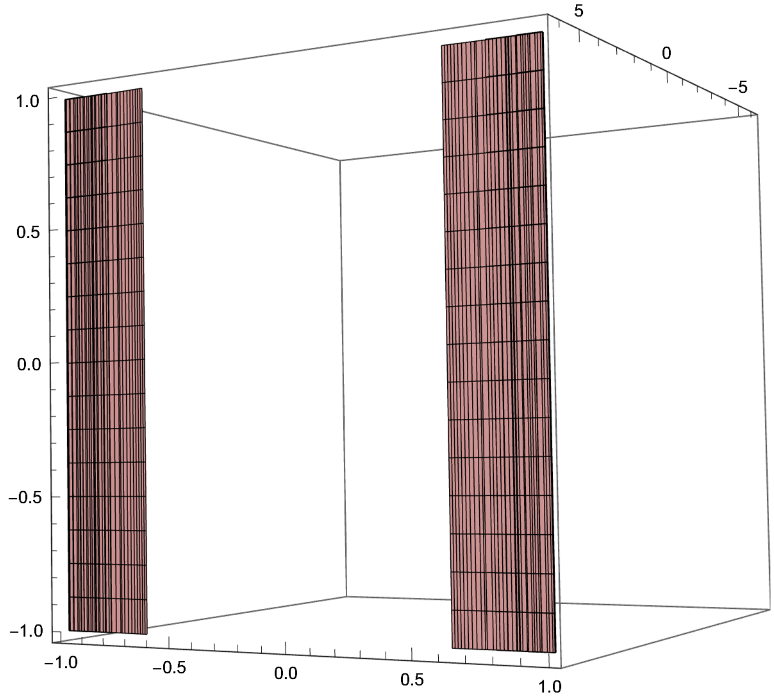
Or, more generally, we can construct the equation :

$$\text{ContourPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,(r)^2\,\theta-\left(\frac{4\,\pi^2\,\eta}{(2\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}\right)^2\theta^2}}{2\,\pi}\right)\text{^}3,\right.$$

$$\left.\{\eta,-1,1\},\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$

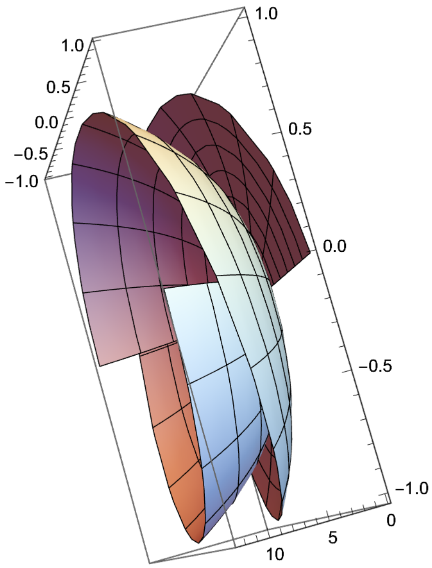


```
ContourPlot3D[(4 / 3) π (Sqrt[4 π ((4 π^2 η)/((2 π-θ) Sqrt[(4 π-θ) θ]))^2 θ - r^2 θ^2]/(2 π))^3,
 {η, -1, 1}, {r, -1, 1}, {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[4 π (Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π))^3, {r, -1, 1}, {θ, -2 π, 2 π}]
```

$$\text{RevolutionPlot3D}\left[4\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)\text{^}3,\ \{r,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

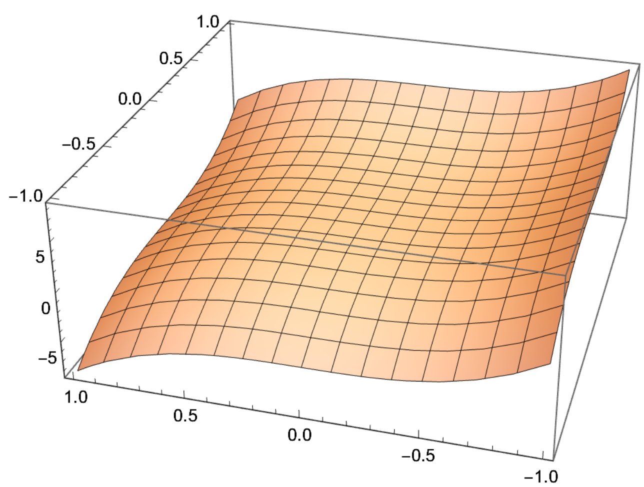


$$4\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\Theta - r^2\,\Theta^2}}{2\,\pi}\right)\text{^}3 - 4\,\pi\,(r_1)\,\text{^}3 = \triangle V \tag{40}$$

$$r_1 \to \frac{2\,\pi\,r - r\,\Theta}{2\,\pi} \tag{41}$$

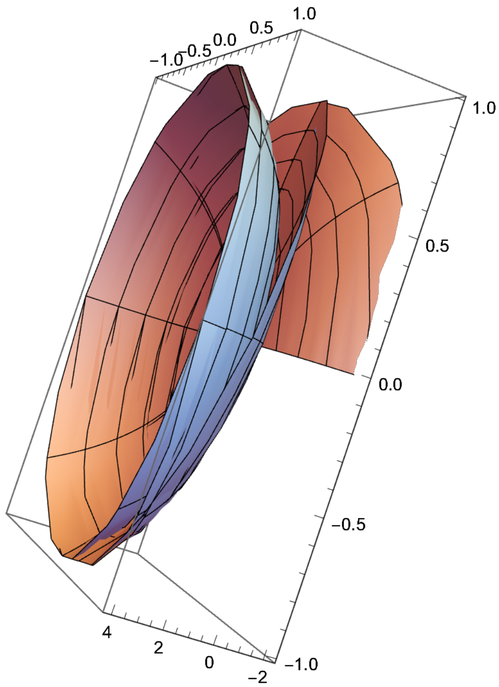
$$4\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\Theta - r^2\,\Theta^2}}{2\,\pi}\right)\text{^}3 - 4\,\pi\left(\frac{2\,\pi\,r - r\,\Theta}{2\,\pi}\right)\text{^}3 = \triangle V \tag{42}$$

```
Plot3D[((4 / 3) π (r) ^3 - (4 / 3) π (η) ^3), {r, -1, 1}, {η, -1, 1}]
```



```
RevolutionPlot3D[
```

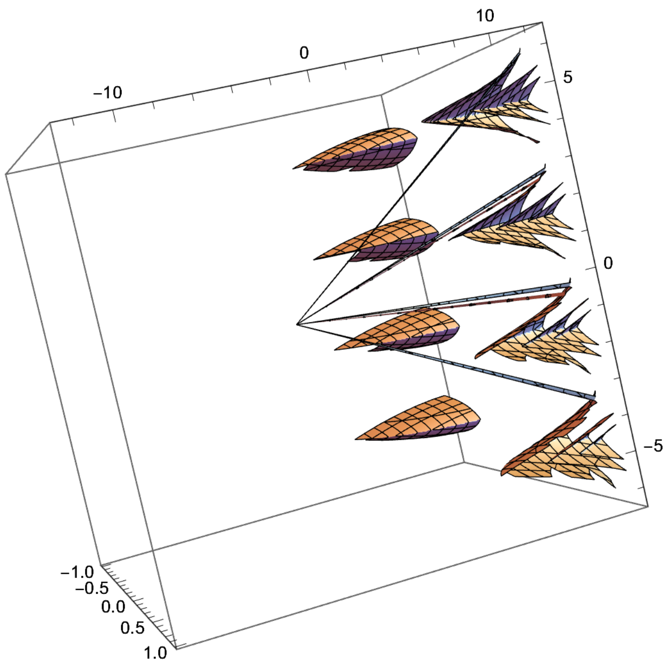
$$(4 / 3)\ \pi \left(\frac{\sqrt{4\ \pi\ r^2\ (\theta) - r^2\ \theta^2}}{2\ \pi}\right) \hat{}\ 3 - (4 / 3)\ \pi \left(\frac{2\ \pi\ r - r\ \theta}{2\ \pi}\right) \hat{}\ 3,\ \{r,\ -1,\ 1\},\ \{\theta,\ -4\ \pi,\ 4\ \pi\}]$$



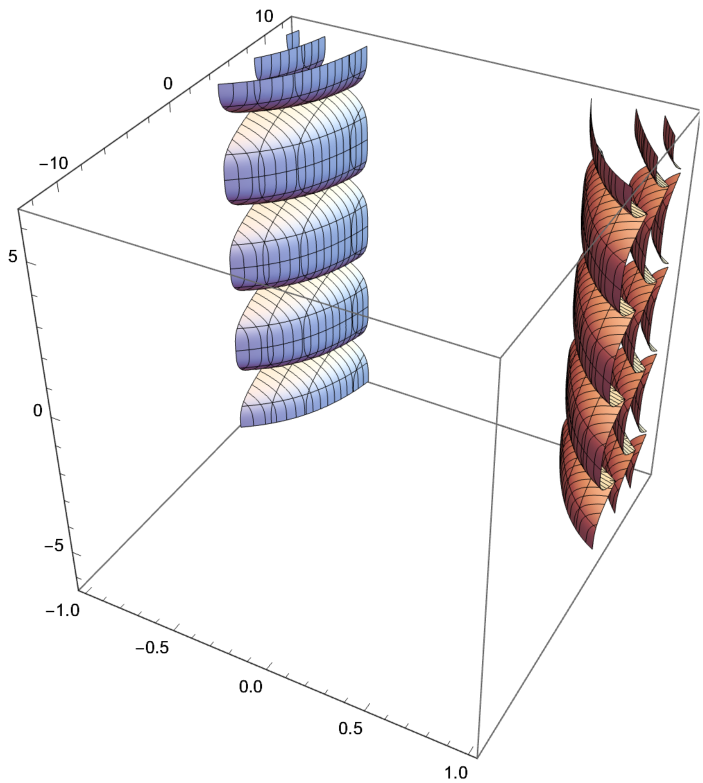
$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\ \mathrm{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\ \mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

```
ContourPlot3D[(4 / 3) π (Sqrt[4 π r^2 (θ) - r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2] / (2 π))^3 -
  (4 / 3) π ((2 π r - r (θ)) / (2 π))^3, {r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}]
```

$$\text{ContourPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,(\theta)-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)^{\wedge}3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,(\theta)}{2\,\pi}\right)^{\wedge}3,\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\},\ \{\beta,-2\,\pi,2\,\pi\}\right]$$



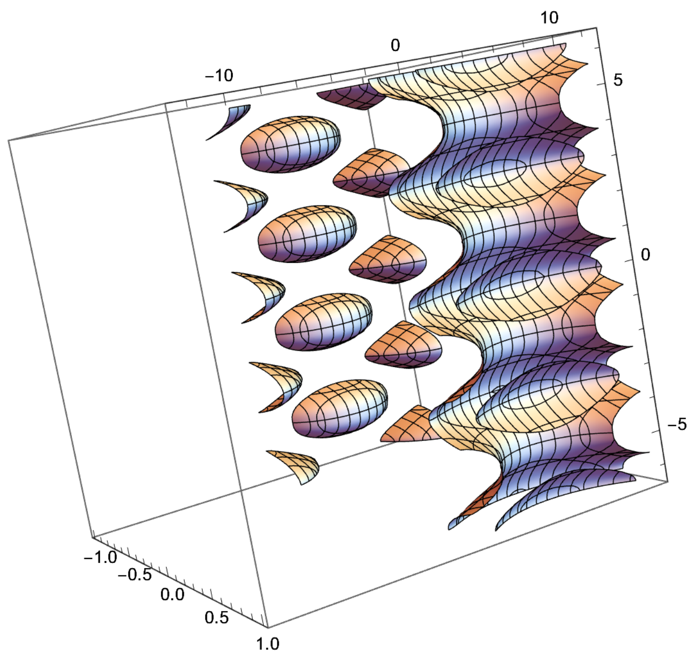
$$\texttt{ContourPlot3D}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,(\theta)-r^2\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\texttt{\^{}}3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,(\theta)}{2\,\pi}\right)\texttt{\^{}}3,\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\},\ \{\beta,-2\,\pi,2\,\pi\}\right]$$



ContourPlot3D$\Big[$

$$(4/3)\,\pi \left(\frac{\sqrt{4\,\pi\, r^2\,(\theta) - r^2\,(\theta)^2}}{2\,\pi}\right)^{\wedge}3 - (4/3)\,\pi\left(\frac{2\,\pi\, r - r\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}{2\,\pi}\right)^{\wedge}3,$$

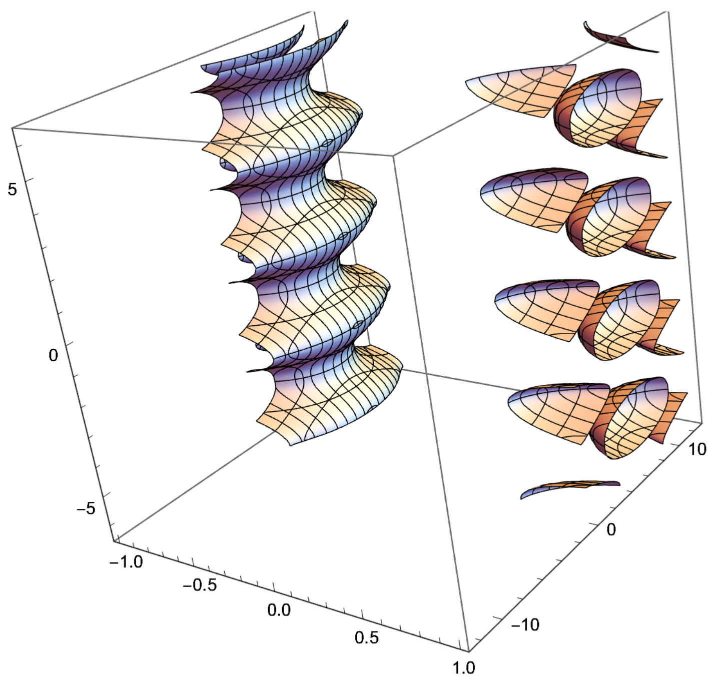
{r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}$\Big]$



ContourPlot3D$\Big[$

$$(4/3)\,\pi \left(\frac{\sqrt{4\,\pi\,r^2\,(\theta) - r^2\,(\theta)^2}}{2\,\pi}\right)\text{^}3 - (4/3)\,\pi \left(\frac{2\,\pi\,r - r\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}{2\,\pi}\right)\text{^}3,$$

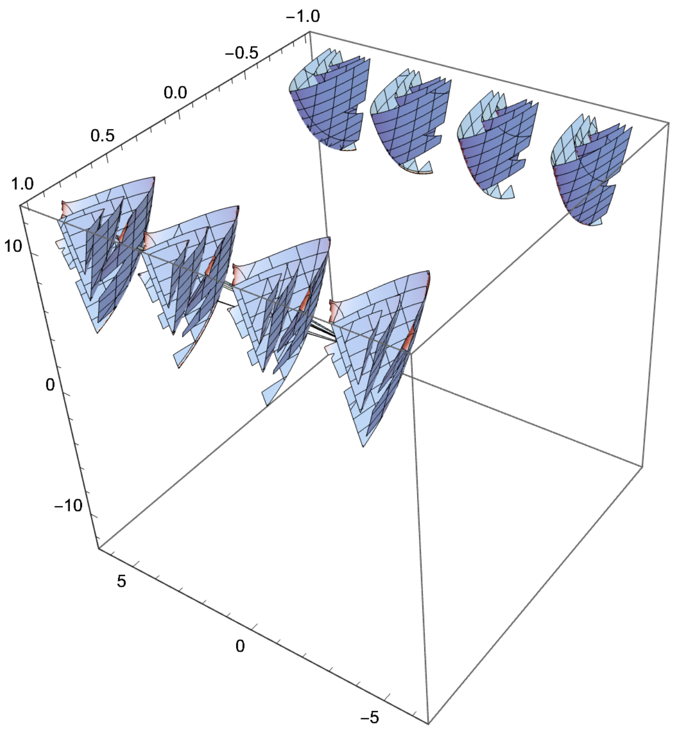
$\{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}, \{\beta, -2\,\pi, 2\,\pi\}\Big]$



$$\texttt{ContourPlot3D}\Big[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,(\theta) - r^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\texttt{\^{}}3 -$$

$$(4/3)\,\pi\left(\frac{2\,\pi\,r - r\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)}{2\,\pi}\right)\texttt{\^{}}3,$$

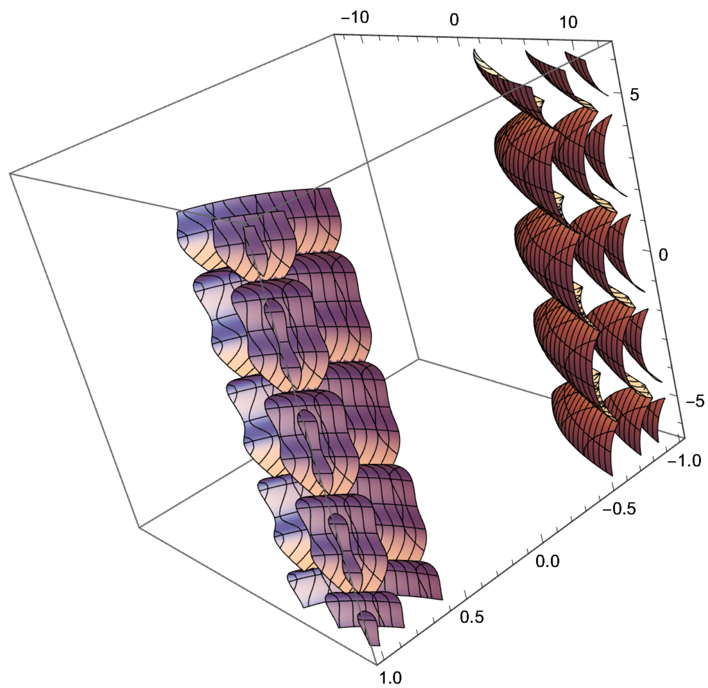
$$\{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}, \{\beta, -2\,\pi, 2\,\pi\}\Big]$$



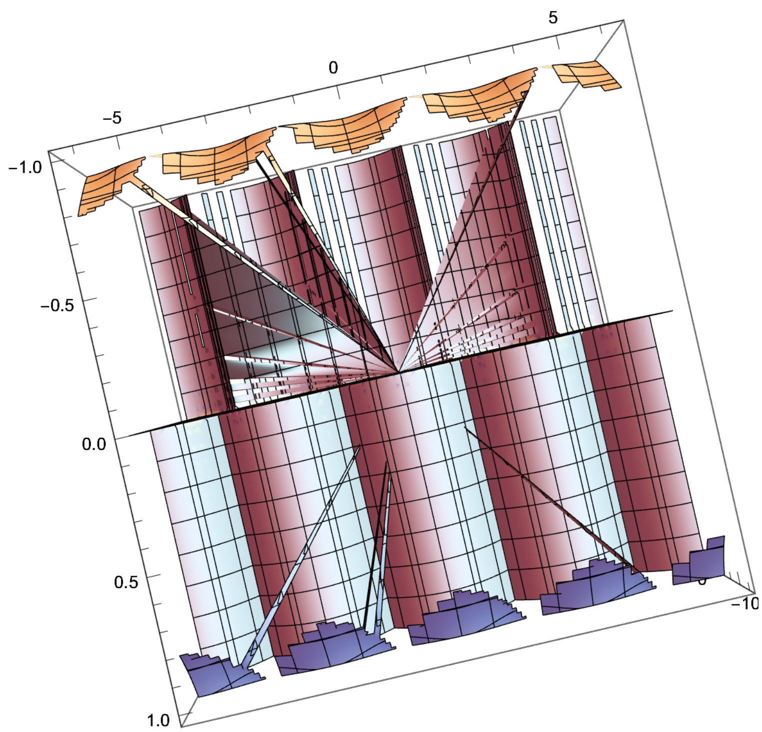
$$\text{ContourPlot3D}\Big[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,(\theta) - r^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\text{^}3 -$$

$$(4/3)\,\pi\left(\frac{2\,\pi\,r - r\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)}{2\,\pi}\right)\text{^}3,$$

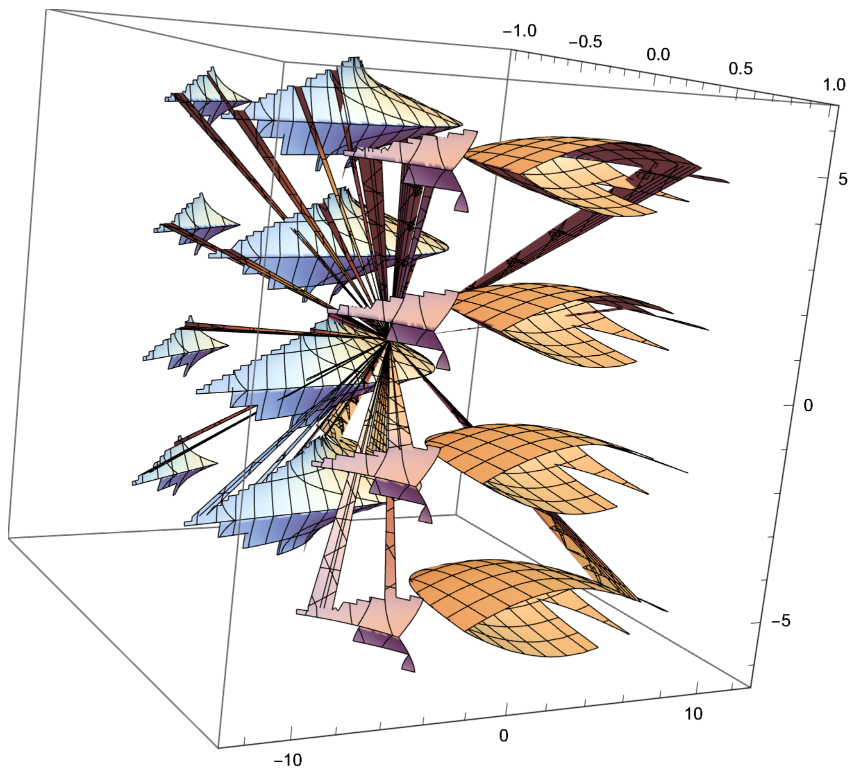
$$\{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}, \{\beta, -2\,\pi, 2\,\pi\}\Big]$$



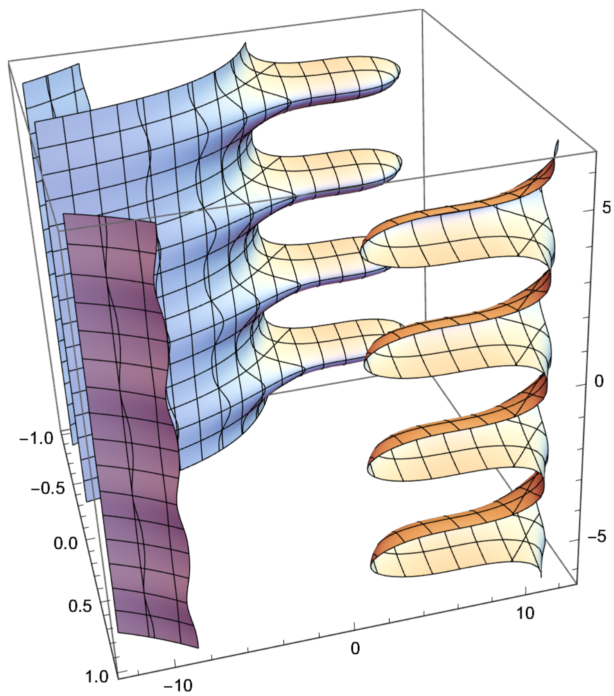
```
ContourPlot3D[(4 / 3) π (Sqrt[4 π r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - r^2 (θ)^2] / (2 π))^3 -
  (4 / 3) π ((2 π r - r θ) / (2 π))^3, {r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}]
```



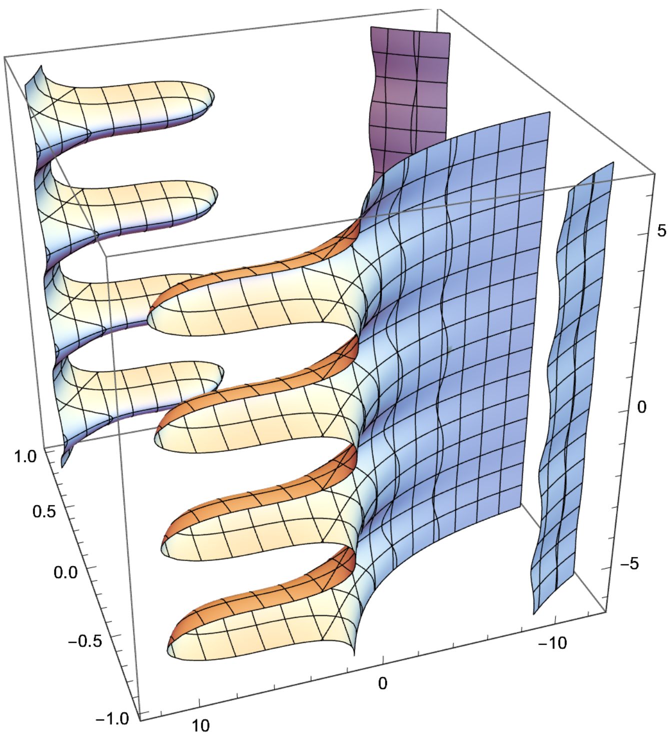
```
ContourPlot3D[(4 / 3) π (Sqrt[4 π r^2 (2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) - r^2 (θ)^2] / (2 π))^3 -
  (4 / 3) π ((2 π r - r θ) / (2 π))^3, {r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}]
```



```
ContourPlot3D[
 (4 / 3) π (Sqrt[4 π r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2] / (2 π))^3 -
  (4 / 3) π ((2 π r - r θ) / (2 π))^3, {r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}]
```



$$\texttt{ContourPlot3D}\Big[(4/3)\,\pi \left(\frac{\sqrt{4\,\pi\, r^2 \left(2\left(\pi - \sqrt{\pi^2 - \pi^2\, \texttt{Sin}[\beta]^2}\right)\right) - r^2 \left(2\left(\pi - \sqrt{\pi^2 - \pi^2\, \texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi} \right) \texttt{^}3 - (4/3)\,\pi \left(\frac{2\,\pi\, r - r\,\theta}{2\,\pi} \right) \texttt{^}3,\ \{r, -1, 1\},\ \{\theta, -4\,\pi, 4\,\pi\},\ \{\beta, -2\,\pi, 2\,\pi\} \Big]$$



When more generally, we can understand that the function for the distance, η, and the function for the distance, r are different spheres. We can then discuss what the change in volume would be between these two spheres.

$$\texttt{Solve}\Big[\theta == \frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\, \texttt{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\,\pi^3\, \texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\, \texttt{Sin}[\beta]^2 + 11\,\pi^6\, \texttt{Sin}[\beta]^4 + \pi^6\, \texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\, \texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\, \texttt{Sin}[\beta]^2 + 11\,\pi^6\, \texttt{Sin}[\beta]^4 + \pi^6\, \texttt{Sin}[\beta]^6}\right)^{1/3},\ \beta\Big]$$

$$\left\{\left\{\beta \to -\texttt{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta + 4\,\pi\,\theta^2 - \theta^3}}{2\,\pi\,\sqrt{-4\,\pi + \theta}}\right]\right\},\ \left\{\beta \to \texttt{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta + 4\,\pi\,\theta^2 - \theta^3}}{2\,\pi\,\sqrt{-4\,\pi + \theta}}\right]\right\}\right\}$$

Solutions for the Speed of Light

The Tearing of Space - Time?

In order to visualize these functions, we must set the internal velocity equal to something more specific.

Earlier, we showed that:

$$\left\{\left\{v \to -\left(1.\ \sqrt{\left(3.54814\times 10^{18} - 1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.4784 - 12.5664\,\theta + \theta^2}\right)\right\}, \left\{v \to \left(\sqrt{\left(3.54814\times 10^{18} - 1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.4784 - 12.5664\,\theta + \theta^2}\right)\right\}\right\} \quad (43)$$

when the height of the cone equals the initial radius.

Thus, if we use the positive solutions for velocity, we can visualize these functions for the speed of light.

```
v :=
√ (3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2) /
 ( √39.47841760435743` - 12.566370614359172` θ + θ^2 )
```

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi}\ \sqrt{1-\frac{v^2}{c^2}} == c\left((\theta\,/\,(2\,\pi)) \Big/ \sqrt{1-\frac{v^2}{c^2}}\right),\ c\right]$$

$$\left\{\left\{c \to -\sqrt{\left(-\frac{r^2}{3} + \frac{4\,\pi\,r^2}{3\,\theta} - \left(8\times 2^{1/3}\,\pi\,r^4\,\theta^2\right) \Big/ \left(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right) r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right) r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\right)^{1/3} + \right.}\right.\right.$$

$$\left(2\times 2^{1/3}\,r^4\,\theta^3\right) \Big/ \left(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right) r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right) r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\right)^{1/3} +$$

$$\left(16\times 2^{1/3}\,\pi^2\,r^4\,\theta^3\right) \Big/ \left(3\left(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + \right.\right.$$

$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\right.}$$
$$\left.\left.\left.\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\right)\right)^{1/3}\right)-$$
$$\left(8\times 2^{1/3}\pi r^4\theta^4\right)\Big/\left(3\left(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+\right.\right.$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\right.}$$
$$\left.\left.\left.\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\right)\right)^{1/3}\right)+$$
$$\left(2^{1/3} r^4\theta^5\right)\Big/\left(3\left(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+\right.\right.$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\right.}$$
$$\left.\left.\left.\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\right)\right)^{1/3}\right)+$$
$$\frac{1}{3\times 2^{1/3}\theta^5}\left(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-\right.$$
$$18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\right.}$$
$$\left.\left.\left.\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\right)\right)^{1/3}\right)\Big\},$$
$$\Big\{c\to\sqrt{\left(-\frac{r^2}{3}+\frac{4\pi r^2}{3\theta}-\left(8\times 2^{1/3}\pi r^4\theta^2\right)\Big/\left(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+\right.\right.}$$
$$144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-$$
$$2 r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\right.}$$
$$\left.\left.\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\right)\right)^{1/3}+$$
$$\left(2\times 2^{1/3} r^4\theta^3\right)\Big/\left(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+\right.$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\frac{1}{27}\right.}$$

$$\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}+$$

$$\left(16\times 2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\vphantom{x}}\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(8\times 2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\vphantom{x}}\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(2^{1/3}\,r^4\,\theta^5\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\vphantom{x}}\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,\theta^5}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-$$

$$18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\vphantom{x}}\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}$$

$$\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)\Big\},$$

$$\Big\{c\to-\sqrt{\vphantom{x}}\Big(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+\left(4\times 2^{1/3}\,\pi\,r^4\,\theta^2\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+$$

$$144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-$$

$$2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\vphantom{x}}\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}-$$

$$\left(4\,i\,2^{1/3}\,\sqrt{3}\,\pi\,r^4\,\theta^2\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}-$$

$$\left(2^{1/3}\,r^4\,\theta^3\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}+$$

$$\left(i\,2^{1/3}\,\sqrt{3}\,r^4\,\theta^3\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}-\left(8\times2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/$$

$$\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)+$$

$$\left(8\,i\,2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)+$$

$$\left(4\times2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$(4\,\mathrm{i}\,2^{1/3}\,\pi\,r^4\,\theta^4)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$(r^4\,\theta^5)\Big/\Big(3\times 2^{2/3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$(\mathrm{i}\,r^4\,\theta^5)\Big/\Big(2^{2/3}\,\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{6\times 2^{1/3}\,\theta^5}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-$$

$$18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}-$$

$$\frac{1}{2\times 2^{1/3}\,\sqrt{3}\,\theta^5}\,\mathrm{i}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}\Bigg)\Bigg\},$$

$$\Bigg\{c\to\sqrt{\Bigg(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+\left(4\times 2^{1/3}\,\pi\,r^4\,\theta^2\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+}$$

$$144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-$$

$$2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}}$$

$$\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}-$$

$$\left(4\,i\,2^{1/3}\,\sqrt{3}\,\pi\,r^4\,\theta^2\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}}$$

$$\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}-$$

$$\left(2^{1/3}\,r^4\,\theta^3\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}}$$

$$\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}+$$

$$\left(i\,2^{1/3}\,\sqrt{3}\,r^4\,\theta^3\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}}$$

$$\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}-$$

$$\left(8\times 2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/\Bigg(3\,\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Bigg)\Bigg)^{1/3}\Bigg)+$$

$$\left(8\,i\,2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\bigg/\left(\sqrt{3}\,\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)+$$

$$\left(4\times 2^{1/3}\,\pi\,r^4\,\theta^4\right)\bigg/\left(3\,\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

$$\left(4\,i\,2^{1/3}\,\pi\,r^4\,\theta^4\right)\bigg/\left(\sqrt{3}\,\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

$$\left(r^4\,\theta^5\right)\bigg/\left(3\times 2^{2/3}\,\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)+$$

$$\left(i\,r^4\,\theta^5\right)\bigg/\left(2^{2/3}\,\sqrt{3}\,\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

$$\frac{1}{6\times 2^{1/3}\,\theta^5}\left(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-\right.$$

$$18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}}$$

$$\left.\left.\left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\Big)\right)\right)^{1/3} -$$

$$\frac{1}{2 \times 2^{1/3}\, \sqrt{3}\, \theta^5}\, \mathbb{i}\, \Big(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} +}$$

$$\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\Big)\right)^{1/3}\right)\Big\},$$

$$\Big\{c \to -\sqrt{\Big(-\frac{r^2}{3} + \frac{4\, \pi\, r^2}{3\, \theta} + \left(4 \times 2^{1/3}\, \pi\, r^4\, \theta^2\right) \Big/ \Big(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} +}$$

$$144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} -$$

$$2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} +}$$

$$\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\Big)\right)^{1/3} +$$

$$\left(4\, \mathbb{i}\, 2^{1/3}\, \sqrt{3}\, \pi\, r^4\, \theta^2\right) \Big/ \Big(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} +}$$

$$\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\Big)\right)^{1/3} -$$

$$\left(2^{1/3}\, r^4\, \theta^3\right) \Big/ \Big(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} +}$$

$$\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\Big)\right)^{1/3} -$$

$$\left(\mathbb{i}\, 2^{1/3}\, \sqrt{3}\, r^4\, \theta^3\right) \Big/ \Big(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\Big(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} +}$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}-$$

$$\left(8\times 2^{1/3}\pi^2 r^4\theta^3\right)\Big/\Big(3\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\ \sqrt{}\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(8\,i\,2^{1/3}\pi^2 r^4\theta^3\right)\Big/\Big(\sqrt{3}\ \Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\ \sqrt{}\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(4\times 2^{1/3}\pi r^4\theta^4\right)\Big/\Big(3\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\ \sqrt{}\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(4\,i\,2^{1/3}\pi r^4\theta^4\right)\Big/\Big(\sqrt{3}\ \Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\ \sqrt{}\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(r^4\theta^5\right)\Big/\Big(3\times 2^{2/3}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\ \sqrt{}\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(\mathbb{i}\, r^4\, \theta^5\right) \Big/ \left(2^{2/3}\, \sqrt{3}\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +\right.\right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \right.}$$

$$\left.\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3}\right) -$$

$$\frac{1}{6 \times 2^{1/3}\, \theta^5}\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} -\right.$$

$$18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \right.}$$

$$\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3} +$$

$$\frac{1}{2 \times 2^{1/3}\, \sqrt{3}\, \theta^5}\, \mathbb{i}\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +\right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \right.}$$

$$\left.\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3}\right\},$$

$$\left\{c \to \sqrt{\left(-\frac{r^2}{3} + \frac{4\, \pi\, r^2}{3\, \theta} + \left(4 \times 2^{1/3}\, \pi\, r^4\, \theta^2\right) \Big/ \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} +\right.\right.}\right.$$

$$144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} -$$

$$2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\right.}$$

$$\left.\left.\theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3} +$$

$$\left(4\, \mathbb{i}\, 2^{1/3}\, \sqrt{3}\, \pi\, r^4\, \theta^2\right) \Big/ \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +\right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\right.}$$

$$\left.\left.\left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3} -$$

$$\left(2^{1/3}\, r^4\, \theta^3\right) \Big/ \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} +\right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}-$$

$$\left(\mathbb{i}\,2^{1/3}\sqrt{3}\,r^4\theta^3\right)\Bigg/\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}-$$

$$\left(8\times 2^{1/3}\pi^2 r^4\theta^3\right)\Bigg/\Bigg(3\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)-$$

$$\left(8\,\mathbb{i}\,2^{1/3}\pi^2 r^4\theta^3\right)\Bigg/\Bigg(\sqrt{3}\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)+$$

$$\left(4\times 2^{1/3}\pi r^4\theta^4\right)\Bigg/\Bigg(3\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)+$$

$$\left(4\,\mathbb{i}\,2^{1/3}\pi r^4\theta^4\right)\Bigg/\Bigg(\sqrt{3}\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\right.}$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(r^4\theta^5\right)\Big/\Big(3\times 2^{2/3}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(\mathbb{i}\, r^4\theta^5\right)\Big/\Big(2^{2/3}\sqrt{3}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{6\times 2^{1/3}\theta^5}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-$$
$$18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+\frac{1}{27}}$$
$$\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}+$$

$$\frac{1}{2\times 2^{1/3}\sqrt{3}\,\theta^5}\,\mathbb{i}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)\}\}$$

RevolutionPlot3D[

$$\boldsymbol{-\sqrt{\Big(-\frac{r^2}{3}+\frac{4\pi r^2}{3\theta}-\left(8\times 2^{1/3}\pi r^4\theta^2\right)\Big/\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+}}$$
$$\boldsymbol{144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-}$$
$$\boldsymbol{2 r^6\theta^{15}+3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}}$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}+$$

$$\left(2\times 2^{1/3}\,r^4\,\theta^3\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}+\left(16\times 2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/$$

$$\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96$$

$$\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)}$$

$$r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)-$$

$$\left(8\times 2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(2^{1/3}\,r^4\,\theta^5\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+}$$

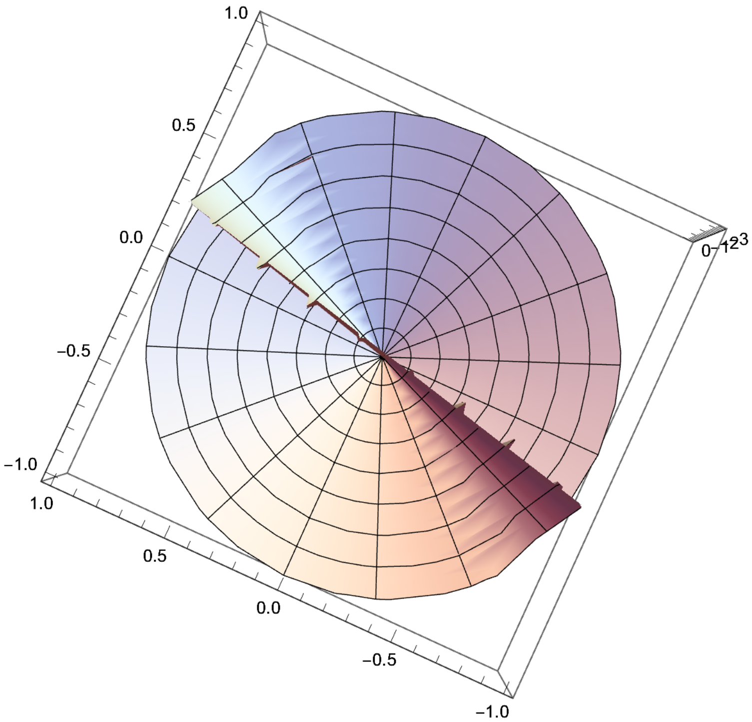
$$\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,\theta^5}\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-$$

$$18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)}$$

$$r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big),\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\Big]$$



RevolutionPlot3D[

$$\sqrt{\Bigg(}-\frac{r^2}{3}+\frac{4\pi r^2}{3\theta}-\left(8\times 2^{1/3}\pi r^4\theta^2\right)\Big/\Bigg(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$

$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\sqrt{3}\sqrt{\Bigg(}432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-$$

$$48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Bigg)\Bigg)^{1/3}+\left(2\times 2^{1/3} r^4\theta^3\right)\Big/$$

$$\Bigg(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+$$

$$24\pi r^6\theta^{14}-2 r^6\theta^{15}+3\sqrt{3}\sqrt{\Bigg(}432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+$$

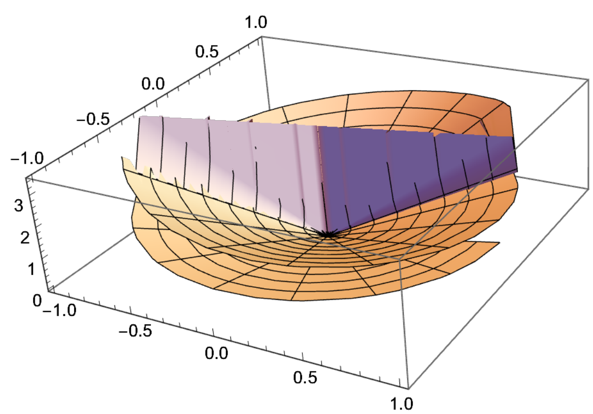
$$\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Bigg)\Bigg)^{1/3}+\left(16\times 2^{1/3}\pi^2 r^4\theta^3\right)\Big/$$

$$\Bigg(3\Bigg(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96$$

$$\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+3\sqrt{3}\sqrt{\Bigg(}432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)$$

$$r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Bigg)\Bigg)^{1/3}\Bigg)-$$

$$\left(8\times 2^{1/3}\,\pi\, r^4\,\theta^4\right)\Big/\ \Bigg(3\ \Big(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+$$
$$128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+$$
$$3\ \sqrt{3}\ \sqrt{\Big(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\, r^{12}\,\theta^{21}+\frac{1}{27}}$$
$$\left(729+5184\,\pi^2\right)\, r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Bigg)+\left(2^{1/3}\, r^4\,\theta^5\right)\Big/$$
$$\Bigg(3\ \Big(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96$$
$$\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\Big(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)}$$
$$r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\, r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Bigg)+$$
$$\frac{1}{3\times 2^{1/3}\,\theta^5}\ \Big(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-$$
$$18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+$$
$$3\ \sqrt{3}\ \sqrt{\Big(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\, r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\, r^{12}\,\theta^{22}-}$$
$$48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Bigg),\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Big]$$



RevolutionPlot3D[

$$-\sqrt{\Bigg(-\frac{r^2}{3}+\frac{4\,\pi\, r^2}{3\,\theta}+\left(4\times 2^{1/3}\,\pi\, r^4\,\theta^2\right)\Big/\ \Big(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+}$$
$$144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-$$
$$2\, r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\Big(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\, r^{12}\,\theta^{21}+}$$

$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}-$$

$$\left(4\,\mathrm{i}\,2^{1/3}\sqrt{3}\,\pi r^4\theta^2\right)\Big/\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}-$$

$$\left(2^{1/3} r^4\theta^3\right)\Big/\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-$$
$$18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-\right.}$$
$$\left.6912\pi^3\right) r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}+$$

$$\left(\mathrm{i}\,2^{1/3}\sqrt{3}\,r^4\theta^3\right)\Big/\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}-\left(8\times 2^{1/3}\pi^2 r^4\theta^3\right)\Big/$$

$$\Big(3\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96$$
$$\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)}$$
$$r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(8\,\mathrm{i}\,2^{1/3}\pi^2 r^4\theta^3\right)\Big/\Big(\sqrt{3}\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$
$$3\sqrt{3}\sqrt{\Big(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right) r^{12}\theta^{21}+}$$
$$\frac{1}{27}\left(729+5184\pi^2\right) r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4 r^{12}\theta^{24}\Big)\Big)^{1/3}\Big)+$$

$$\left(4\times 2^{1/3}\pi r^4\theta^4\right)\Big/\Big(3\Big(108\pi r^6\theta^{10}-27 r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+$$
$$128\pi^3 r^6\theta^{12}-18 r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2 r^6\theta^{15}+$$

$$3\ \sqrt{3}\ \sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\,\Big)^{1/3}\Big)-$$

$$\left(4\,\mathrm{i}\,2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)-$$

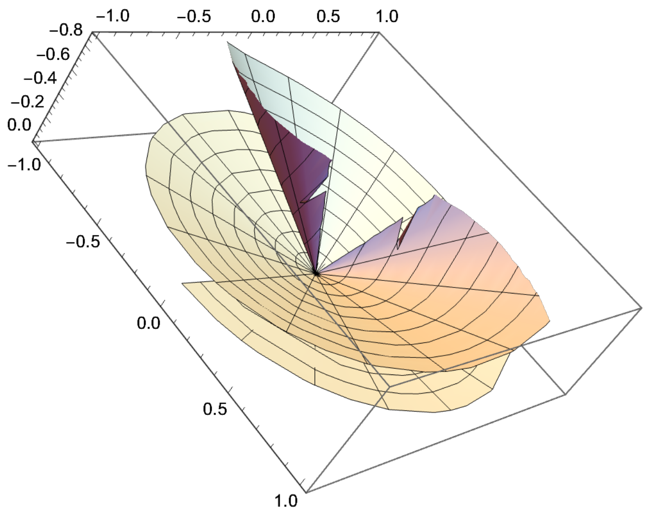
$$\left(r^4\,\theta^5\right)\Big/\Big(3\times 2^{2/3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)+$$

$$\left(\mathrm{i}\,r^4\,\theta^5\right)\Big/\Big(2^{2/3}\ \sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)-$$

$$\frac{1}{6\times 2^{1/3}\,\theta^5}\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}-$$

$$\frac{1}{2\times 2^{1/3}\ \sqrt{3}\ \theta^5}\,\mathrm{i}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\ \sqrt{3}\ \sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)}$$

$$r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big),\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



RevolutionPlot3D[

$$\sqrt{\Big(-\frac{r^2}{3} + \frac{4\,\pi\,r^2}{3\,\theta} + \big(4\times 2^{1/3}\,\pi\,r^4\,\theta^2\big)\Big/\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +}$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\big(-5832\,\pi - 6912\,\pi^3\big)\,r^{12}\,\theta^{21} + \frac{1}{27}\,\big(729 + 5184\,\pi^2\big)\,r^{12}\,\theta^{22} -}$$

$$48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3} - \big(4\,i\,2^{1/3}\,\sqrt{3}\,\pi\,r^4\,\theta^2\big)\Big/$$

$$\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} -$$

$$96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\big(-5832\,\pi - 6912\,\pi^3\big)}$$

$$r^{12}\,\theta^{21} + \frac{1}{27}\,\big(729 + 5184\,\pi^2\big)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3} -$$

$$\big(2^{1/3}\,r^4\,\theta^3\big)\Big/\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} -$$

$$18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\big(-5832\,\pi -}$$

$$6912\,\pi^3\big)\,r^{12}\,\theta^{21} + \frac{1}{27}\,\big(729 + 5184\,\pi^2\big)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3} +$$

$$\big(i\,2^{1/3}\,\sqrt{3}\,r^4\,\theta^3\big)\Big/\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}-\left(8\times2^{1/3}\pi^2 r^4\theta^3\right)\Big/$$

$$\Bigg(3\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)+$$

$$\left(8\,i\,2^{1/3}\pi^2 r^4\theta^3\right)\Big/\Bigg(\sqrt{3}\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)+\left(4\times2^{1/3}\pi r^4\theta^4\right)\Big/$$

$$\Bigg(3\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)-$$

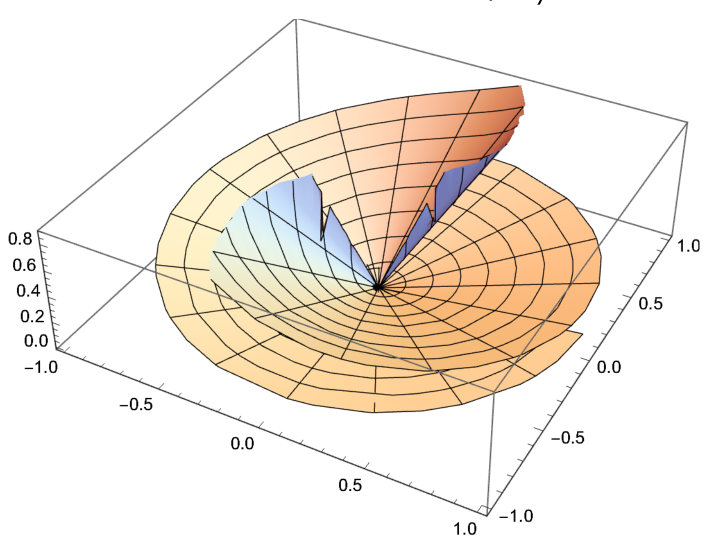
$$\left(4\,i\,2^{1/3}\pi r^4\theta^4\right)\Big/\Bigg(\sqrt{3}\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)-$$

$$\left(r^4\theta^5\right)\Big/\Bigg(3\times2^{2/3}\Bigg(108\pi r^6\theta^{10}-27r^6\theta^{11}-288\pi^2 r^6\theta^{11}+144\pi r^6\theta^{12}+128\pi^3 r^6\theta^{12}-18r^6\theta^{13}-96\pi^2 r^6\theta^{13}+24\pi r^6\theta^{14}-2r^6\theta^{15}+3\sqrt{3}\sqrt{\left(432\pi^2 r^{12}\theta^{20}+\frac{1}{27}\left(-5832\pi-6912\pi^3\right)r^{12}\theta^{21}+\frac{1}{27}\left(729+5184\pi^2\right)r^{12}\theta^{22}-48\pi r^{12}\theta^{23}+4r^{12}\theta^{24}\right)}\Bigg)^{1/3}\Bigg)+$$

$$\left(\mathrm{i}\, r^4 \theta^5\right) \Big/ \left(2^{2/3} \sqrt{3} \left(108 \pi r^6 \theta^{10} - 27 r^6 \theta^{11} - 288 \pi^2 r^6 \theta^{11} + 144 \pi r^6 \theta^{12} + 128 \pi^3 r^6 \theta^{12} - 18 r^6 \theta^{13} - 96 \pi^2 r^6 \theta^{13} + 24 \pi r^6 \theta^{14} - 2 r^6 \theta^{15} + 3 \sqrt{3} \sqrt{\left(432 \pi^2 r^{12} \theta^{20} + \frac{1}{27} \left(-5832 \pi - 6912 \pi^3\right) r^{12} \theta^{21} + \frac{1}{27} \left(729 + 5184 \pi^2\right) r^{12} \theta^{22} - 48 \pi r^{12} \theta^{23} + 4 r^{12} \theta^{24}\right)}\right)^{1/3}\right) -$$

$$\frac{1}{6 \times 2^{1/3} \theta^5} \left(108 \pi r^6 \theta^{10} - 27 r^6 \theta^{11} - 288 \pi^2 r^6 \theta^{11} + 144 \pi r^6 \theta^{12} + 128 \pi^3 r^6 \theta^{12} - 18 r^6 \theta^{13} - 96 \pi^2 r^6 \theta^{13} + 24 \pi r^6 \theta^{14} - 2 r^6 \theta^{15} + 3 \sqrt{3} \sqrt{\left(432 \pi^2 r^{12} \theta^{20} + \frac{1}{27} \left(-5832 \pi - 6912 \pi^3\right) r^{12} \theta^{21} + \frac{1}{27} \left(729 + 5184 \pi^2\right) r^{12} \theta^{22} - 48 \pi r^{12} \theta^{23} + 4 r^{12} \theta^{24}\right)}\right)^{1/3} -$$

$$\frac{1}{2 \times 2^{1/3} \sqrt{3} \theta^5} \mathrm{i} \left(108 \pi r^6 \theta^{10} - 27 r^6 \theta^{11} - 288 \pi^2 r^6 \theta^{11} + 144 \pi r^6 \theta^{12} + 128 \pi^3 r^6 \theta^{12} - 18 r^6 \theta^{13} - 96 \pi^2 r^6 \theta^{13} + 24 \pi r^6 \theta^{14} - 2 r^6 \theta^{15} + 3 \sqrt{3} \sqrt{\left(432 \pi^2 r^{12} \theta^{20} + \frac{1}{27} \left(-5832 \pi - 6912 \pi^3\right) r^{12} \theta^{21} + \frac{1}{27} \left(729 + 5184 \pi^2\right) r^{12} \theta^{22} - 48 \pi r^{12} \theta^{23} + 4 r^{12} \theta^{24}\right)}\right)^{1/3}\right), \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}]$$



RevolutionPlot3D[

$$-\sqrt{\left(-\frac{r^2}{3} + \frac{4 \pi r^2}{3 \theta} + \left(4 \times 2^{1/3} \pi r^4 \theta^2\right) \Big/ \left(108 \pi r^6 \theta^{10} - 27 r^6 \theta^{11} - 288 \pi^2 r^6 \theta^{11} + 144 \pi r^6 \theta^{12} + 128 \pi^3 r^6 \theta^{12} - 18 r^6 \theta^{13} - 96 \pi^2 r^6 \theta^{13} + 24 \pi r^6 \theta^{14} -\right.\right.}$$

$$2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3} +$$

$$\left(4\, \text{i}\, 2^{1/3}\, \sqrt{3}\, \pi\, r^4\, \theta^2\right) \Big/ \Bigg(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3} -$$

$$\left(2^{1/3}\, r^4\, \theta^3\right) \Big/ \Bigg(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3} -$$

$$\left(\text{i}\, 2^{1/3}\, \sqrt{3}\, r^4\, \theta^3\right) \Big/ \Bigg(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3} - \left(8 \times 2^{1/3}\, \pi^2\, r^4\, \theta^3\right) \Big/$$

$$\Bigg(3\, \Bigg(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3}\Bigg) -$$

$$\left(8\, \text{i}\, 2^{1/3}\, \pi^2\, r^4\, \theta^3\right) \Big/ \Bigg(\sqrt{3}\, \Bigg(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} + 3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)}\Bigg)^{1/3}\Bigg) +$$

$$\left(4\times 2^{1/3}\,\pi\, r^4\, \theta^4\right)\Big/\left(3\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right) r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right) r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)+$$

$$\left(4\, i\, 2^{1/3}\,\pi\, r^4\, \theta^4\right)\Big/\left(\sqrt{3}\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right) r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right) r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

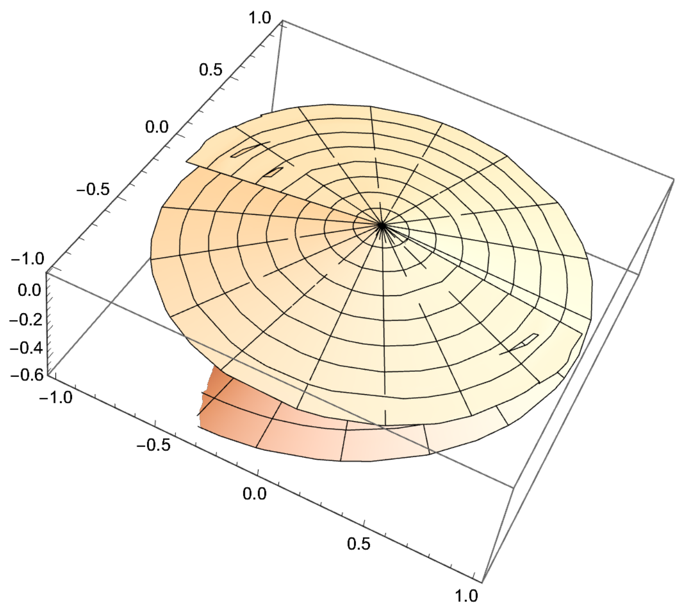
$$\left(r^4\, \theta^5\right)\Big/\left(3\times 2^{2/3}\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right) r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right) r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

$$\left(i\, r^4\, \theta^5\right)\Big/\left(2^{2/3}\,\sqrt{3}\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right) r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right) r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\right)}\right)^{1/3}\right)-$$

$$\frac{1}{6\times 2^{1/3}\,\theta^5}\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+128\,\pi^3\, r^6\,\theta^{12}-18\, r^6\,\theta^{13}-96\,\pi^2\, r^6\,\theta^{13}+24\,\pi\, r^6\,\theta^{14}-2\, r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\, r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right) r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right) r^{12}\,\theta^{22}-48\,\pi\, r^{12}\,\theta^{23}+4\, r^{12}\,\theta^{24}\right)}\right)^{1/3}+$$

$$\frac{1}{2\times 2^{1/3}\,\sqrt{3}\,\theta^5}\, i\left(108\,\pi\, r^6\,\theta^{10}-27\, r^6\,\theta^{11}-288\,\pi^2\, r^6\,\theta^{11}+144\,\pi\, r^6\,\theta^{12}+\right.$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}\Bigg),\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\Big]$$



RevolutionPlot3D[

$$\sqrt{\Bigg(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+\left(4\times2^{1/3}\,\pi\,r^4\,\theta^2\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}+\left(4\,i\,2^{1/3}\,\sqrt{3}\,\pi\,r^4\,\theta^2\right)\Big/}$$

$$\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}-$$

$$\left(2^{1/3}\,r^4\,\theta^3\right)\Big/\Bigg(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\Bigg(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\Big(-5832\,\pi-}$$

$$6912\,\pi^3)\;r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}-$$

$$\left(\mathbb{i}\,2^{1/3}\,\sqrt{3}\,r^4\,\theta^3\right)\Big/\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}-\left(8\times2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/$$

$$\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)-$$

$$\left(8\,\mathbb{i}\,2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)+\left(4\times2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/$$

$$\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)+$$

$$\left(4\,\mathbb{i}\,2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\left(-5832\,\pi-6912\,\pi^3\right)\,r^{12}\,\theta^{21}+\frac{1}{27}\left(729+5184\,\pi^2\right)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}\right)}\Big)^{1/3}\Big)-$$

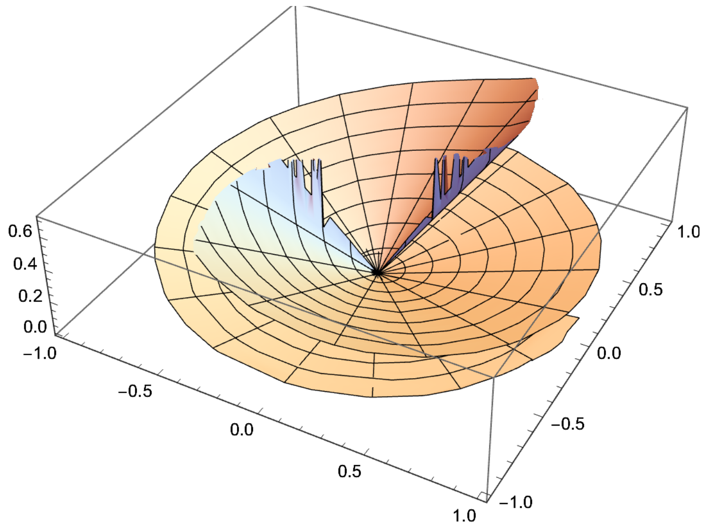
$$\left(r^4\,\theta^5\right)\Big/\Big(3\times2^{2/3}\,\Big(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}\Bigg) -$$

$$\left(\mathbb{i}\,r^4\,\theta^5\right) \Big/ \Bigg(2^{2/3}\,\sqrt{3}\,\Bigg(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}\Bigg) -$$

$$\frac{1}{6 \times 2^{1/3}\,\theta^5}\Bigg(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3} +$$

$$\frac{1}{2 \times 2^{1/3}\,\sqrt{3}\,\theta^5}\,\mathbb{i}\,\Bigg(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\left(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} + \frac{1}{27}\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\right)}\Bigg)^{1/3}\Bigg), \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



RevolutionPlot3D[

$$\{(\surd(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+(4\times 2^{1/3}\,\pi\,r^4\,\theta^2)\Big/\,(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+$$

$$144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-$$

$$2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\surd(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}$$

$$\theta^{21}+\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}))^{1/3}+$$

$$(4\,\mathrm{i}\,2^{1/3}\,\sqrt{3}\,\pi\,r^4\,\theta^2)\Big/\,(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\surd(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+\frac{1}{27}$$

$$(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}))^{1/3}-(2^{1/3}\,r^4\,\theta^3)\Big/$$

$$(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-$$

$$96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+3\,\sqrt{3}\,\surd(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-$$

$$6912\,\pi^3)\,r^{12}\,\theta^{21}+\frac{1}{27}\,(729+5184\,\pi^2)\,r^{12}\,\theta^{22}-48\,\pi\,r^{12}\,\theta^{23}+4\,r^{12}\,\theta^{24}))^{1/3}-$$

$$(\mathrm{i}\,2^{1/3}\,\sqrt{3}\,r^4\,\theta^3)\Big/\,(108\,\pi\,r^6\,\theta^{10}-27\,r^6\,\theta^{11}-288\,\pi^2\,r^6\,\theta^{11}+144\,\pi\,r^6\,\theta^{12}+$$

$$128\,\pi^3\,r^6\,\theta^{12}-18\,r^6\,\theta^{13}-96\,\pi^2\,r^6\,\theta^{13}+24\,\pi\,r^6\,\theta^{14}-2\,r^6\,\theta^{15}+$$

$$3\,\sqrt{3}\,\surd(432\,\pi^2\,r^{12}\,\theta^{20}+\frac{1}{27}\,(-5832\,\pi-6912\,\pi^3)\,r^{12}\,\theta^{21}+\frac{1}{27}\,(729+5184\,\pi^2)$$

$$r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3} - \left(8\times 2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/$$

$$\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} + 128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} -$$

$$96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} + 3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\big(-5832\,\pi - 6912}$$

$$\pi^3\big)\,r^{12}\,\theta^{21} + \frac{1}{27}\,\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big) -$$

$$\left(8\,i\,2^{1/3}\,\pi^2\,r^4\,\theta^3\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} +}$$

$$\frac{1}{27}\,\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big) +$$

$$\left(4\times 2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(3\,\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} +}$$

$$\frac{1}{27}\,\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big) +$$

$$\left(4\,i\,2^{1/3}\,\pi\,r^4\,\theta^4\right)\Big/\Big(\sqrt{3}\,\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} +}$$

$$\frac{1}{27}\,\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big) -$$

$$\left(r^4\,\theta^5\right)\Big/\Big(3\times 2^{2/3}\,\Big(108\,\pi\,r^6\,\theta^{10} - 27\,r^6\,\theta^{11} - 288\,\pi^2\,r^6\,\theta^{11} + 144\,\pi\,r^6\,\theta^{12} +$$

$$128\,\pi^3\,r^6\,\theta^{12} - 18\,r^6\,\theta^{13} - 96\,\pi^2\,r^6\,\theta^{13} + 24\,\pi\,r^6\,\theta^{14} - 2\,r^6\,\theta^{15} +$$

$$3\,\sqrt{3}\,\sqrt{\Big(432\,\pi^2\,r^{12}\,\theta^{20} + \frac{1}{27}\,\left(-5832\,\pi - 6912\,\pi^3\right)\,r^{12}\,\theta^{21} +}$$

$$\frac{1}{27}\,\left(729 + 5184\,\pi^2\right)\,r^{12}\,\theta^{22} - 48\,\pi\,r^{12}\,\theta^{23} + 4\,r^{12}\,\theta^{24}\Big)\Big)^{1/3}\Big) -$$

$$\left(i\, r^4\, \theta^5\right) \Big/ \left(2^{2/3}\, \sqrt{3}\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + \right.\right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \right.}$$

$$\left.\left.\left.\frac{1}{27}\, \left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3}\right) -$$

$$\frac{1}{6 \times 2^{1/3}\, \theta^5}\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + 128\, \pi^3\, r^6\, \theta^{12} - \right.$$

$$18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\right.}$$

$$\left.\left.\left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3} +$$

$$\frac{1}{2 \times 2^{1/3}\, \sqrt{3}\, \theta^5}\, i\, \left(108\, \pi\, r^6\, \theta^{10} - 27\, r^6\, \theta^{11} - 288\, \pi^2\, r^6\, \theta^{11} + 144\, \pi\, r^6\, \theta^{12} + \right.$$

$$128\, \pi^3\, r^6\, \theta^{12} - 18\, r^6\, \theta^{13} - 96\, \pi^2\, r^6\, \theta^{13} + 24\, \pi\, r^6\, \theta^{14} - 2\, r^6\, \theta^{15} +$$

$$3\, \sqrt{3}\, \sqrt{\left(432\, \pi^2\, r^{12}\, \theta^{20} + \frac{1}{27}\, \left(-5832\, \pi - 6912\, \pi^3\right)\, r^{12}\, \theta^{21} + \frac{1}{27}\right.}$$

$$\left.\left.\left.\left.\left(729 + 5184\, \pi^2\right)\, r^{12}\, \theta^{22} - 48\, \pi\, r^{12}\, \theta^{23} + 4\, r^{12}\, \theta^{24}\right)\right)^{1/3}\right)\right),$$

$$-\sqrt{\left(-\frac{r^2}{3} + \frac{4\, \pi\, r^2}{3\, \theta} + \left(4 \times 2^{1/3}\, \pi\, r^4\right) \Big/ \left(3\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + \right.\right.\right.}$$

$$24\, \pi\, r^6\, \theta^2 + 144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\, \pi\, r^6\, v^6\, \theta^5 - \right.}$$

$$\left.\left.216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\right) + \left(4\, i\, 2^{1/3}\, \pi\, r^4\right) \Big/$$

$$\left(\sqrt{3}\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 + 144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - \right.\right.$$

$$2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 + 3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + \right.}$$

$$\left.\left.432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\right) +$$

$$\left(4 \times 2^{1/3}\, \pi\, r^2\, v^2\right) \Big/ \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 + \right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\right.}$$

$$\left.\left.\pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3} +$$

$$\left(4\, i\, 2^{1/3}\, \sqrt{3}\, \pi\, r^2\, v^2\right) \Big/ \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 + \right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\, \pi\, r^6\, v^6\right.}$$

$$\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3} - \left(8\times 2^{1/3}\,\pi^2\,r^4\right)\Big/$$
$$\Big(3\,\theta\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 + 144\,\pi\,r^4\,v^2\,\theta^2 + 108\,\pi\,r^2\,v^4\,\theta^2 -$$
$$2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 + 3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 +}$$
$$432\,\pi^2\,r^4\,v^8\,\theta^4 - 48\,\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3}\Big) -$$
$$\left(8\,i\,2^{1/3}\,\pi^2\,r^4\right)\Big/\Big(\sqrt{3}\,\theta\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 +$$
$$144\,\pi\,r^4\,v^2\,\theta^2 + 108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 -}$$
$$48\,\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3}\Big) -$$
$$\left(r^4\,\theta\right)\Big/\Big(3\times 2^{2/3}\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 +$$
$$144\,\pi\,r^4\,v^2\,\theta^2 + 108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 -}$$
$$48\,\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3}\Big) -$$
$$\left(i\,r^4\,\theta\right)\Big/\Big(2^{2/3}\,\sqrt{3}\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 +$$
$$144\,\pi\,r^4\,v^2\,\theta^2 + 108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 -}$$
$$48\,\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3}\Big) -$$
$$\left(2^{1/3}\,r^2\,v^2\,\theta\right)\Big/\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 + 144\,\pi\,r^4\,v^2\,\theta^2 +$$
$$108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 - 48}$$
$$\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3} -$$
$$\left(i\,2^{1/3}\,\sqrt{3}\,r^2\,v^2\,\theta\right)\Big/\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 +$$
$$144\,\pi\,r^4\,v^2\,\theta^2 + 108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 - 48}$$
$$\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3} -$$
$$\frac{1}{6\times 2^{1/3}\,\theta}\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 + 144\,\pi\,r^4\,v^2\,\theta^2 +$$
$$108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 - 48}$$
$$\pi\,r^6\,v^6\,\theta^5 - 216\,\pi\,r^4\,v^8\,\theta^5 + 4\,r^6\,v^6\,\theta^6 + 27\,r^4\,v^8\,\theta^6\Big)\Big)^{1/3} +$$
$$\frac{1}{2\times 2^{1/3}\,\sqrt{3}\,\theta}\,i\,\Big(128\,\pi^3\,r^6 - 96\,\pi^2\,r^6\,\theta - 288\,\pi^2\,r^4\,v^2\,\theta + 24\,\pi\,r^6\,\theta^2 + 144\,\pi\,r^4\,v^2\,\theta^2 +$$
$$108\,\pi\,r^2\,v^4\,\theta^2 - 2\,r^6\,\theta^3 - 18\,r^4\,v^2\,\theta^3 - 27\,r^2\,v^4\,\theta^3 +$$
$$3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3 + 192\,\pi^2\,r^6\,v^6\,\theta^4 + 432\,\pi^2\,r^4\,v^8\,\theta^4 - 48}$$

$$\pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3}),$$

$$-\sqrt{(-\frac{r^2}{3} + \frac{4 \pi r^2}{3 \theta} - (8 \times 2^{1/3} \pi r^4) / (3 (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta +}$$

$$24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 -$$

$$27 r^2 v^4 \theta^3 + 3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 -$$

$$48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3}) -$$

$$(8 \times 2^{1/3} \pi r^2 v^2) / (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 +$$

$$144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$

$$3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48$$

$$\pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3} +$$

$$(16 \times 2^{1/3} \pi^2 r^4) / (3 \theta (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 +$$

$$144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$

$$3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 -$$

$$216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3}) + (2^{1/3} r^4 \theta) /$$

$$(3 (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 -$$

$$2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 +$$

$$432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3}) +$$

$$(2 \times 2^{1/3} r^2 v^2 \theta) / (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 +$$

$$144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$

$$3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48$$

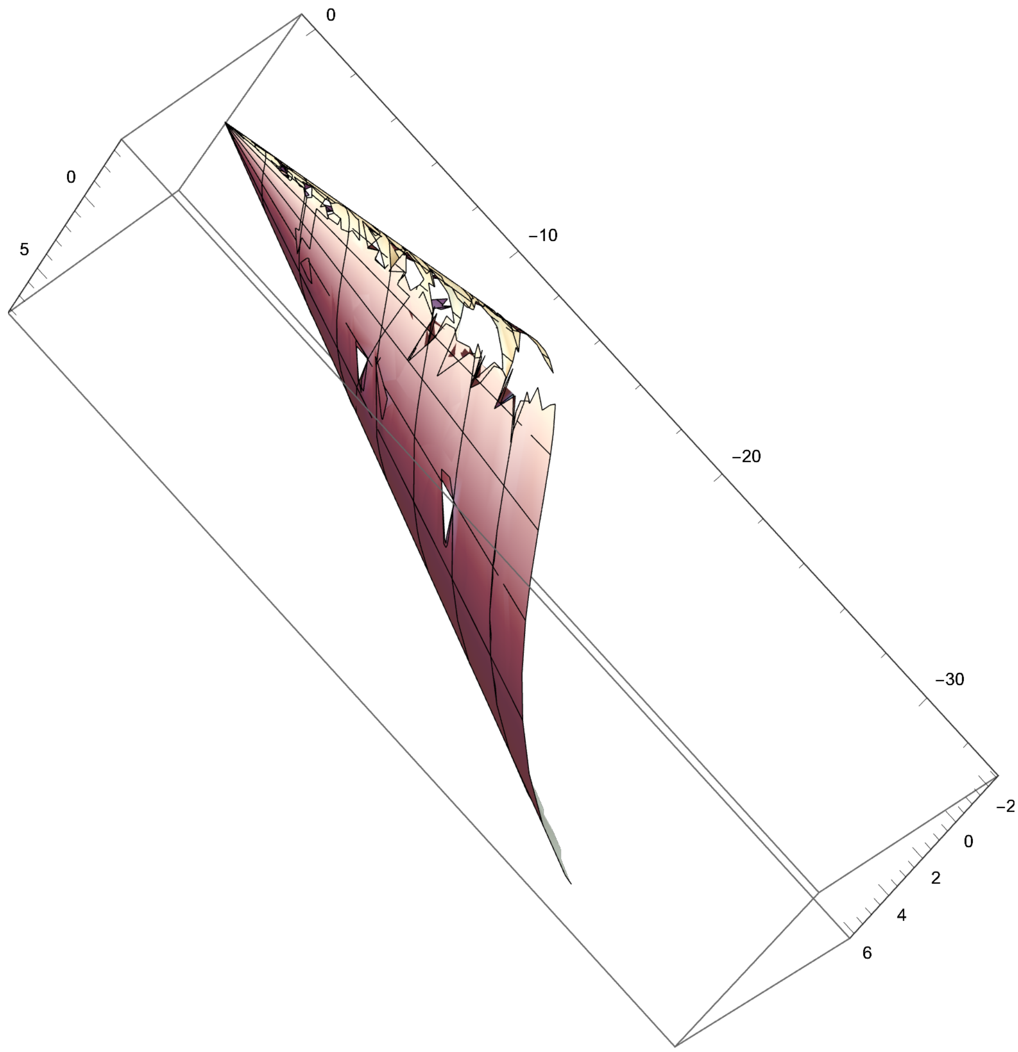
$$\pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3} +$$

$$\frac{1}{3 \times 2^{1/3} \theta} (128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 +$$

$$108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$

$$3 \sqrt{3} \sqrt{(}-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi$$

$$r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6))^{1/3})\}, \{r, -10, 10\}, \{\theta, -4 \pi, 4 \pi\}]$$



$$1 == \frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\mathrm{Solve}\left[\frac{\sqrt{r\,\sqrt{\frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} - \frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{\frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} - \frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi}\ \sqrt{\frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} - \frac{v^2}{c^2}} == \right.$$

$$\left. c\left((\theta\ /\ (2\,\pi)) \middle/ \sqrt{\frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} - \frac{v^2}{c^2}}\right),\right]$$

$$\texttt{Solve}\left[\frac{\sqrt{r\sqrt{\frac{2\pi\,\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-\frac{v^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{\frac{2\pi\,\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-\frac{v^2}{c^2}}}}\;\sqrt{4\pi r-r\theta}}{2\pi}\sqrt{\frac{2\pi\,\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-\frac{v^2}{c^2}} ==\right.$$

$$\left. c\left((\theta/(2\pi))\Big/\sqrt{\frac{2\pi\,\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}-\frac{v^2}{c^2}}\right),\beta\right]$$

$$\left\{\left\{\beta\to\texttt{ArcSin}\left[\frac{-c^5\,r\,\theta+c^2\,r^2\,v^2\,\sqrt{(4\pi-\theta)\,\theta}}{2\,c^4\,\pi\,r^2}\right]\right\},\left\{\beta\to\texttt{ArcSin}\left[\frac{c^5\,r\,\theta+c^2\,r^2\,v^2\,\sqrt{(4\pi-\theta)\,\theta}}{2\,c^4\,\pi\,r^2}\right]\right\}\right\}$$

```
c := (2.99792458 * 10 ^ 8)
```

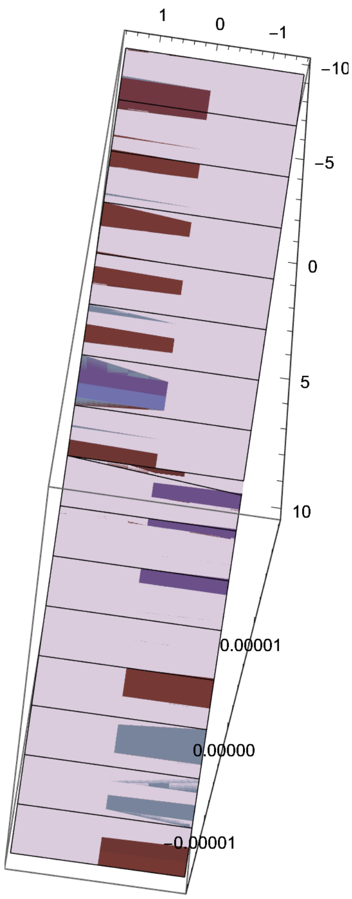
$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)$$

$$\texttt{SphericalPlot3D}\left[\texttt{ArcSin}\left[\frac{-c^5\ \theta+c^2\,v^2\,\sqrt{(4\pi-\theta)\ 2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}}{2\,c^4\,\pi}\right],\right.$$

$$\left.\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

−0.0002 0.0005

```
RevolutionPlot3D[ArcSin[(-c^5 r θ + c^2 r^2 v^2 Sqrt[(4 π - θ) θ])/(2 c^4 π r^2)], {r, -10, 10}, {θ, -4 π, 4 π}]
```



$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\,\pi}\right]\right\}\right\} \tag{44}$$

```
Solve[ArcSin[(c^5 r θ + c^2 r^2 v^2 Sqrt[(4 π - θ) θ])/(2 c^4 π r^2)] == ArcSin[Sqrt[(4 π - θ) θ]/(2 π)], θ]
```

Addendum No. 2

$$\theta \to \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2} \tag{45}$$

$$\text{Solve}\left[\theta == \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}, r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}\right\}$$

$$\theta \to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right) \tag{46}$$

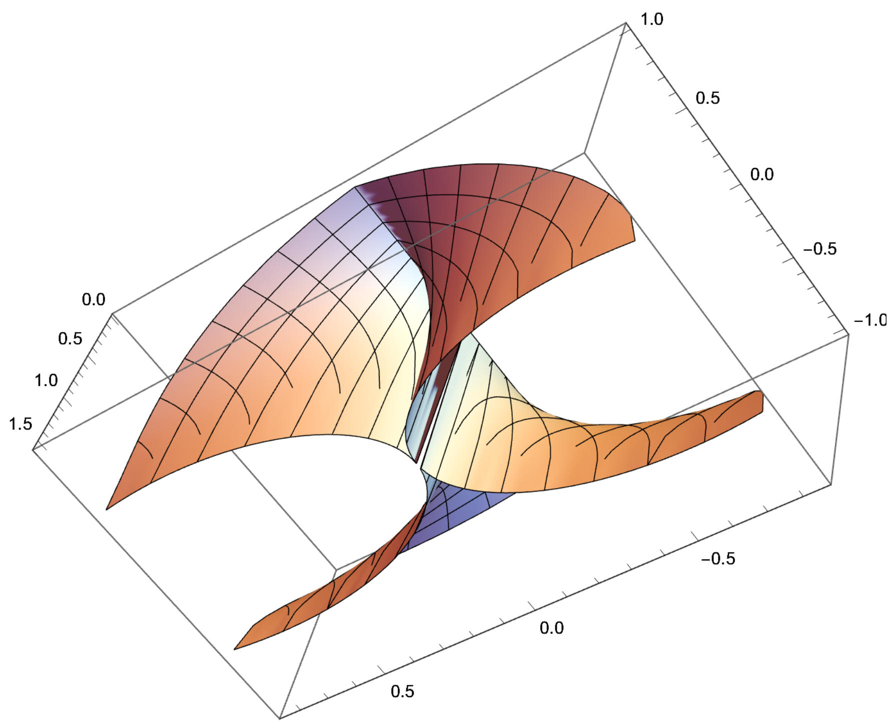
$$\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2} == 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right) \tag{47}$$

$$\eta \to \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi} \tag{48}$$

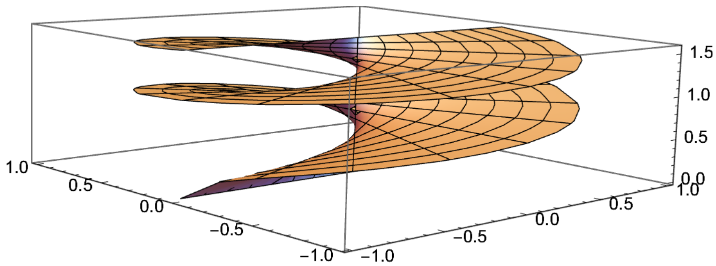
$$\text{Solve}\left[\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2} == 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}\right\}$$

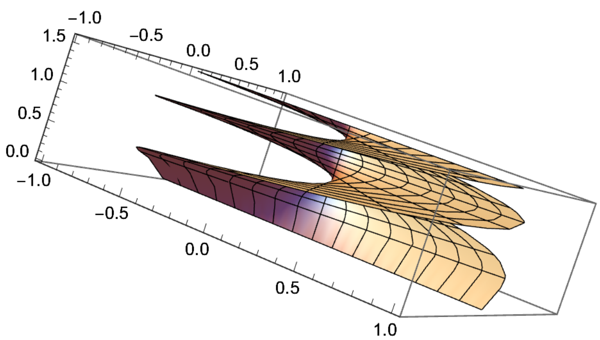
$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right], \{r, -1, 1\}, \{\eta, -1, 1\}\right]$$



$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\sqrt{\frac{\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}{r^2}}\right], \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$

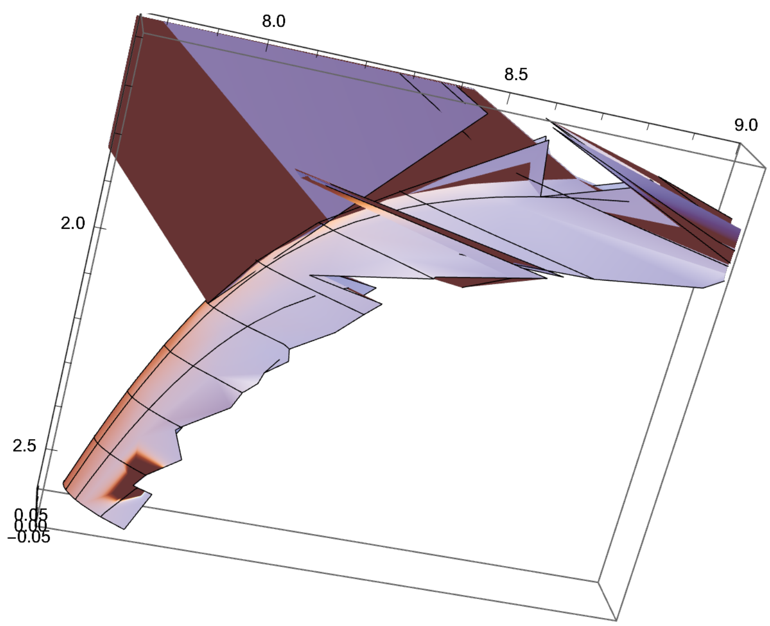


$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\sqrt{\frac{(\eta)^2}{\left(\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2}}\right], \{\eta, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



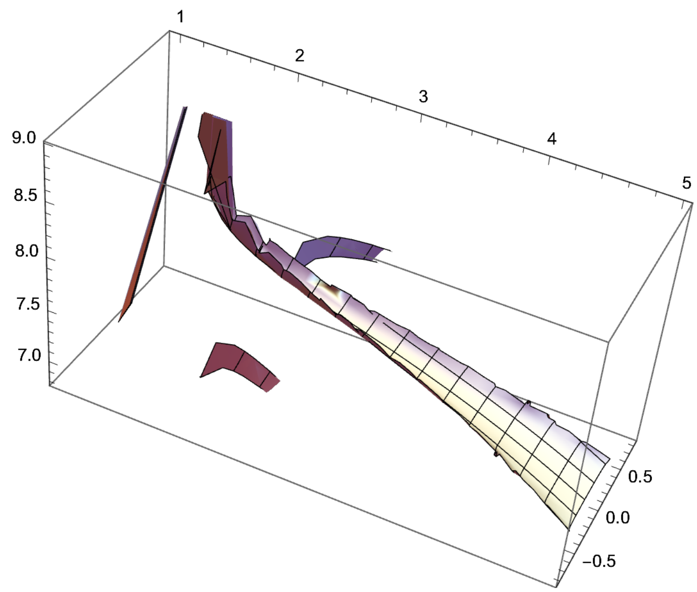
Grasshopper Batman Helmet

$$\text{SphericalPlot3D}\Big[\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6\,\text{Sin}[\beta]^6\right)}\right)^{1/3}, \{\theta, -.1\pi, .1\pi\}, \{\beta, -.05\pi, .05\pi\}\Big]$$

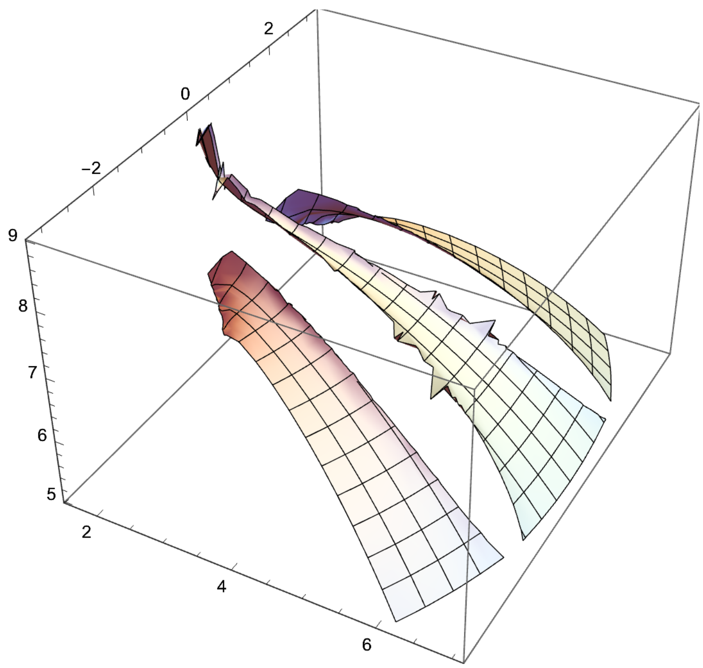


SphericalPlot3D[

$$\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6\,\text{Sin}[\beta]^6\right)}\right)^{1/3}, \{\theta, -.2\pi, .2\pi\}, \{\beta, -.1\pi, .1\pi\}]$$



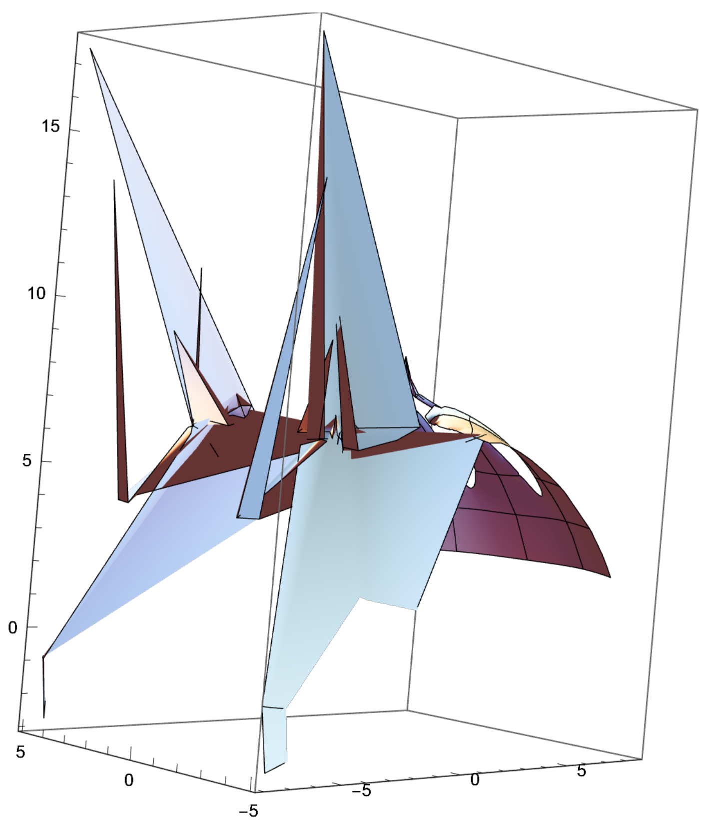
$$\text{SphericalPlot3D}\Big[\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6 \text{Sin}[\beta]^6\right)}\right)^{1/3}, \{\theta, -.3\pi, .3\pi\}, \{\beta, -.15\pi, .15\pi\}\Big]$$



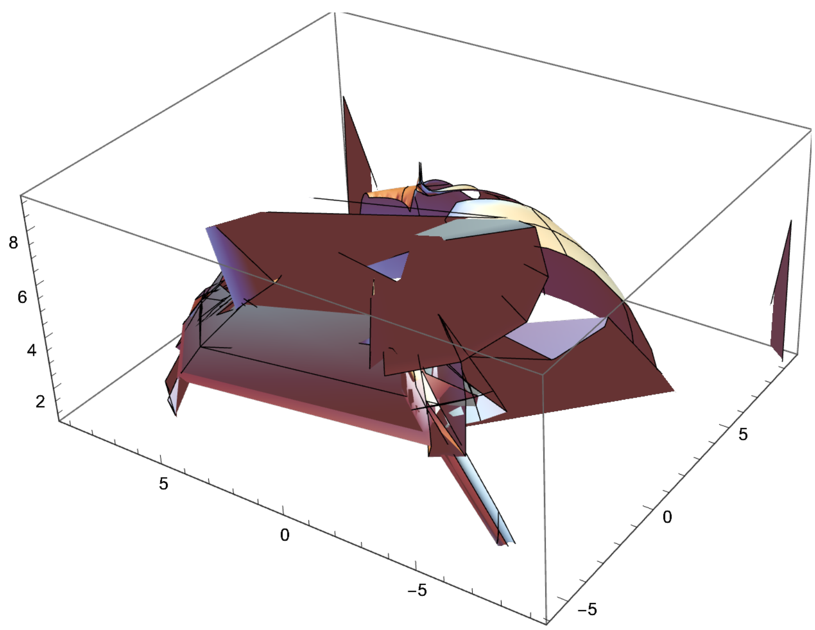
```
SphericalPlot3D[
```

$$\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\mathrm{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) +$$

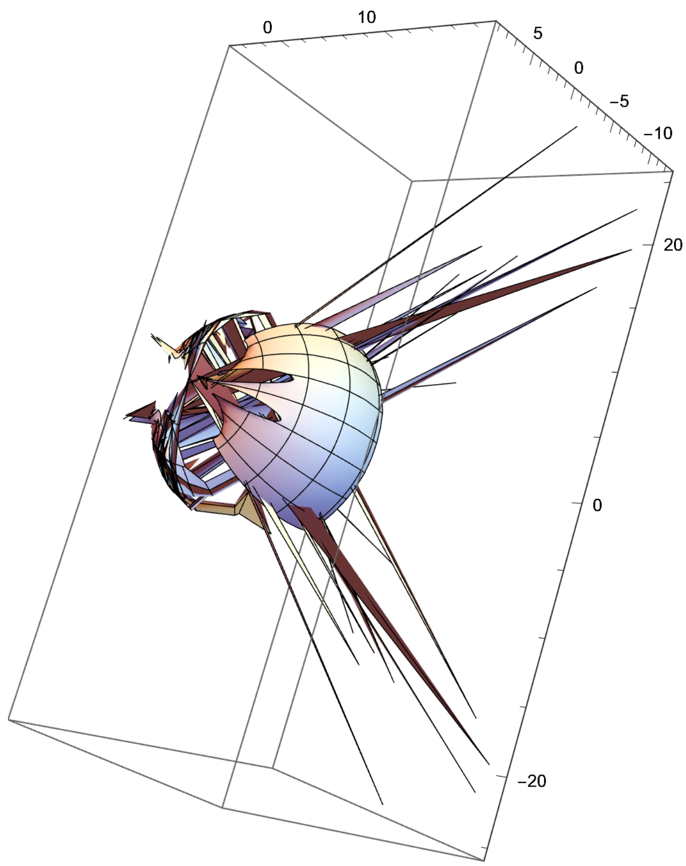
$$\frac{2}{3}\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6\,\mathrm{Sin}[\beta]^6\right)}\right)^{1/3}, \{\theta, -.4\pi, .4\pi\}, \{\beta, -.2\pi, .2\pi\}\Big]$$



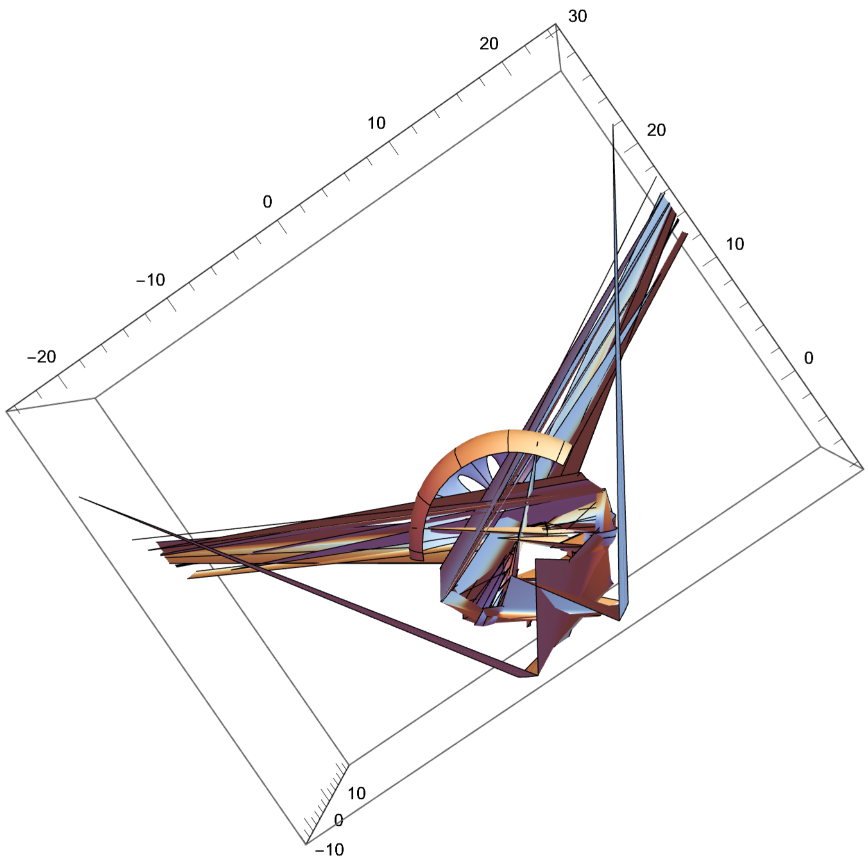
```
SphericalPlot3D[
 4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
  (6 (-π^3 + 18 π^3 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^2 + 3 Sqrt[3]
        Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^6])^(1/3)) +
  2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[(-π^6 Sin[β]^2 + 11 π^6 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^4 +
        π^6 Sin[β]^6)])^(1/3), {θ, -.5 π, .5 π}, {β, -.25 π, .25 π}]
```



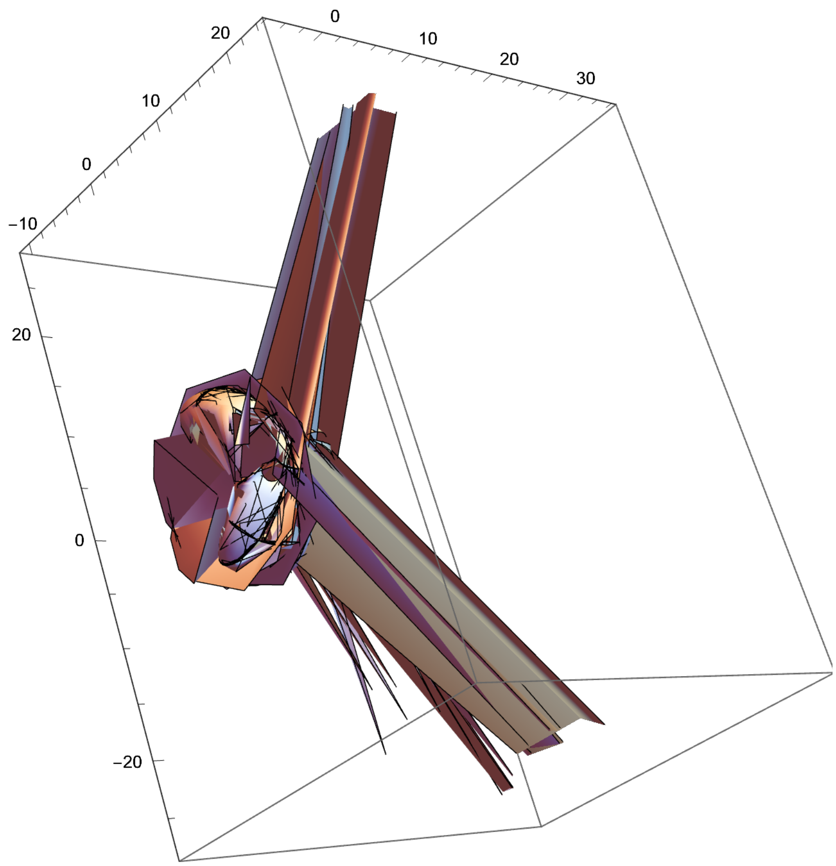
$$\text{SphericalPlot3D}\Big[\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6\,\text{Sin}[\beta]^6\right)}\right)^{1/3}, \{\theta, -.6\pi, .6\pi\}, \{\beta, -.3\pi, .3\pi\}\Big]$$



$$\mathrm{SphericalPlot3D}\Big[\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^6}\,\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\left(-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^4 + \pi^6\,\mathrm{Sin}[\beta]^6\right)}\right)^{1/3},\ \{\theta,\ -.7\,\pi,\ .7\,\pi\},\ \{\beta,\ -.35\,\pi,\ .35\,\pi\}\Big]$$



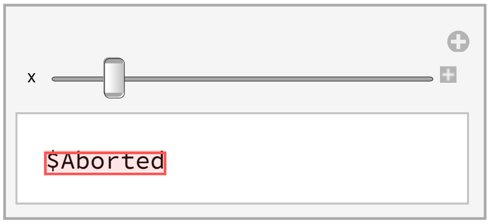
$$\text{SphericalPlot3D}\Big[\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^4 + \pi^6\,\text{Sin}[\beta]^6\right)}\right)^{1/3},\ \{\theta, -.8\pi, .8\pi\},\ \{\beta, -.4\pi, .4\pi\}\Big]$$



$$\text{Solve}[n\,\pi\,\theta == m\,\pi\,r - m\,\pi\,x,\ n]$$

$$\left\{\left\{n \to \frac{m\,r - m\,x}{\theta}\right\}\right\}$$

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{m\,r - m\,x}{\theta},\ \{m, -10, 10\},\ \{r, -10, 10\},\ \{\theta, -2\pi, 2\pi\}\right],\ \{x, -10, 10\}\right]$$



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

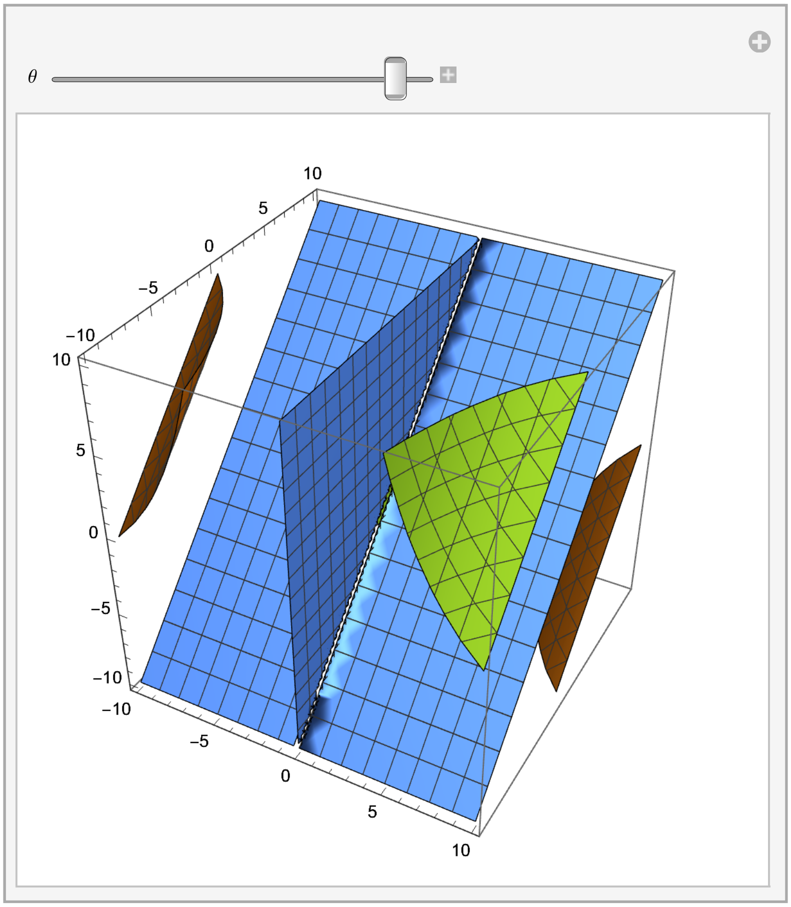
General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

```
Manipulate[
 ContourPlot3D[(m r - m x)/θ, {m, -10, 10}, {x, -10, 10}, {r, -10, 10}], {θ, -2 π, 2 π}]
```

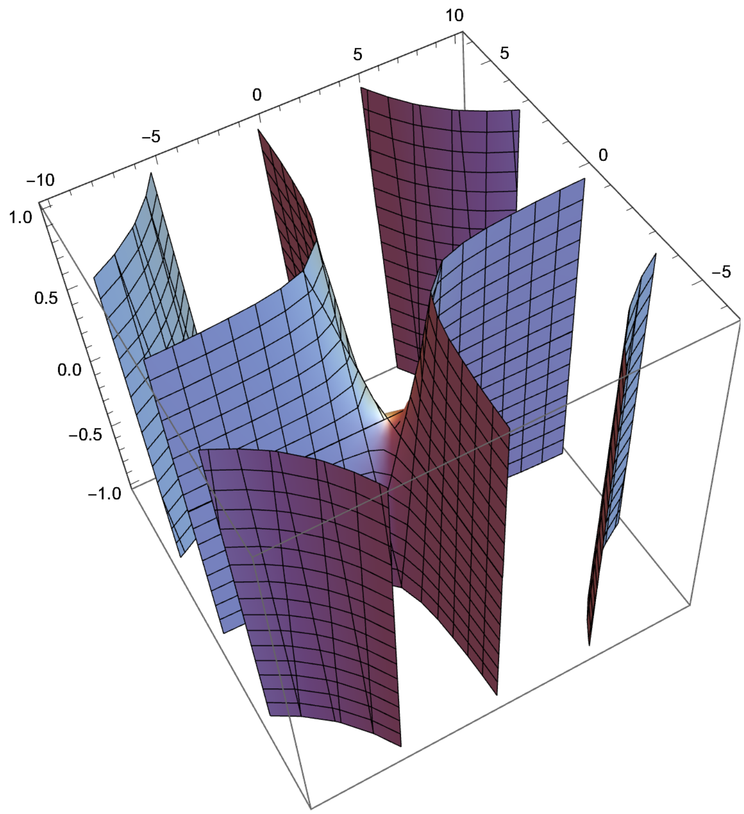


$$\frac{m\,r - m\,x}{\theta}$$

```
Solve[n π θ == 2 π r - 2 π x, r]
```

$$\left\{\left\{r \to \frac{1}{2}\,(2\,x + n\,\theta)\right\}\right\}$$

```
ContourPlot3D[1/2 (2 x + n θ), {x, -1, 1}, {n, -10, 10}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\Bigg[\Bigg(\left(8\pi r\theta - 2r\theta^2\right)\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta] + 8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta} - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi + 2\theta + \frac{\pi\,(4\pi-2\theta)\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\pi-\theta)^2} + \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\Bigg)\Big/$$

$$\left(2\pi\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^3\right) -$$

$$\Bigg(\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\left(\frac{\pi\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$

$$\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$

$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\Bigg)\Big/$$

$$\Bigg(4\pi\,\sqrt{4\pi r^2\theta-r^2\theta^2}\,\Bigg(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)-$$

$$\Bigg(\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\Bigg(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]$$

$$\mathrm{Sin}[\beta]-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\Bigg)\Big/$$

$$\Bigg(4\pi\,\sqrt{4\pi r^2\theta-r^2\theta^2}\,\Bigg(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)+$$

$$\Bigg(\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-$$

$$\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\Bigg)\Big/$$

$$\Bigg(8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}\Bigg(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)-$$

$$\Bigg((8\pi r-4r\theta)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^{2}\,\text{Cos}[\beta]\;\text{Sin}[\beta]-$$

$$\frac{6\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\;\text{Sin}[\beta]^{2}}{4\,\pi-\theta}-\frac{6\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\;\text{Sin}[\beta]^{2}}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\Bigg(4\,\pi\,\sqrt{4\,\pi\,r^{2}\,\theta-r^{2}\,\theta^{2}}\;\Bigg(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^{2}\,\text{Sin}[\beta]^{2}-$$

$$\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta}\Bigg)^{2}\Bigg)-$$

$$\Bigg(\left(8\,\pi\,r\,\theta-2\,r\,\theta^{2}\right)\,\left(-32\,\pi^{3}\,\text{Cos}[\beta]\;\text{Sin}[\beta]+16\,\pi^{2}\,\theta\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\;\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^{2}\,(4\,\pi-2\,\theta)\;\text{Sin}[\beta]^{3}}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^{2}\,(4\,\pi-2\,\theta)\;\text{Sin}[\beta]^{3}}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{(4\,\pi-\theta)^{2}}+\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta^{2}}\Bigg)\Bigg)\Bigg/$$

$$\Bigg(4\,\pi\,\sqrt{4\,\pi\,r^{2}\,\theta-r^{2}\,\theta^{2}}\;\Bigg(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^{2}\,\text{Sin}[\beta]^{2}-$$

$$\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta}\Bigg)^{2}\Bigg)+$$

$$\left(4\,\pi\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^{2}\right)\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)\Bigg/\Bigg(\sqrt{4\,\pi\,r^{2}\,\theta-r^{2}\,\theta^{2}}\;\Bigg(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\text{Sin}[\beta]+4\,\pi^{2}\,\text{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta}\Bigg)\Bigg)-$$

$$\left(\left(4\,\pi\,r^{2}-2\,r^{2}\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^{2}\right)\,\left(-32\,\pi^{3}\,\text{Cos}[\beta]\;\text{Sin}[\beta]+16\,\pi^{2}\,\theta\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)\right)\Bigg/$$

$$\Bigg(8\,\pi\,\left(4\,\pi\,r^{2}\,\theta-r^{2}\,\theta^{2}\right)^{3/2}\,\Bigg(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+$$

$$4\,\pi^{2}\,\text{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta}\Bigg)\Bigg)+$$

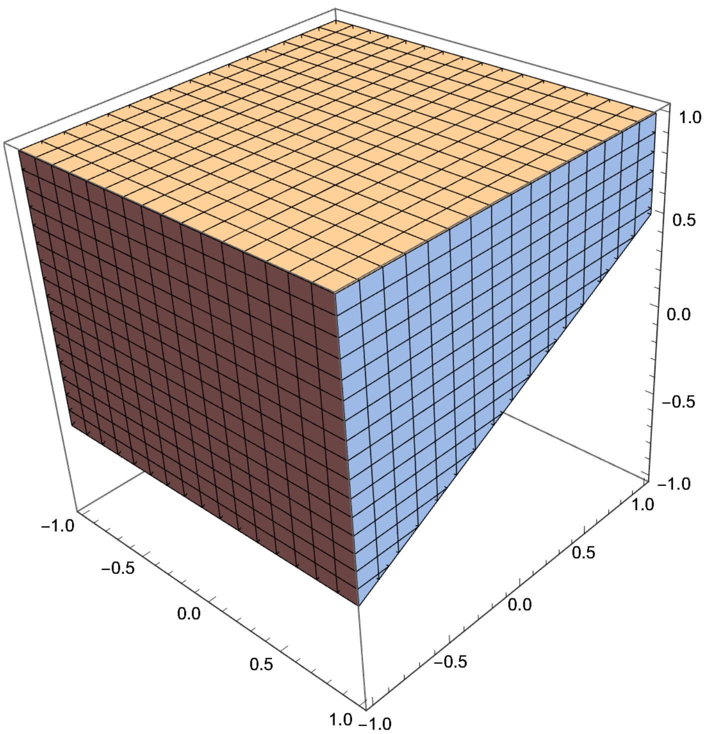
$$\left((8\,\pi\,r-4\,r\,\theta)\,\left(-32\,\pi^{3}\,\text{Cos}[\beta]\;\text{Sin}[\beta]+16\,\pi^{2}\,\theta\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)\right)\Bigg/$$

$$\Bigg(4\,\pi\,\sqrt{4\,\pi\,r^{2}\,\theta-r^{2}\,\theta^{2}}\;\Bigg(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^{2}\,\text{Sin}[\beta]^{2}-$$

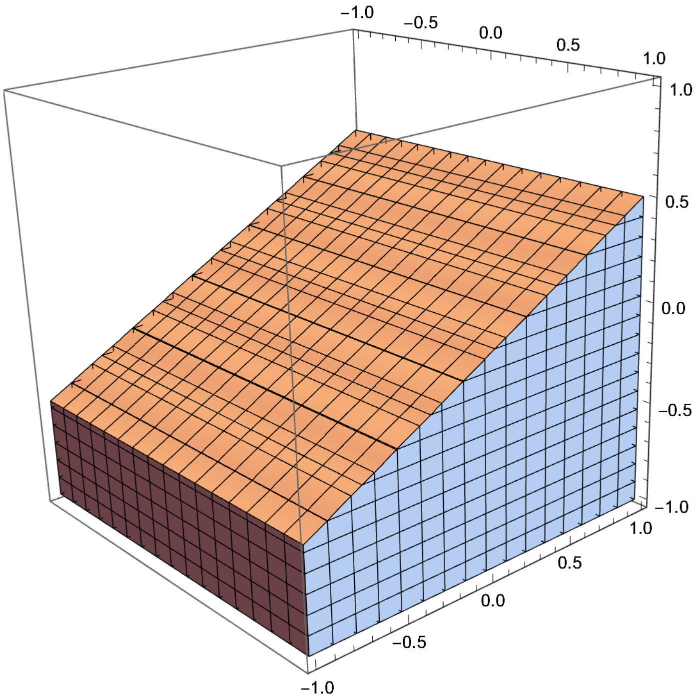
$$\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^{3}}{\theta}\Bigg)\Bigg)==$$

$$\left(r - \frac{r\,\theta}{2\,\pi}\right) \Big/ \left(\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)\right),\ r\Big]$$

RegionPlot3D$\left[\overline{AC} < \overline{AB} + \overline{DE},\ \{\overline{AB}, -1, 1\},\ \{\overline{AC}, -1, 1\},\ \{\overline{DE}, -1, 1\}\right]$



RegionPlot3D$\left[\overline{AC} \geq \overline{AB} + \overline{DE}, \{\overline{AB}, -1, 1\}, \{\overline{AC}, -1, 1\}, \{\overline{DE}, -1, 1\}\right]$



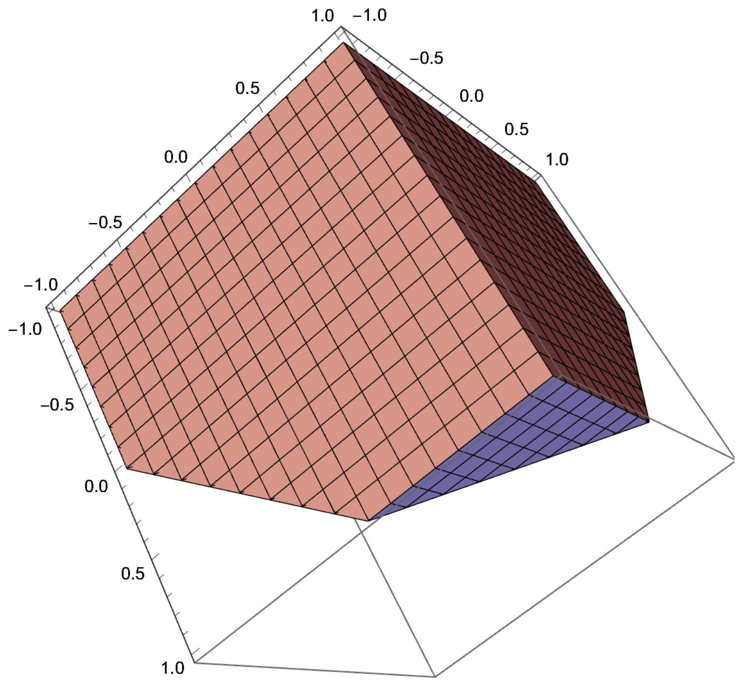
RegionPlot3D$\left[g > \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}, \{r, -1, 1\}, \{g, -1, 1\}, \{\theta, -1, 1\}\right]$

Greater::nord : Invalid comparison with $-1.15915 + 0.586208\,i$ attempted. ≫

RegionPlot3D::boolf : $g > \frac{\sqrt{4\pi r^2 \theta - \text{Power}[\ll 2 \gg]\,\text{Power}[\ll 2 \gg]}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}$ must be a Boolean function. ≫

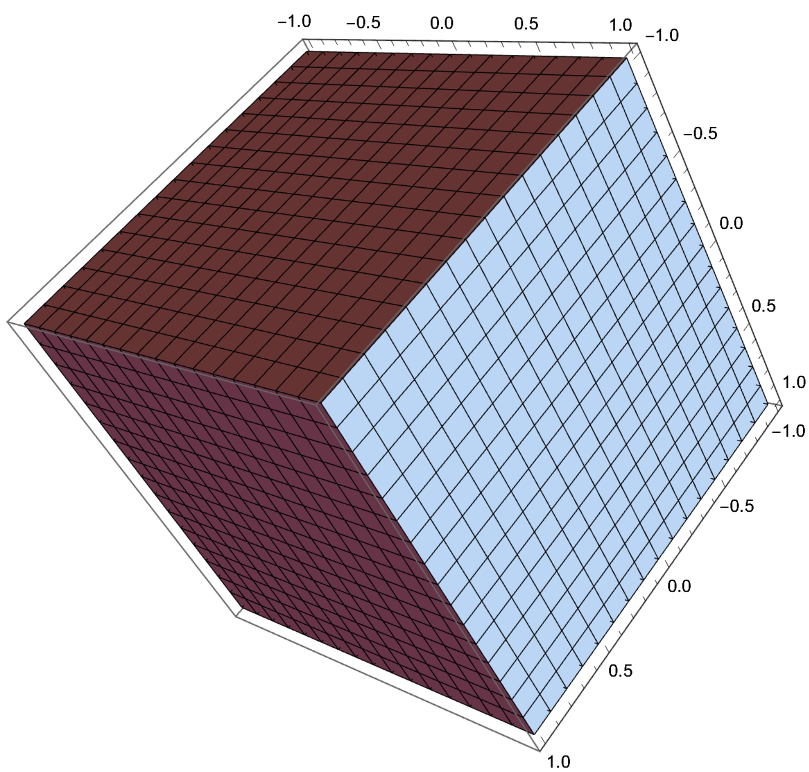
RegionPlot3D$\left[g > \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}, \{r, -1, 1\}, \{g, -1, 1\}, \{\theta, -1, 1\}\right]$

```
RegionPlot3D[AC ≥ AB + DE, {AB, -1, 1}, {AC, -1, 1}, {DE, -1, 1}]
```

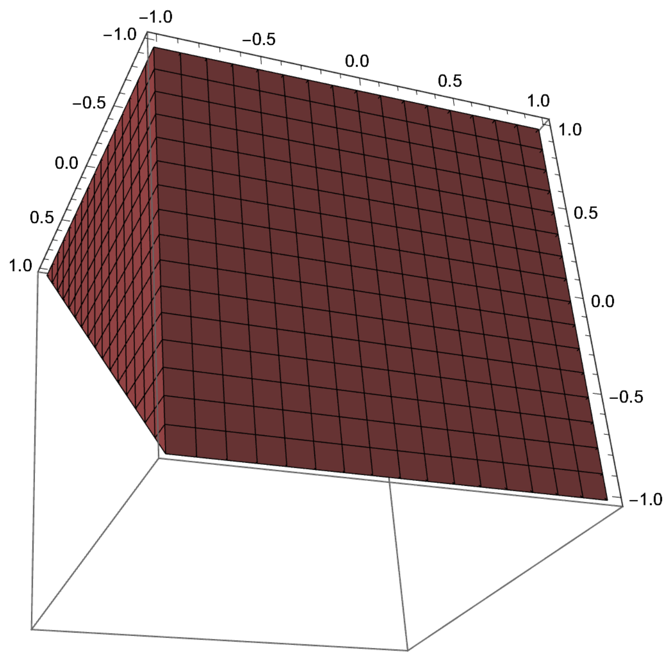


RegionPlot3D[$\overline{AC}$ ≥ $\overline{AB}$ + $\overline{DE}$, {$\overline{AB}$, -1, 1}, {$\overline{AC}$, -1, 1}, {$\overline{DE}$, -1, 1}]

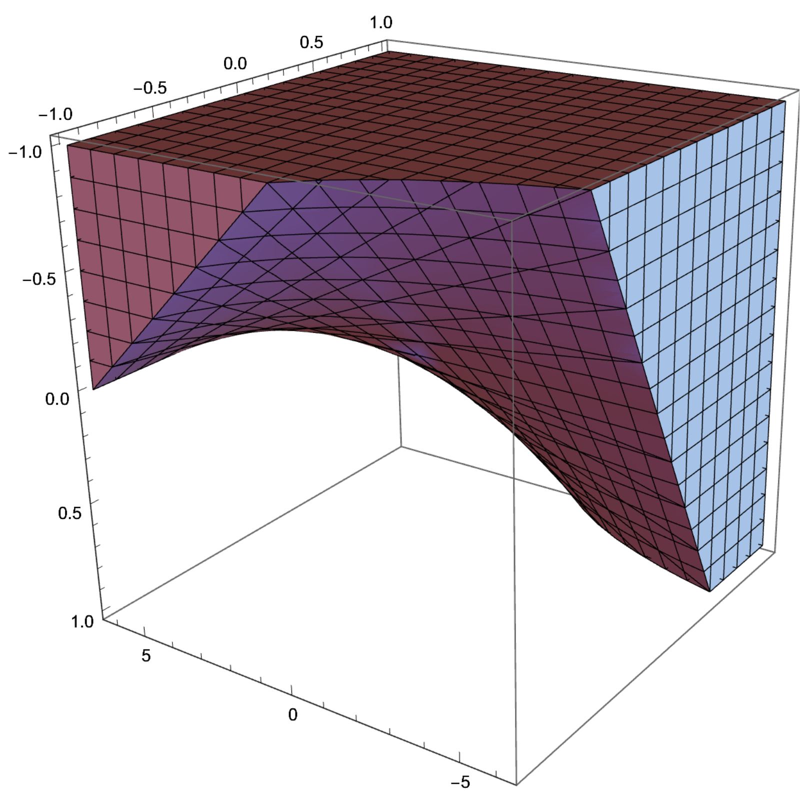
RegionPlot3D[$\overline{AB}$ + $\overline{BC}$ ≥ $\overline{AB}$ + $\overline{DE}$, {$\overline{AB}$, -1, 1}, {$\overline{BC}$, -1, 1}, {$\overline{DE}$, -1, 1}]



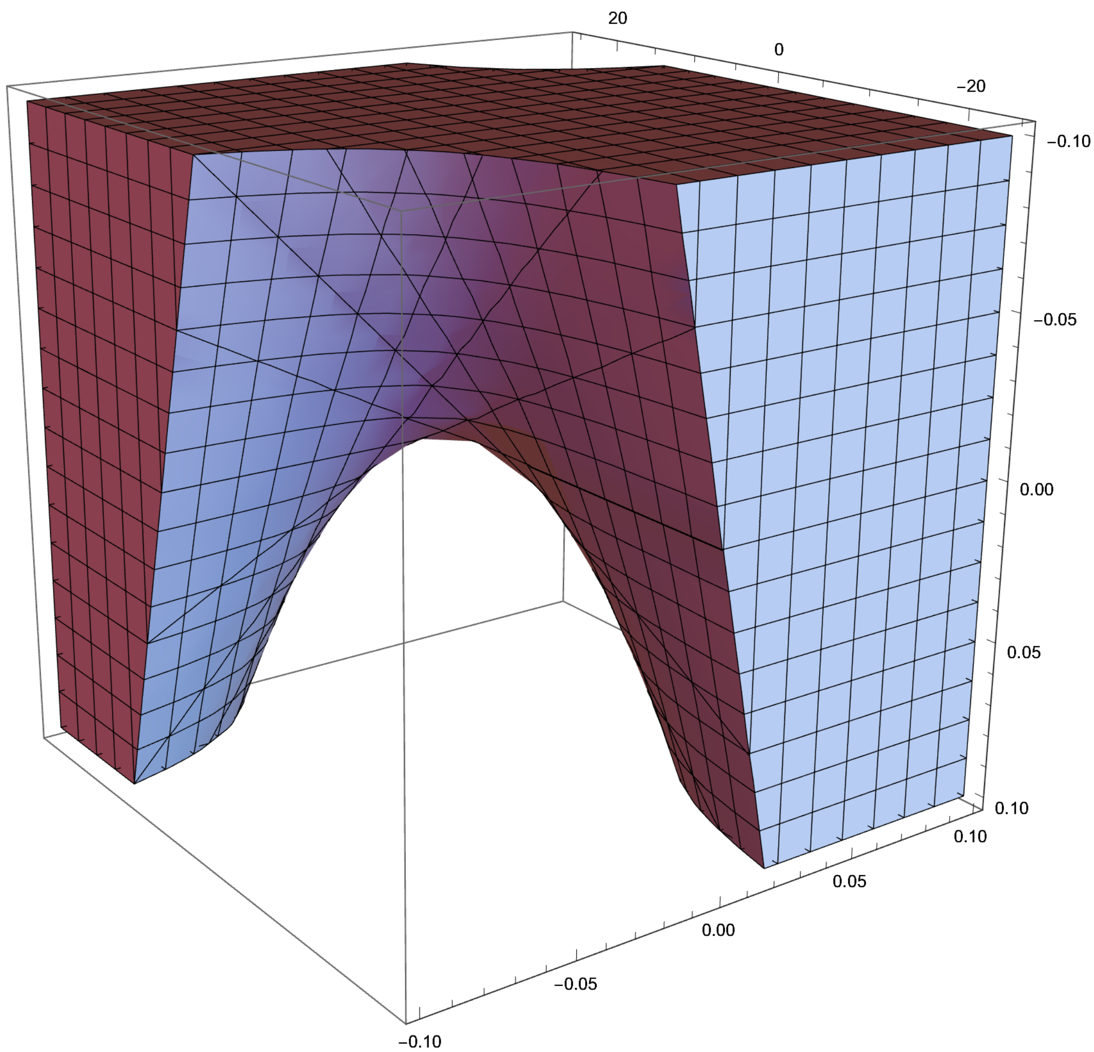
```
RegionPlot3D[AB + BC < AB + DE, {AB, -1, 1}, {BC, -1, 1}, {DE, -1, 1}]
```




```
RegionPlot3D[2 π r - 2 π x > θ r, {r, -1, 1}, {x, -1, 1}, {θ, -2 π, 2 π}]
```




```
RegionPlot3D[2 π r - 2 π x > θ r, {r, -.1, .1}, {x, -.1, .1}, {θ, -8 π, 8 π}]
```


20
0
−20
−0.10
−0.05
0.00
0.05
0.10
0.10
0.05
0.00
−0.05
−0.10

$$\text{RegionPlot3D}\Big[2\pi\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right)-2\pi x<\theta\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right),\{\beta,-\pi,\pi\},\{x,-1,1\},\{\theta,-2\pi,2\pi\}\Big]$$

Less::nord : Invalid comparison with $6.03319+1.76763\times10^{-17}\,i$ attempted. ≫

RegionPlot3D::boolf : $\frac{2\pi\left(-4\pi\theta+\theta^2+2\ll3\gg+\ll1\gg-\ll1\gg-2\ll3\gg\text{Power}[\ll2\gg]\right)}{\ll6\gg+8\,\text{Power}[\ll2\gg]\,\theta\,\text{Power}[\ll2\gg]}-2\pi x<\frac{\theta(\ll1\gg)}{\ll1\gg}$ must be a Boolean function. ≫

$$\text{RegionPlot3D}\Big[\left(2\pi\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)-2\pi x<\left(\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right),\{\beta,-\pi,\pi\},\{x,-1,1\},\{\theta,-2\pi,2\pi\}\Big]$$

$$\text{RegionPlot3D}\Big[2\pi r-2\pi\,\frac{2\pi r-r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\pi}<2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)r,\{r,-1,1\},\{\beta,-\pi/2,\pi/2\},\{\theta,-4\pi,4\pi\}\Big]$$

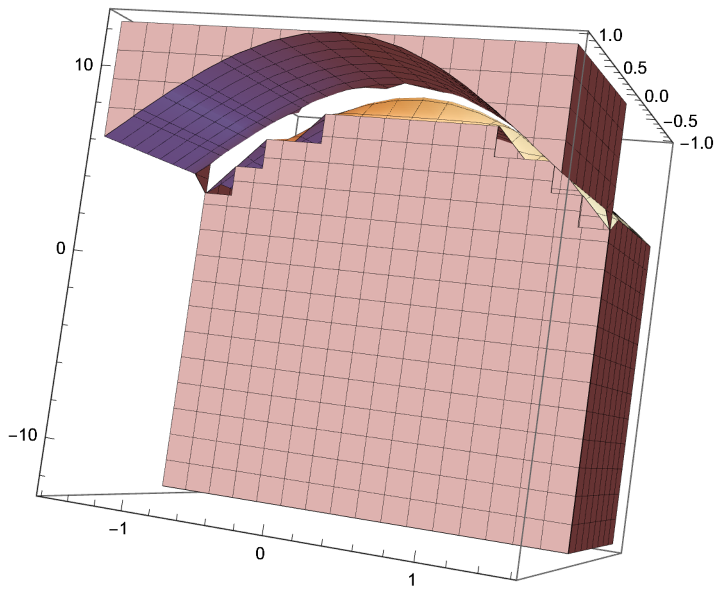
$$\texttt{RegionPlot3D}\left[2\,\pi\,\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}-2\,\pi\,x>\theta\,\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{x,\,-1,\,1\},\ \{\eta,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

Greater::nord : Invalid comparison with 6.28319 + 3.6276 i attempted. ≫

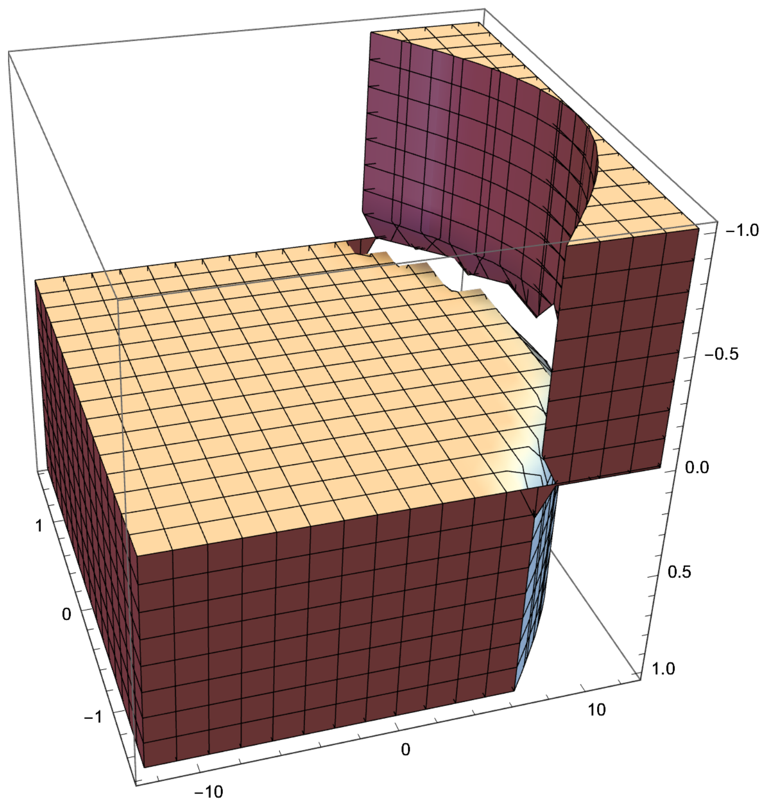
RegionPlot3D::boolf : $\frac{2\,\pi\,(2\,\pi\,\eta)}{\sqrt{\text{Times}[\ll 3\gg]+\text{Times}[\ll 2\gg]}}-2\,\pi\,x>\frac{\theta\,(2\,\pi\,\eta)}{\sqrt{4\,\pi\,\theta-\text{Power}[\ll 2\gg]}}$ must be a Boolean function. ≫

$$\texttt{RegionPlot3D}\left[\frac{2\,\pi\,(2\,\pi\,\eta)}{\sqrt{4\,\pi\,\theta-\theta^2}}-2\,\pi\,x>\frac{\theta\,(2\,\pi\,\eta)}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{x,\,-1,\,1\},\ \{\eta,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

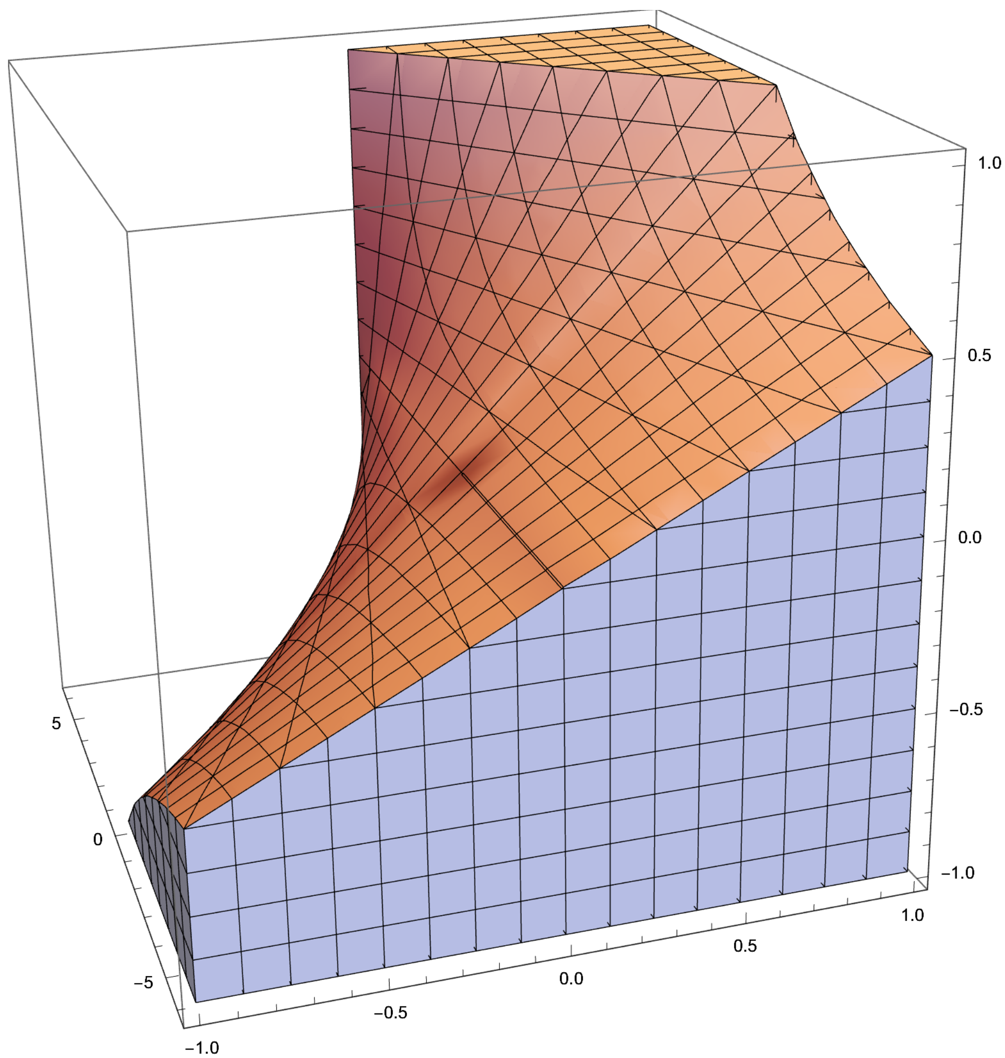
$$\texttt{RegionPlot3D}\left[2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}>2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)r,\ \{r,\,-1,\,1\},\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-4\,\pi,\,4\,\pi\}\right]$$



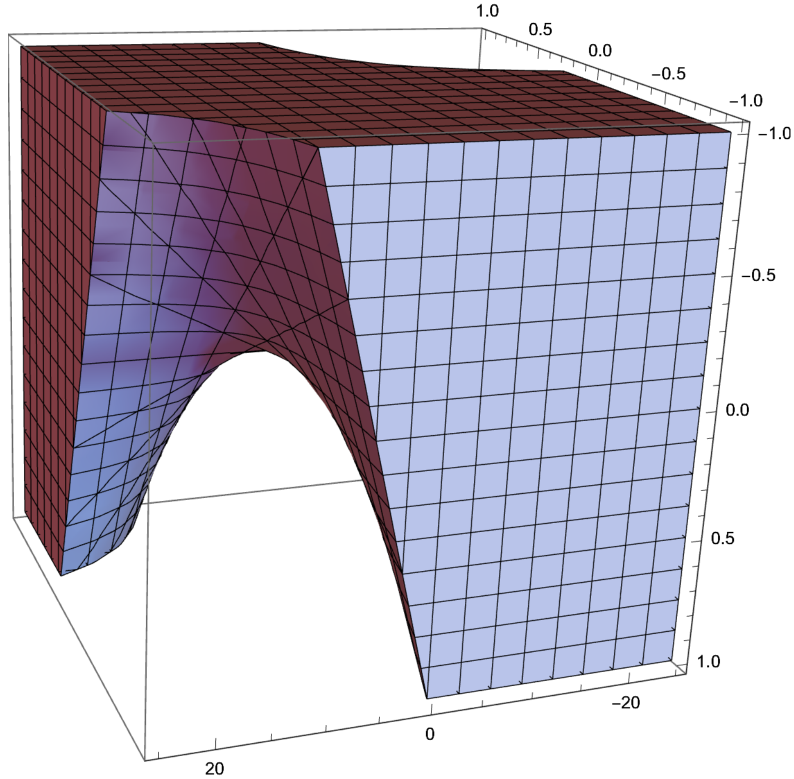
```
RegionPlot3D[2 π r - 2 π (2 π r - r θ)/(2 π) < 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) r,
 {r, -1, 1}, {β, -π / 2, π / 2}, {θ, -4 π, 4 π}]
```




```
RegionPlot3D[2 π r - 2 π x < θ r, {r, -1, 1}, {x, -1, 1}, {θ, -2 π, 2 π}]
```

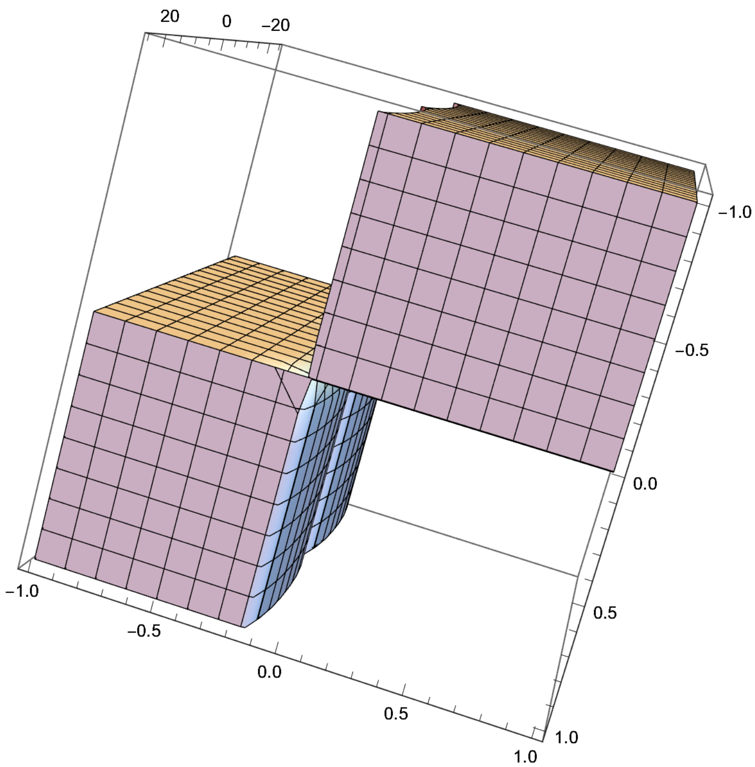

1.0
0.5
0.0
−0.5
−1.0
5
0
−5
−1.0
−0.5
0.0
0.5
1.0

```
RegionPlot3D[2 π r + 2 π x < θ r, {r, -1, 1}, {x, -1, 1}, {θ, -8 π, 8 π}]
```

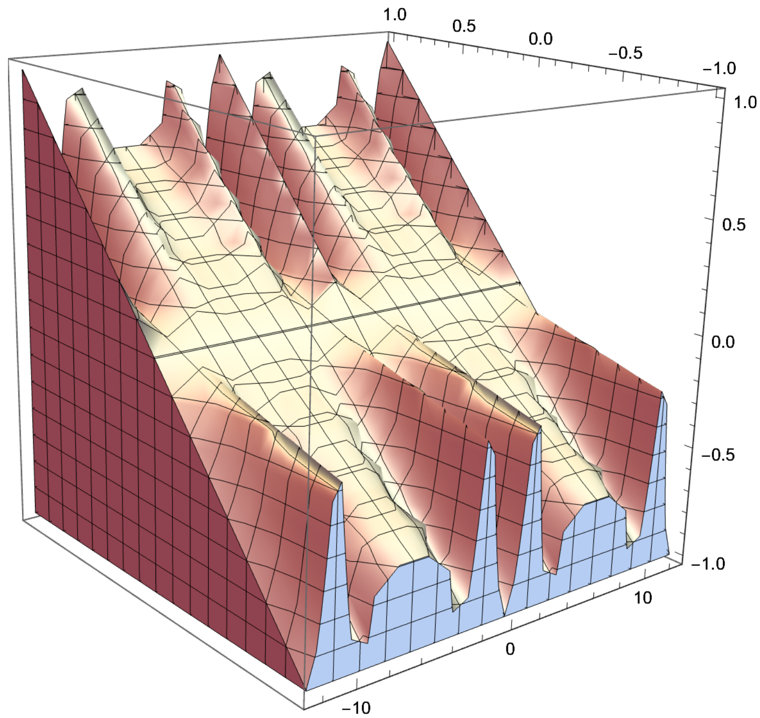


$$\text{RegionPlot3D}\Big[2\,\pi\,r + 2\,\pi\,x\left(\frac{4\,\pi}{3} - \frac{-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) r,$$

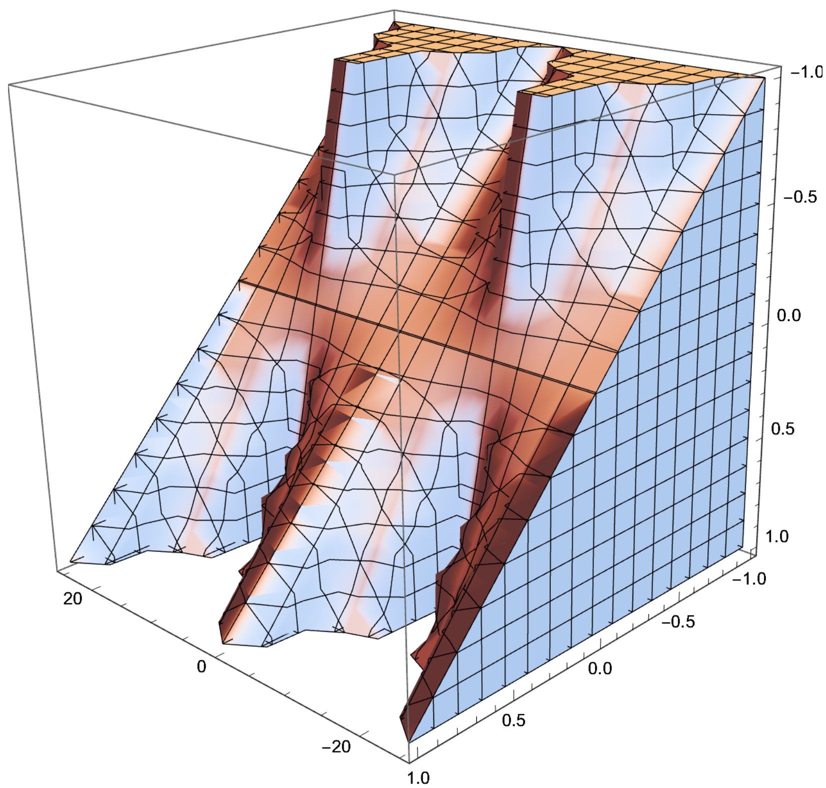
$$\{r, -1, 1\}, \{x, -1, 1\}, \{\beta, -8\,\pi, 8\,\pi\}\Big]$$



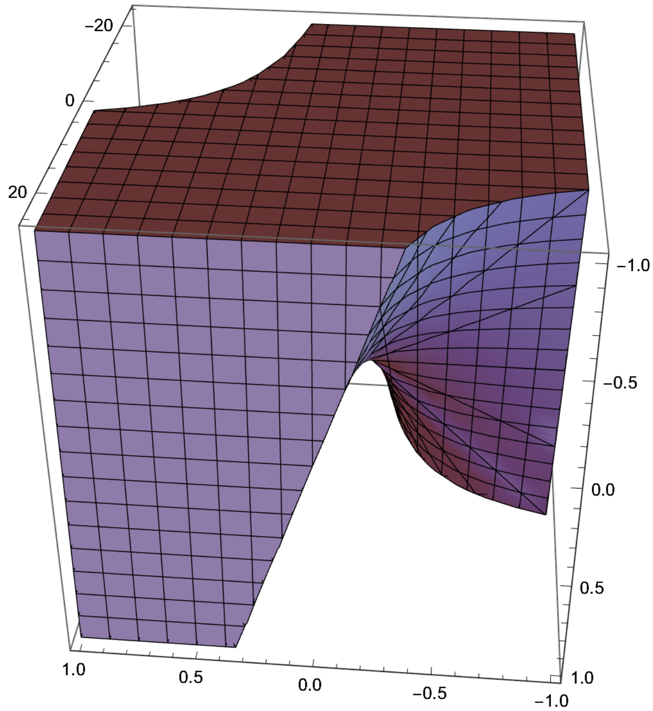
```
RegionPlot3D[2 π r + 2 π x ≤ (2 (π + √(π^2 - π^2 Sin[β]^2))) r,
 {r, -1, 1}, {x, -1, 1}, {β, -4 π, 4 π}]
```



```
RegionPlot3D[2 π r + 2 π x ≤ (2 (π + √(π^2 - π^2 Sin[β]^2))) r,
 {r, -1, 1}, {x, -1, 1}, {β, -8 π, 8 π}]
```



```
RegionPlot3D[2 π r + 2 π x ≤ θ r, {r, -1, 1}, {x, -1, 1}, {θ, -8 π, 8 π}]
```




```
Cos[α]^2 + Sin[α]^2
```

$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2$

$$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2 == 2\,\pi\,\frac{\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta\text{^}2}}$$

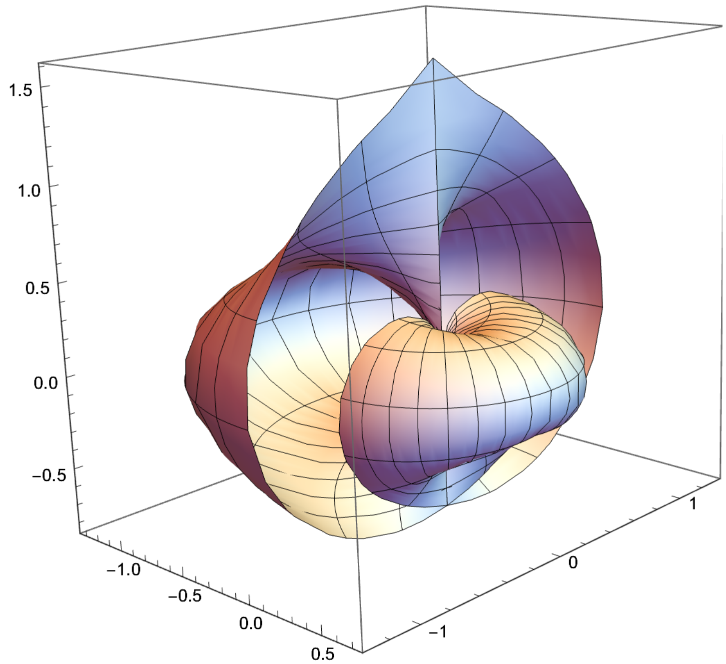
$$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Solve}\left[\text{Cos}[\theta]^2 + \text{Sin}[\theta]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \beta\right]$$

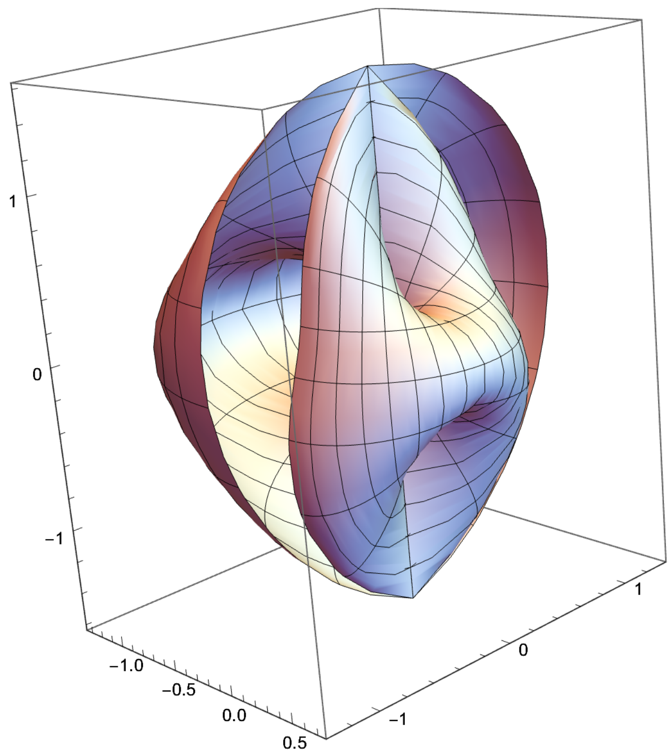
Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Cos}[\theta]^2 + \sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\theta]^2}{2\,\pi}\right]\right\}\right\}$$

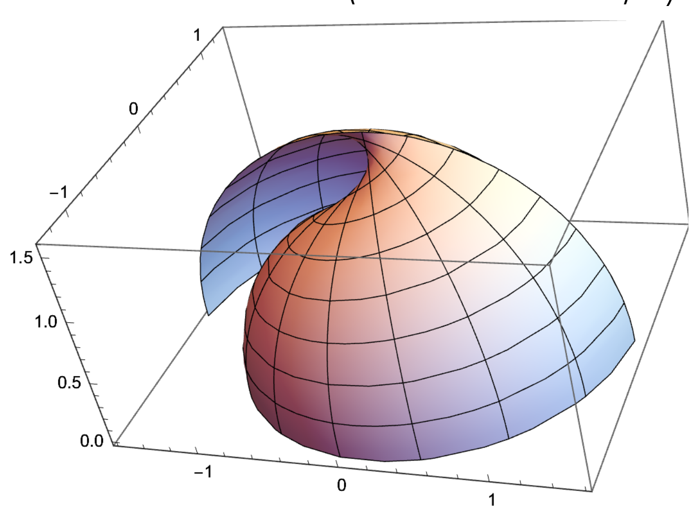
$$\text{SphericalPlot3D}\Big[\text{ArcSin}\Big[\frac{\sqrt{\left(4\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}\;\text{Cos}[\theta]^2 + \sqrt{(4\pi - \theta)\,\theta}\;\text{Sin}[\theta]^2}{2\pi}\Big],\ \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$



```
SphericalPlot3D[
 ArcSin[1/(2 π) (Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] Cos[θ]^2 +
     Sqrt[(4 π - θ) θ] Sin[θ]^2)], {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[ArcSin[1/(2 π) (Sqrt[(4 π - θ) θ] Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2 +
     Sqrt[(4 π - θ) θ] Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2)], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

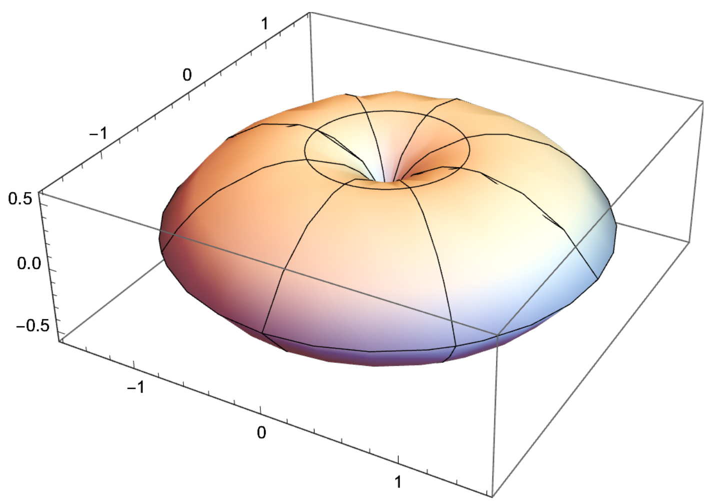


$$\text{Solve}\left[\text{Cos}[\alpha]^2+\text{Sin}[\alpha]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\ \theta}\ \text{Cos}[\alpha]^2+\sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\alpha]^2}{2\,\pi}\right]\right\}\right\}$$

$$\text{SphericalPlot3D}\Big[\text{ArcSin}\left[\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Cos}[\alpha]^2+\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Sin}[\alpha]^2\right)\right],\ \{\beta,-2\,\pi,2\,\pi\},\{\alpha,-2\,\pi,2\,\pi\}\Big]$$



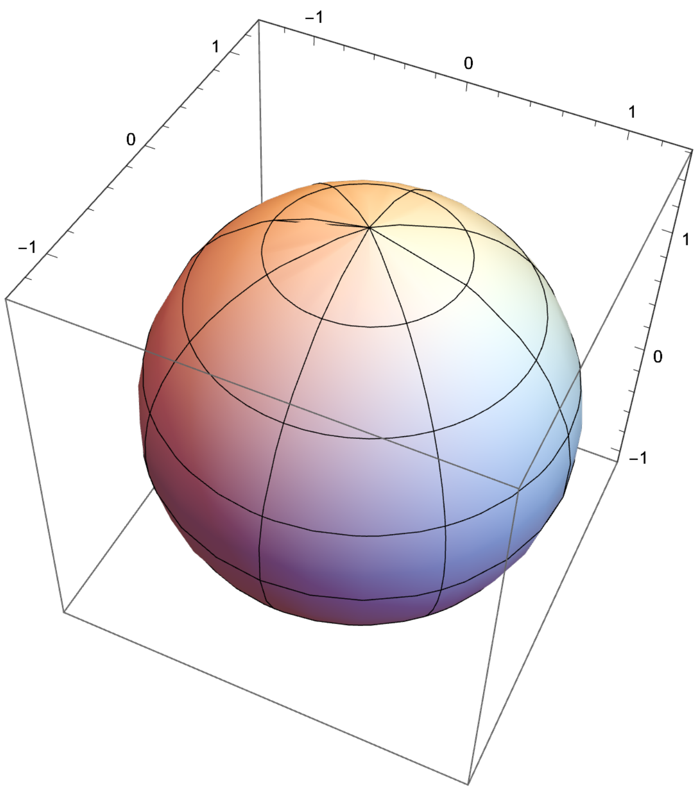
$$\texttt{SphericalPlot3D}\Big[\texttt{ArcSin}\Big[\frac{1}{2\,\pi}\left(\sqrt{\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^{2}-\pi^{2}\,\texttt{Sin}\Big[\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^{2}}\right)\right)\right.}\right.$$

$$\left.\left.2\left(\pi+\sqrt{\pi^{2}-\pi^{2}\,\texttt{Sin}\Big[\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^{2}}\right)\right)\right)\texttt{Cos}[\alpha]^{2}+$$

$$\sqrt{\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^{2}-\pi^{2}\,\texttt{Sin}\Big[\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^{2}}\right)\right)\right)2}$$

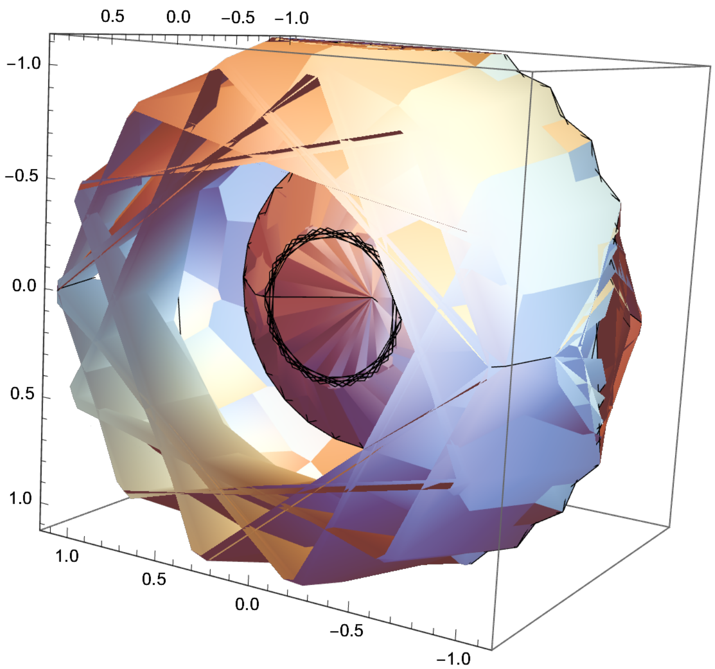
$$\left(\pi+\sqrt{\pi^{2}-\pi^{2}\,\texttt{Sin}\Big[\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]^{2}}\right)\Big)$$

$$\left.\texttt{Sin}[\alpha]^{2}\right)\Big],\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\alpha,\,-2\,\pi,\,2\,\pi\}\Big]$$

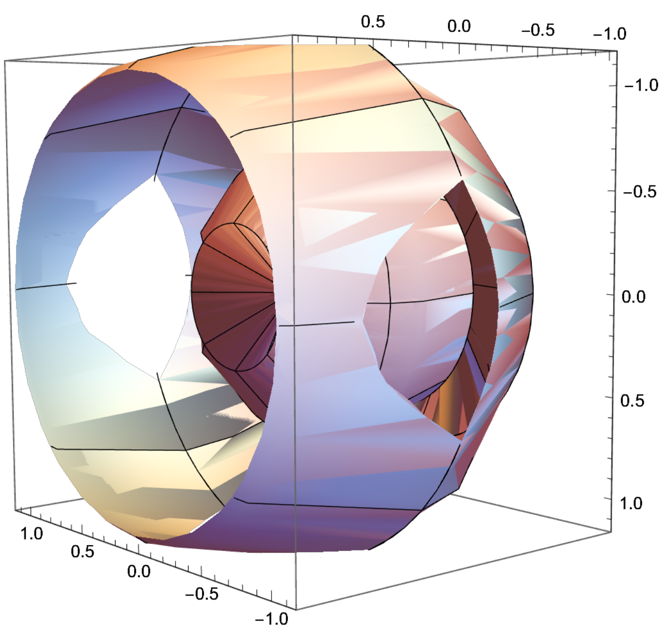


```
SphericalPlot3D[ArcSin[(Sqrt[(4 π - θ) θ] Cos[α]^2 + Sqrt[(4 π - θ) θ] Sin[α]^2)/(2 π)],
 {θ, -16 π, 16 π}, {α, -16 π, 16 π}]
```

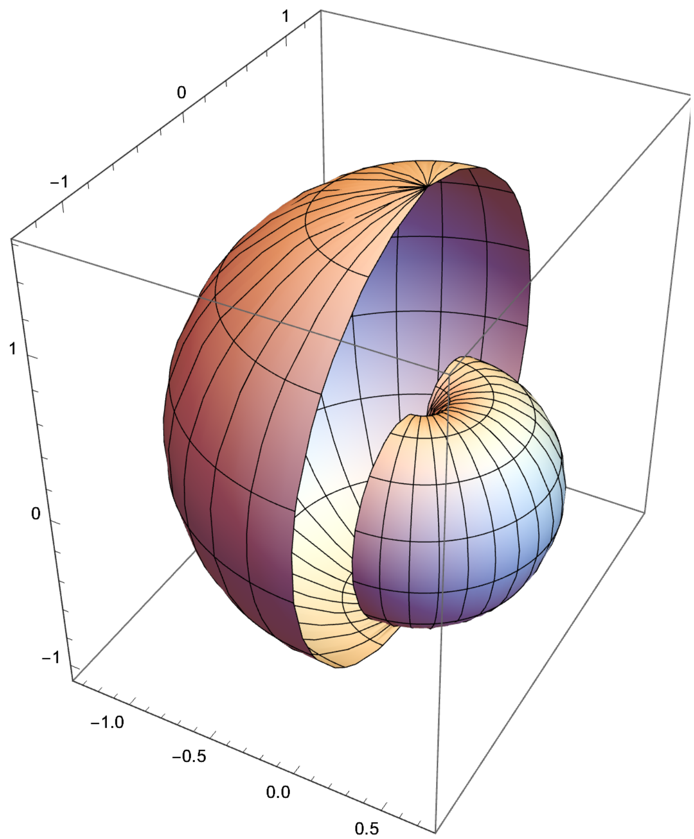
$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\alpha]^2}{2\pi}\right],\ \{\theta,-16\pi,16\pi\},\{\alpha,-16\pi,16\pi\}\right]$$



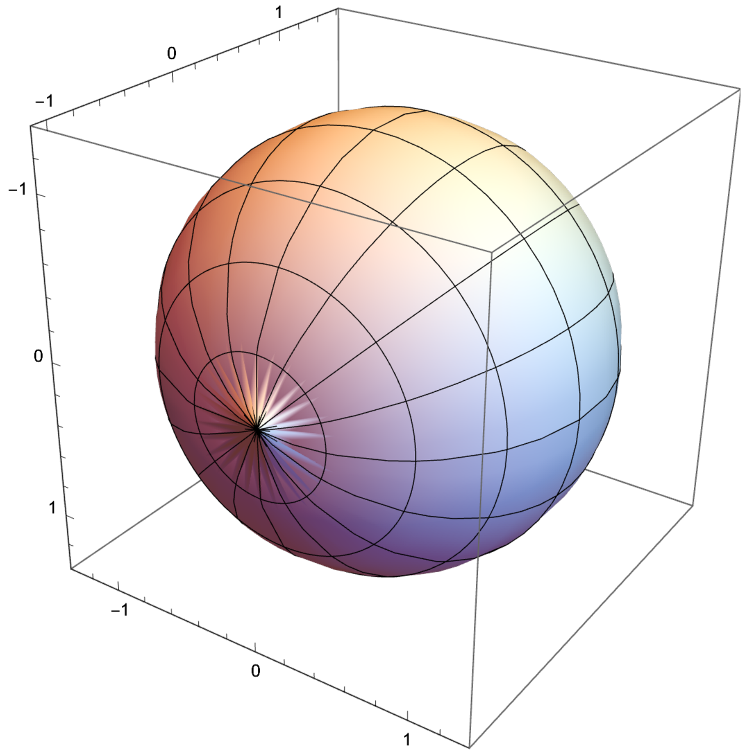
$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\alpha]^2}{2\pi}\right],\ \{\theta,-16\pi,16\pi\},\{\alpha,-2\pi,2\pi\}\right]$$



```
SphericalPlot3D[ArcSin[(Sqrt[(4 π - θ) θ] Cos[α]^2 + Sqrt[(4 π - θ) θ] Sin[α]^2)/(2 π)],
 {θ, -2 π, 2 π}, {α, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 ArcSin[(Sqrt[(4 π - θ) θ] Cos[α]^2 + Sqrt[(4 π - θ) θ] Sin[α]^2)/(2 π)], {θ, -2 π, 2 π}, {α, -π, π}]
```

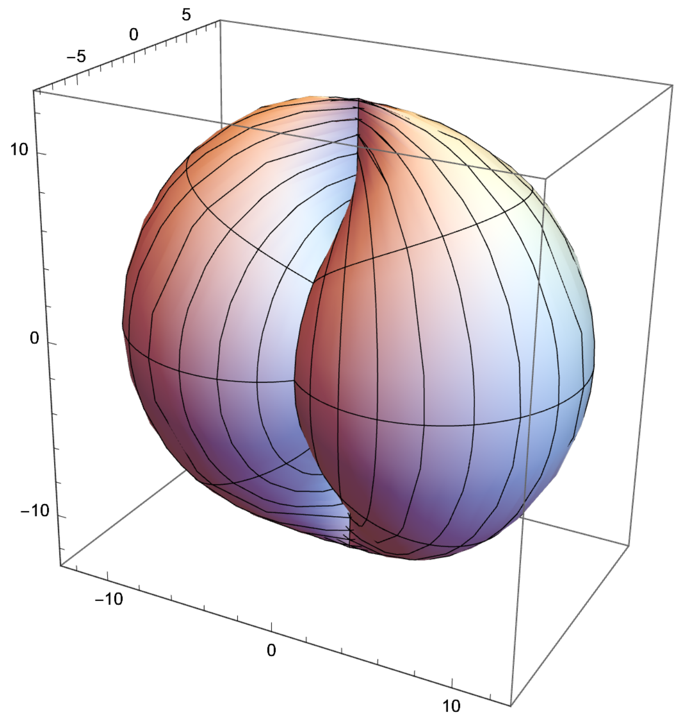



```
Solve[Cos[α]^2 + Sin[α]^2 == (2 π Sin[β])/Sqrt[4 π θ - θ^2], θ]
```

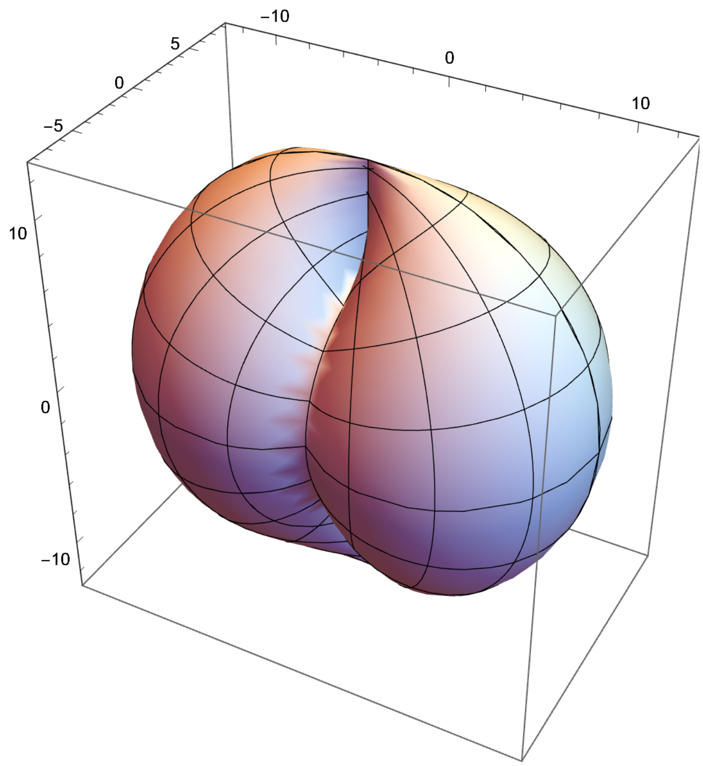
$$\left\{\left\{\theta \to \left(4\pi \cos[\alpha]^4 + 8\pi \cos[\alpha]^2 \sin[\alpha]^2 + 4\pi \sin[\alpha]^4 - \sqrt{\left(\left(-4\pi \cos[\alpha]^4 - 8\pi \cos[\alpha]^2 \sin[\alpha]^2 - 4\pi \sin[\alpha]^4\right)^2 - 16\pi^2 \left(\cos[\alpha]^4 + 2\cos[\alpha]^2 \sin[\alpha]^2 + \sin[\alpha]^4\right) \sin[\beta]^2\right)}\right) \Big/ \left(2\left(\cos[\alpha]^4 + 2\cos[\alpha]^2 \sin[\alpha]^2 + \sin[\alpha]^4\right)\right)\right\},\right.$$

$$\left.\left\{\theta \to \left(4\pi \cos[\alpha]^4 + 8\pi \cos[\alpha]^2 \sin[\alpha]^2 + 4\pi \sin[\alpha]^4 + \sqrt{\left(\left(-4\pi \cos[\alpha]^4 - 8\pi \cos[\alpha]^2 \sin[\alpha]^2 - 4\pi \sin[\alpha]^4\right)^2 - 16\pi^2 \left(\cos[\alpha]^4 + 2\cos[\alpha]^2 \sin[\alpha]^2 + \sin[\alpha]^4\right) \sin[\beta]^2\right)}\right) \Big/ \left(2\left(\cos[\alpha]^4 + 2\cos[\alpha]^2 \sin[\alpha]^2 + \sin[\alpha]^4\right)\right)\right\}\right\}$$

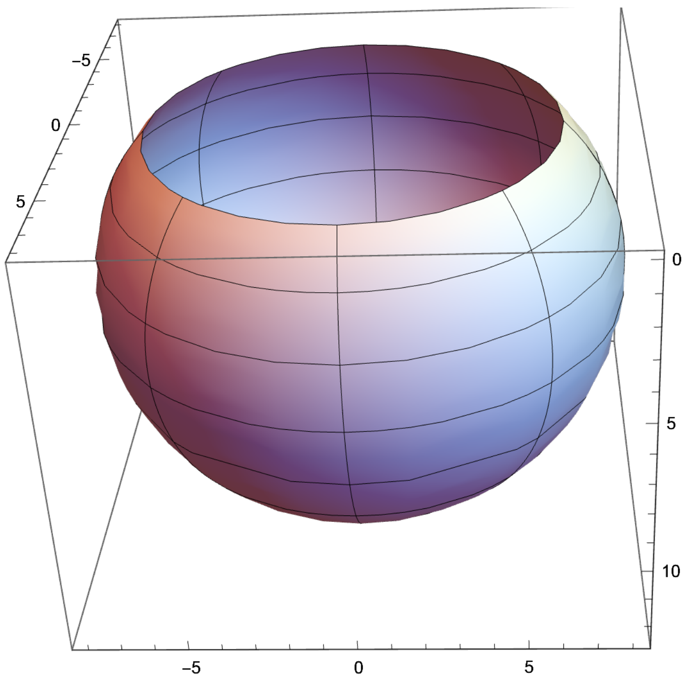
```
SphericalPlot3D[(4 π Cos[α]^4 + 8 π Cos[α]^2 Sin[α]^2 +
    4 π Sin[α]^4 + √((-4 π Cos[α]^4 - 8 π Cos[α]^2 Sin[α]^2 - 4 π Sin[α]^4)^2 -
       16 π^2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4) Sin[β]^2)) /
   (2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4)), {α, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[(4 π Cos[α]^4 + 8 π Cos[α]^2 Sin[α]^2 +
    4 π Sin[α]^4 + √((-4 π Cos[α]^4 - 8 π Cos[α]^2 Sin[α]^2 - 4 π Sin[α]^4)^2 -
       16 π^2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4) Sin[β]^2)) /
  (2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4)), {α, -π, π}, {β, -π, π}]
```



```
SphericalPlot3D[(4 π Cos[α]^4 + 8 π Cos[α]^2 Sin[α]^2 +
    4 π Sin[α]^4 + √((-4 π Cos[α]^4 - 8 π Cos[α]^2 Sin[α]^2 - 4 π Sin[α]^4)^2 -
       16 π^2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4) Sin[β]^2)) /
   (2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4)), {β, -π / 2, π / 2}, {α, -2 π, 2 π}]
```



$$\frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}}$$

$$r := \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\mathrm{D}\left[\mathrm{D}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right], \beta\right]$$

$$-\Bigg(\Bigg(\Bigg(8\pi\theta\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta} - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Bigg) \Big/$$

$$\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\Theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{4\,\pi-\Theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\Theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(8\,\pi\,\Theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]+16\,\pi^2\,\Theta\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(2\,\Theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]+16\,\pi^2\,\Theta\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^3\Bigg)$$

$$\Bigg(\Bigg(8\,\pi\,\Theta\,\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\;\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\Theta)\;\mathrm{Sin}[\beta]^3}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\Theta^2\,\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\;\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{\pi^2 (4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\theta}} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2} + \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(8\pi\theta\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(2\theta^2\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(4\pi\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\theta\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Bigg/$$

$$\Bigg(8\pi\Bigg(\Bigg(4\pi\theta\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(\theta^2 \Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg) +$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta] + 8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta} -$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta] + 8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] -$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 +$$

$$\Bigg(8\,\pi\,\theta\,\Bigg(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2} +$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(2\,\theta^2\,\left(\frac{\pi\,(4\,\pi - 2\,\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{3\,\pi^2\,(4\,\pi - 2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \right.\right.$$

$$\frac{3\,\pi^2\,(4\,\pi - 2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)^2} +$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + \right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(16\,\pi\,\theta\,\left(16\,\pi^2 - 24\,\pi\,\theta + 6\,\theta^2 + 8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\left(4\,\theta^2\,\left(16\,\pi^2 - 24\,\pi\,\theta + 6\,\theta^2 + 8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\left(8\,\pi\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + \right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\left(4\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta] + 8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\left(16\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta] + 16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\left(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3 +$$

$$\left(4\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta] + 16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\left(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3 +$$

$$\left(24\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta] + 16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(16\,\pi^2 - 24\,\pi\,\theta + 6\,\theta^2 + 8\,\pi^2\,\text{Sin}[\beta]^2\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + \right.$$

$$
4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$
$$
\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4 -
$$
$$
\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2 - 24\,\pi\,\theta + 6\,\theta^2 + 8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)
$$
$$
\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -
$$
$$
\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$
$$
\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4 -
$$
$$
\Bigg(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -
$$
$$
\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$
$$
\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +
$$
$$
\Bigg(32\,\pi^2\,\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -
$$
$$
\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$
$$
\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 -
$$
$$
\Bigg(8\,\pi\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)
$$
$$
\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -
$$
$$
\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$
$$
\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +
$$
$$
\Bigg(4\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)
$$
$$
\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -
$$
$$
\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/
$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\Bigg) \Bigg/$$

$$\Bigg(4\,\pi\,\sqrt{\Bigg(\Bigg(4\,\pi\,\theta\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg) \Bigg/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 - \Bigg(\theta^2\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg) \Bigg/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)}\Bigg)$$

SphericalPlot3D$\Bigg[$

$$-\Bigg(\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg) \Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg) \Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(8\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(2\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\Bigg)$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+\right.$$

$$\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+\right.$$

$$\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(8\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4$$

$$\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(2\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4$$

$$\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\pi\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Big/$$

$$\Bigg(8\,\pi\,\Bigg(\Bigg(4\,\pi\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(\theta^2\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left.\left.\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)^{3/2}\right)+$$

$$\left(\left(8\pi\theta\left(2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]+8\pi^2\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\right.\right.\right.$$

$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\theta}}-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\theta^2\left(2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]+8\pi^2\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\theta}}-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2+$$

$$\left(8\pi\theta\left(\frac{\pi(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

$$\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\sqrt{(4\pi-\theta)\theta}}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$

$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\theta^2\left(\frac{\pi(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(8\,\pi\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(4\,\theta\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(24\,\pi\,\theta\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(32\,\pi^2\,\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\Bigg(8\,\pi\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

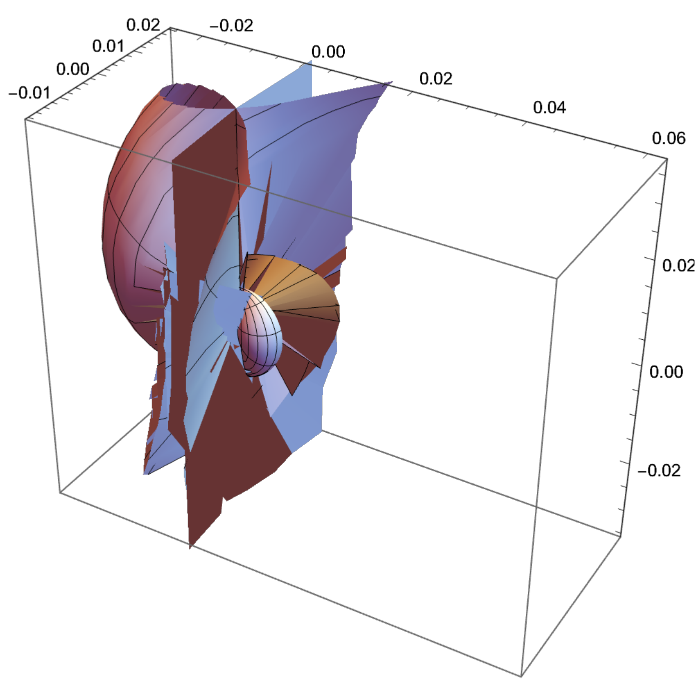
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

```
         2 π² √((4 π - θ) θ) Sin[β]³   2 π² √((4 π - θ) θ) Sin[β]³   2
         ─────────────────────────── - ───────────────────────────) ) /
                  4 π - θ                           θ

   (16 π² θ - 12 π θ² + 2 θ³ - 16 π³ Sin[β]² + 8 π² θ Sin[β]²)³) /

(4 π √(((4 π θ (-4 π θ + θ² + 2 π √((4 π - θ) θ) Sin[β] + 4 π² Sin[β]² -

            2 π² √((4 π - θ) θ) Sin[β]³   2 π² √((4 π - θ) θ) Sin[β]³   2
            ─────────────────────────── - ───────────────────────────) ) /
                     4 π - θ                           θ

      (16 π² θ - 12 π θ² + 2 θ³ - 16 π³ Sin[β]² + 8 π² θ Sin[β]²)² -

      (θ² (-4 π θ + θ² + 2 π √((4 π - θ) θ) Sin[β] + 4 π² Sin[β]² -

            2 π² √((4 π - θ) θ) Sin[β]³   2 π² √((4 π - θ) θ) Sin[β]³   2
            ─────────────────────────── - ───────────────────────────) ) /
                     4 π - θ                           θ

      (16 π² θ - 12 π θ² + 2 θ³ - 16 π³ Sin[β]² + 8 π² θ Sin[β]²)²))),

 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[
 -(((8 π θ (2 π √((4 π - θ) θ) Cos[β] + 8 π² Cos[β] Sin[β] - 6 π² √((4 π - θ) θ) Cos[β] Sin[β]² / (4 π - θ) -
```

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\;\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\;\text{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\;\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\;\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\left(-32\,\pi^3\,\text{Cos}[\beta]\;\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\left(-32\,\pi^3\,\text{Cos}[\beta]\;\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\;\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)$$

$$\left(\left(8\,\pi\,\theta\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\;\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\;\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\frac{\pi^2\ (4\pi-2\theta)\ \mathrm{Sin}[\beta]^3}{\theta\ \sqrt{(4\pi-\theta)\ \theta}} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2} +$$

$$\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta^2}\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(2\theta^2\ \left(-4\pi+2\theta+\frac{\pi\ (4\pi-2\theta)\ \mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\ \theta}} - \frac{\pi^2\ (4\pi-2\theta)\ \mathrm{Sin}[\beta]^3}{(4\pi-\theta)\ \sqrt{(4\pi-\theta)\ \theta}} -\right.\right.$$

$$\frac{\pi^2\ (4\pi-2\theta)\ \mathrm{Sin}[\beta]^3}{\theta\ \sqrt{(4\pi-\theta)\ \theta}} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2} +$$

$$\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta^2}\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(8\pi\theta\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\left(2\theta^2\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\left(4\pi\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Big/$$

$$\Bigg(8\,\pi\,\Bigg(\Bigg(4\,\pi\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(\theta^2\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg)+$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$
$$\left.\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2+$$
$$\left(8\pi\theta\left(\frac{\pi\,(4\pi-2\theta)\,\text{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(\frac{\pi\,(4\pi-2\theta)\,\text{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(16\pi\theta\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\text{Sin}[\beta]^2\right)\right.$$
$$\left(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\right.$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(8\,\pi\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(4\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(24\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4-$$

$$\Bigg(128\,\pi^3\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(32\,\pi^2\,\theta^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3-$$

$$\Bigg(8\,\pi\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\Bigg)\Big/$$

$$\Bigg(4\,\pi\,\sqrt{\Bigg(\Bigg(4\,\pi\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-}$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

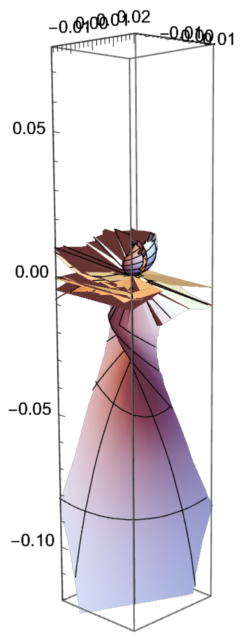
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(\theta^2\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg)\Bigg),$$

$$\{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\,\pi,2\,\pi\}]$$



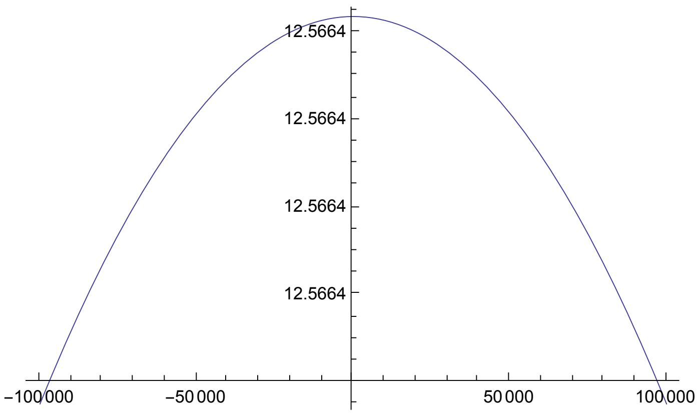

```
Solve[
 (4 π r^2 - 2 r^2 θ) / (4 π Sqrt[4 π r^2 θ - r^2 θ^2]) == (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
   (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]), θ]
```

```
{{θ → (0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 -
        1.4322774071693905`*^32 Sqrt[3.548143227025099`*^18 + 1.` r^2])) /
    (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2)},
 {θ → (0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
        1.4322774071693905`*^32 Sqrt[3.548143227025099`*^18 + 1.` r^2])) /
    (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2)}}
```

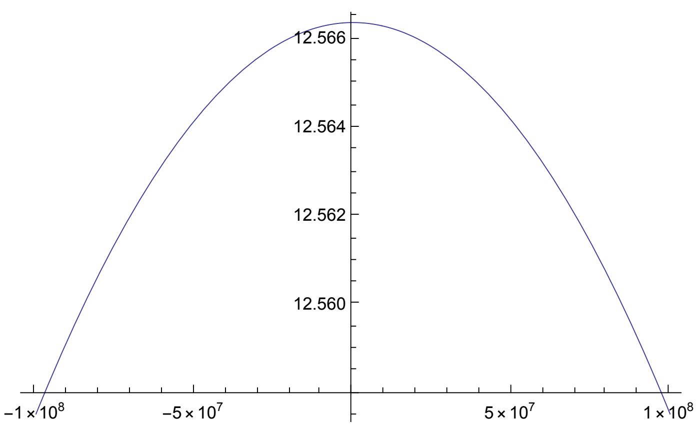
```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 Sqrt[3.548143227025099`*^18 + 1.` r^2]))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^5, 1 * 10^5}]
```



```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 Sqrt[3.548143227025099`*^18 + 1.` r^2]))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^5, 1 * 10^5}]
```

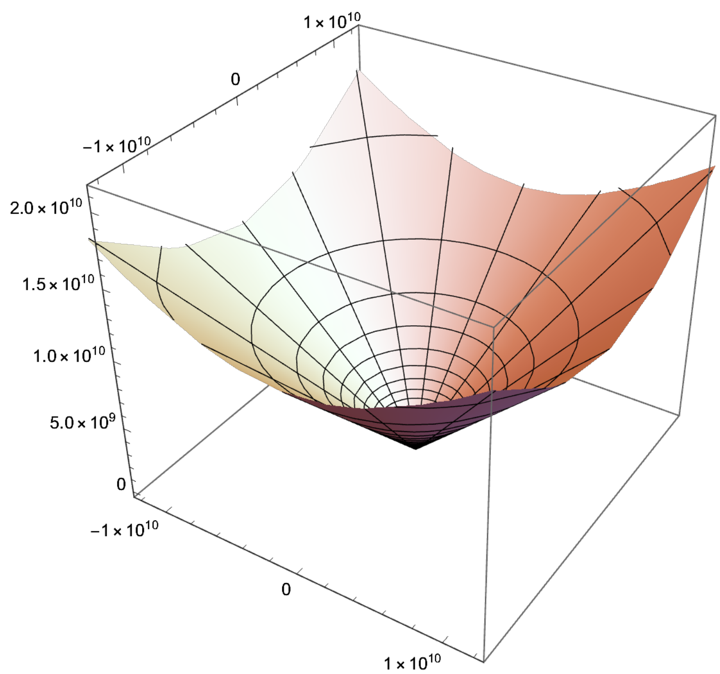

```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 Sqrt[3.548143227025099`*^18 + 1.` r^2]))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^8, 1 * 10^8}]
```



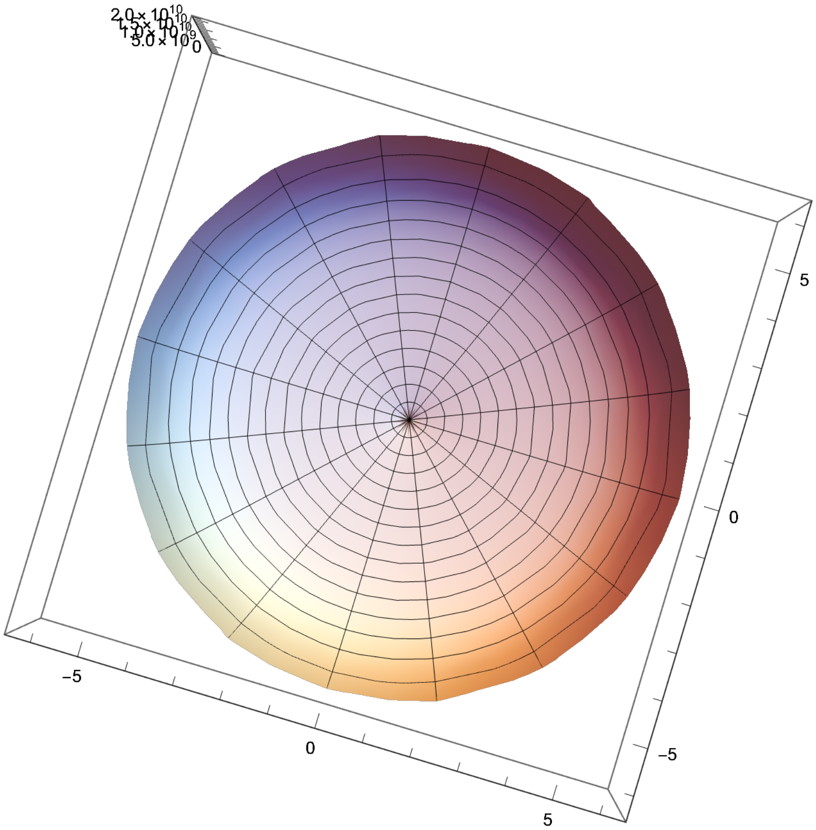
```
Solve[
  (4 π r^2 - 2 r^2 θ)/(4 π Sqrt[4 π r^2 θ - r^2 θ^2]) == (√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
    (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]), r]
```

$$\left\{\left\{r \to -\frac{1.\ \sqrt{2.69791\times 10^{41} - 2.14693\times 10^{40}\,\theta}\ \sqrt{\theta}}{\sqrt{2.38878\times 10^{23} - 7.60373\times 10^{22}\,\theta + 6.05085\times 10^{21}\,\theta^2}}\right\},\right.$$
$$\left.\left\{r \to \frac{\sqrt{2.69791\times 10^{41} - 2.14693\times 10^{40}\,\theta}\ \sqrt{\theta}}{\sqrt{2.38878\times 10^{23} - 7.60373\times 10^{22}\,\theta + 6.05085\times 10^{21}\,\theta^2}}\right\}\right\}$$

```
RevolutionPlot3D[{-(1.` Sqrt[2.697911582835683`*^41 - 2.1469298221658919`*^40 θ] Sqrt[θ]) /
    (√ (2.3887815869760647`*^23 -
        7.60372795068286`*^22 θ + 6.050854446385924`*^21 θ^2)),
   (Sqrt[2.697911582835683`*^41 - 2.1469298221658919`*^40 θ] Sqrt[θ]) /
    (√ (2.3887815869760647`*^23 - 7.60372795068286`*^22 θ +
        6.050854446385924`*^21 θ^2))}, {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[(√(2.697911582835683`*^41 - 2.1469298221658919`*^40 θ) √θ) /
  (√(2.3887815869760647`*^23 - 7.60372795068286`*^22 θ + 6.050854446385924`*^21 θ^2)),
 {θ, -2 π, 2 π}]
```



$$D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

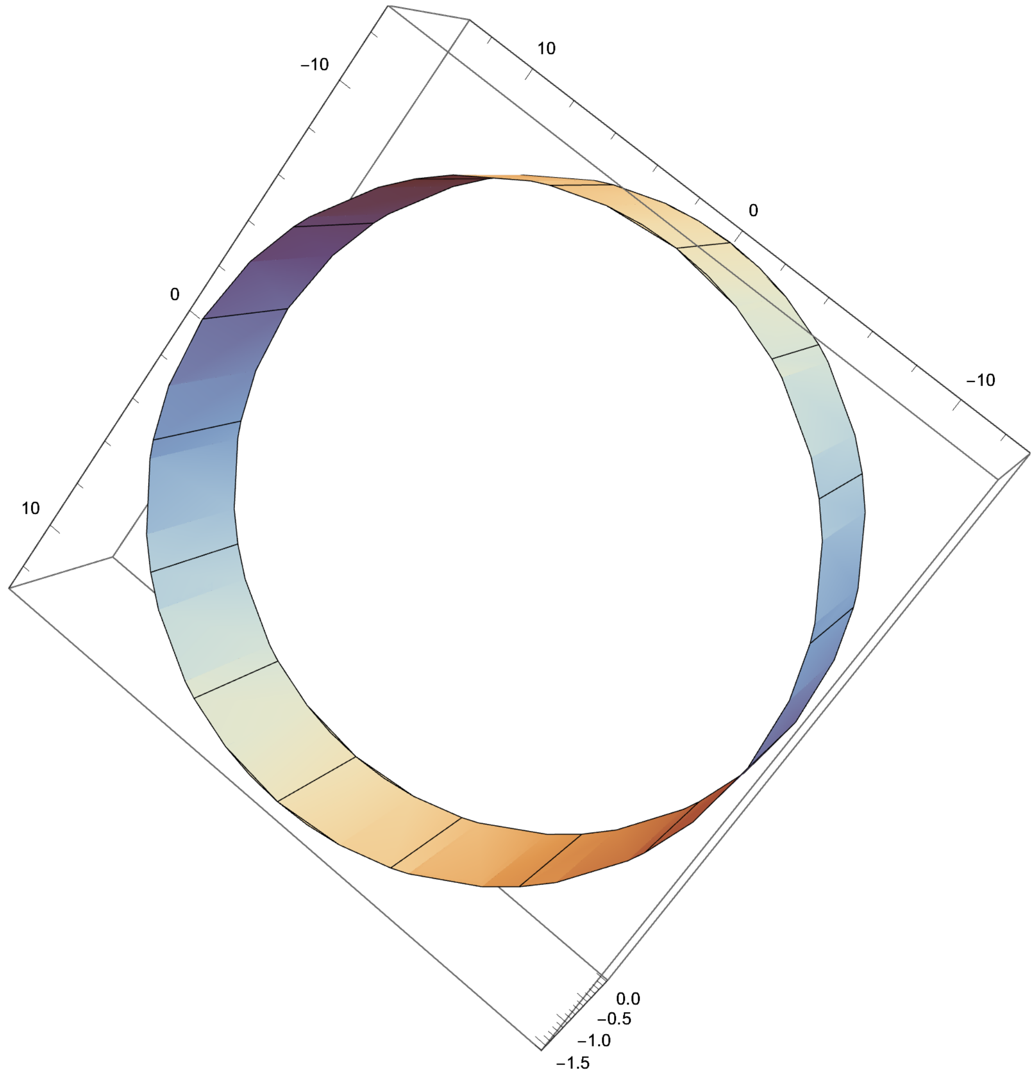
$$\frac{4\pi r^2 - 2 r^2\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

```
Solve[(√(2.697911582835683`*^41 - 2.1469298221658919`*^40 θ) √θ) /
  (√(2.3887815869760647`*^23 -
      7.60372795068286`*^22 θ + 6.050854446385924`*^21 θ^2)) ==
 (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) -
   (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), β]
```

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to \mathrm{ArcSin}\left[2.05971\times10^{-25}\left(7.72706\times10^{23}\sqrt{12.5664\,\theta-1.\,\theta^2}-\frac{2.41639\times10^{8}\sqrt{12.5664\,\theta-1.\,\theta^2}}{12.5664-1.\,\theta}-\frac{1.14922\times10^{35}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}}{\sqrt{12.5664-1.\,\theta}\sqrt{39.4784-12.5664\,\theta+\theta^2}}+\frac{1.82905\times10^{34}\sqrt{12.5664-1.\,\theta}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}}{\sqrt{39.4784-12.5664\,\theta+\theta^2}}+\frac{2.91102\times10^{33}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}\sqrt{39.4784-12.5664\,\theta+\theta^2}}{\sqrt{12.5664-1.\,\theta}}\right)\right]\right\}\right\}$$

```
RevolutionPlot3D[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 √(12.566370614359172` θ - 1.` θ^2) -
     (2.4163860935781455`*^8 √(12.566370614359172` θ - 1.` θ^2))/(12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 √θ √(12.566370614359172` θ - 1.` θ^2)) /
      (√(12.566370614359172` - 1.` θ) √(39.47841760435743` - 12.56637061435917` θ + θ^2)) +
     (1.8290459931697553`*^34 √(12.566370614359172` - 1.` θ)
        √θ √(12.566370614359172` θ - 1.` θ^2)) /
      (√(39.47841760435743` - 12.56637061435917` θ + θ^2)) +
     (2.911017109553914`*^33 √θ √(12.566370614359172` θ - 1.` θ^2)
        √(39.47841760435743` - 12.56637061435917` θ + θ^2)) /
      (√(12.566370614359172` - 1.` θ))]], {β, -4 π, 8 π / 2}]
```



$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[1000\,\beta]^2}\right)$$

$$\theta := \frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

```
Play[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 √(12.566370614359172` θ - 1.` θ^2) -

    (2.4163860935781455`*^8 √(12.566370614359172` θ - 1.` θ^2)) / (12.566370614359172` - 1.` θ) -

    (1.1492234910439907`*^35 √θ √(12.566370614359172` θ - 1.` θ^2)) /
     (√(12.566370614359172` - 1.` θ) √(39.47841760435743` - 12.56637061435917` θ + θ^2)) +

    (1.8290459931697553`*^34 √(12.566370614359172` - 1.` θ)
      √θ √(12.566370614359172` θ - 1.` θ^2)) /
     (√(39.47841760435743` - 12.56637061435917` θ + θ^2)) +

    (2.911017109553914`*^33 √θ √(12.566370614359172` θ - 1.` θ^2)
      √(39.47841760435743` - 12.56637061435917` θ + θ^2)) /
     (√(12.566370614359172` - 1.` θ))) ], {β, -2 π, 2 π}]
```

Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫

```
Play[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 Sqrt[12.566370614359172` θ - 1.` θ^2] -
     (2.4163860935781455`*^8 Sqrt[12.566370614359172` θ - 1.` θ^2])/(12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ] Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (1.8290459931697553`*^34 Sqrt[12.566370614359172` - 1.` θ]
        Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (2.911017109553914`*^33 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]
        Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ]))], {β, -2 π, 2 π}]
```

Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫


```
"ribbit.wav"

Export["ribbit.wav",
 Play[Sqrt[12.566370614359172` Sin[1000 θ] - 1.` Cos[1000 θ]^2], {β, -π, π}]]
```

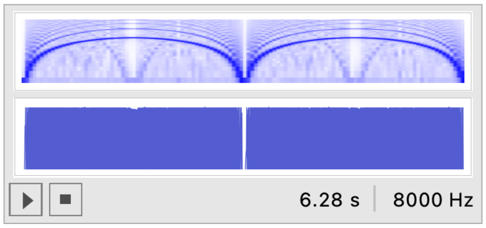
Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫

LinkObject::linkw : Unable to write data to closed link LinkObject[/Applications/Mathematica.app/SystemFiles/Converters/Binaries/MacOSX−x86−64/Audio.exe, 25, 9]. ≫

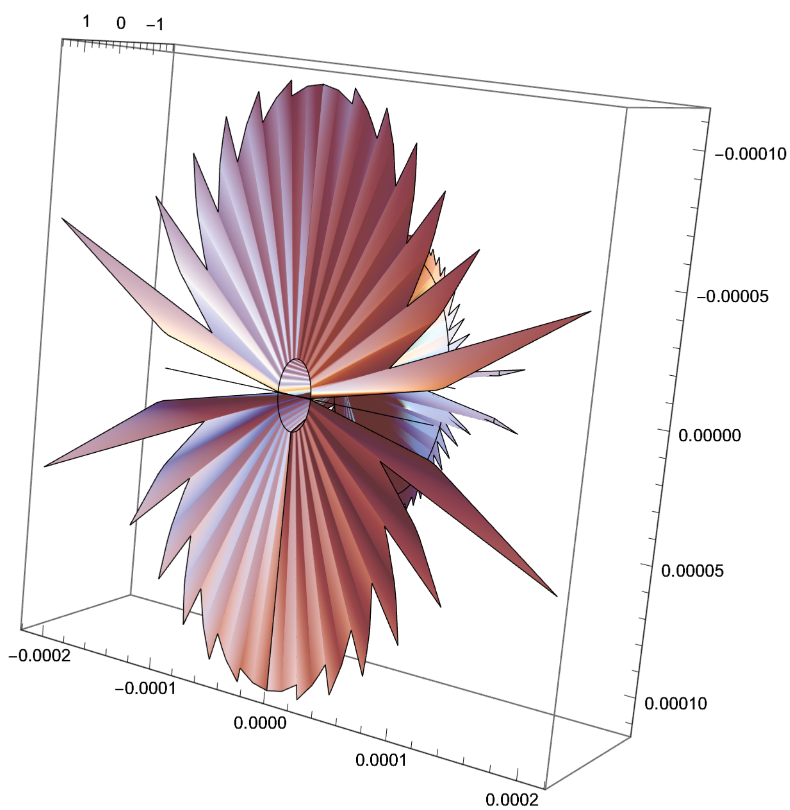
```
$Failed
```

$$\text{Play}\left[\sqrt{12.566370614359172\grave{}\ \text{Sin}[1000\,\theta] - 1.\grave{}\ \text{Cos}[1000\,\theta]^2},\ \{\beta, -\pi, \pi\}\right]$$

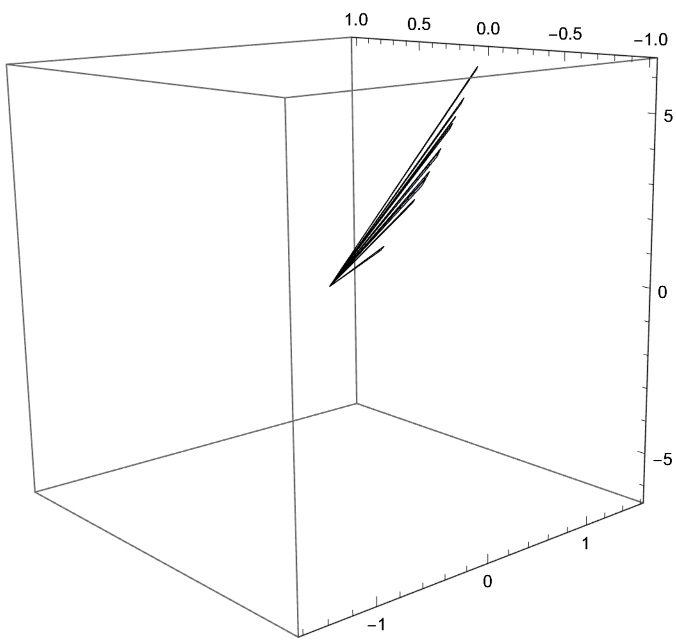
Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫



```
RevolutionPlot3D[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 Sqrt[12.566370614359172` θ - 1.` θ^2] -
     (2.4163860935781455`*^8 Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ] Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (1.8290459931697553`*^34 Sqrt[12.566370614359172` - 1.` θ]
        Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (2.911017109553914`*^33 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]
        Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ]))], {θ, -2 π, 2 π}]
```



```
ContourPlot3D[
 (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) ==
  √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}, {η, -1, 1}]
```



```
Export["r=r.3ds", ContourPlot3D[
  (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
      (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) ==
   √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
          32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
        (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
       (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
          32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
        (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
       (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
        (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}, {η, -1, 1}]]
```

r=r.3ds

$$\text{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-(\eta)^2}\right)}{\theta^2}==\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\eta\right]$$

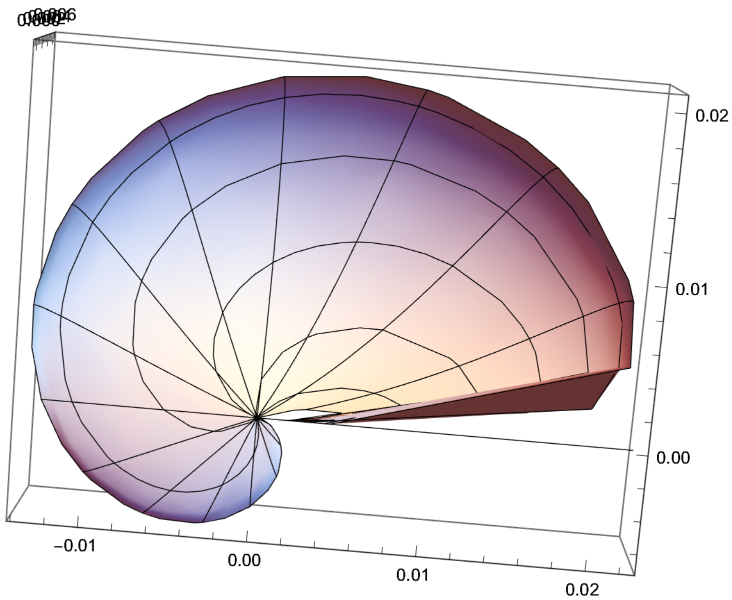
$$\left\{\left\{\eta\to-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right\},\right.$$

$$\left.\left\{\eta\to\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right\}\right\}$$

```
r := (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)
```

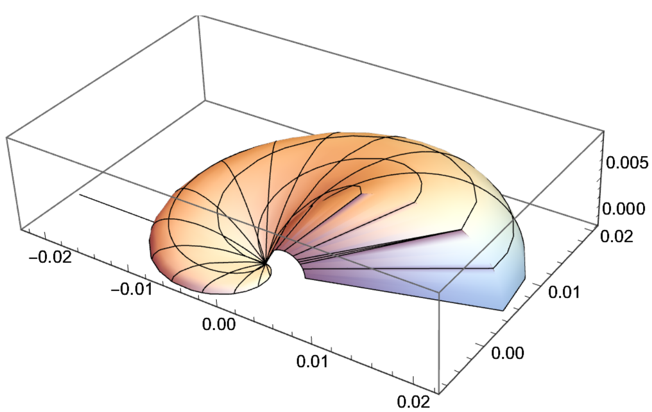
```
SphericalPlot3D[
```

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}]$$



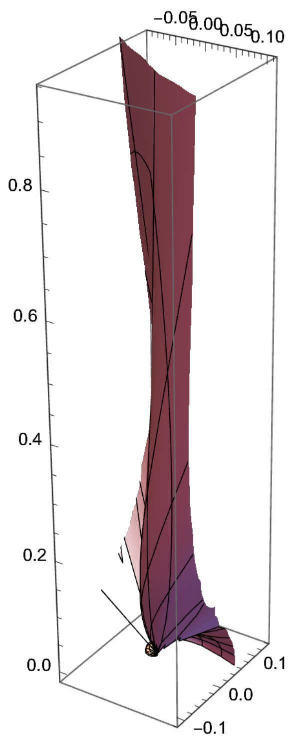

```
SphericalPlot3D[
```

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right),\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}]$$

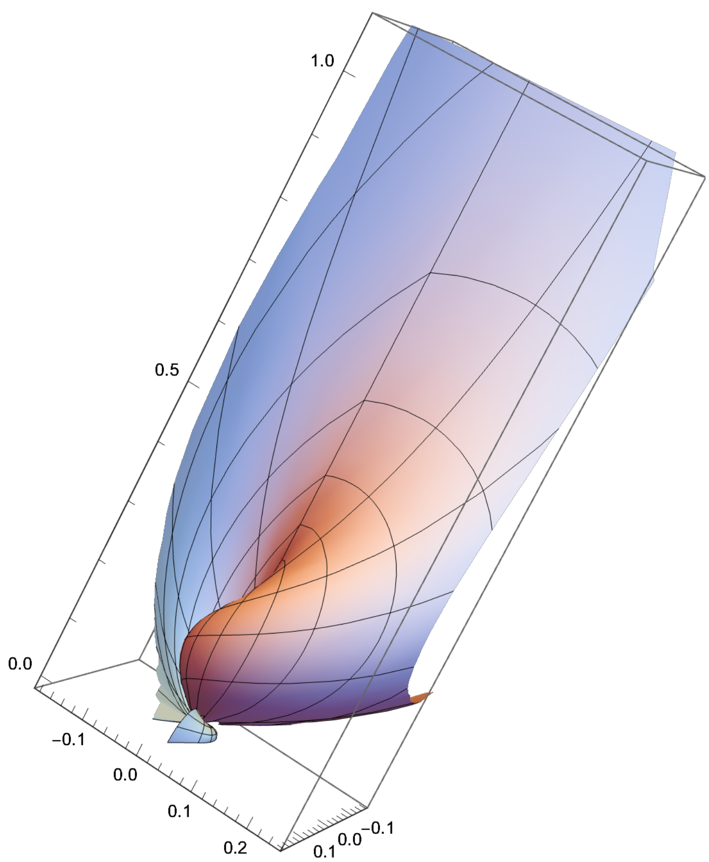


```
SphericalPlot3D[
```

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}\right)}\right),\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}]$$



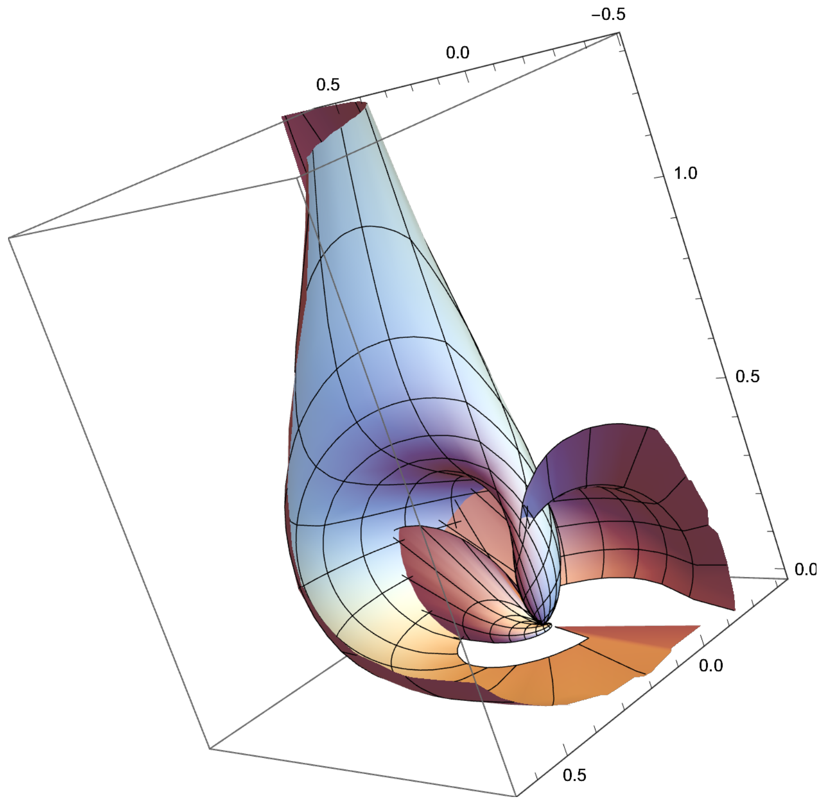
```
SphericalPlot3D[1/(4 π^2) (Sqrt[(64 π^4 r^2 - (256 π^5 r^2)/(4 π - θ) + 16 π^3 r^2 θ + 4 π^2 r^2 θ^2 + r^2 θ^4 +
    16 π^3 r Sqrt[r^2 (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ] - (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) +
    8 π^2 r 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) Sqrt[r^2 (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ])]),
  {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



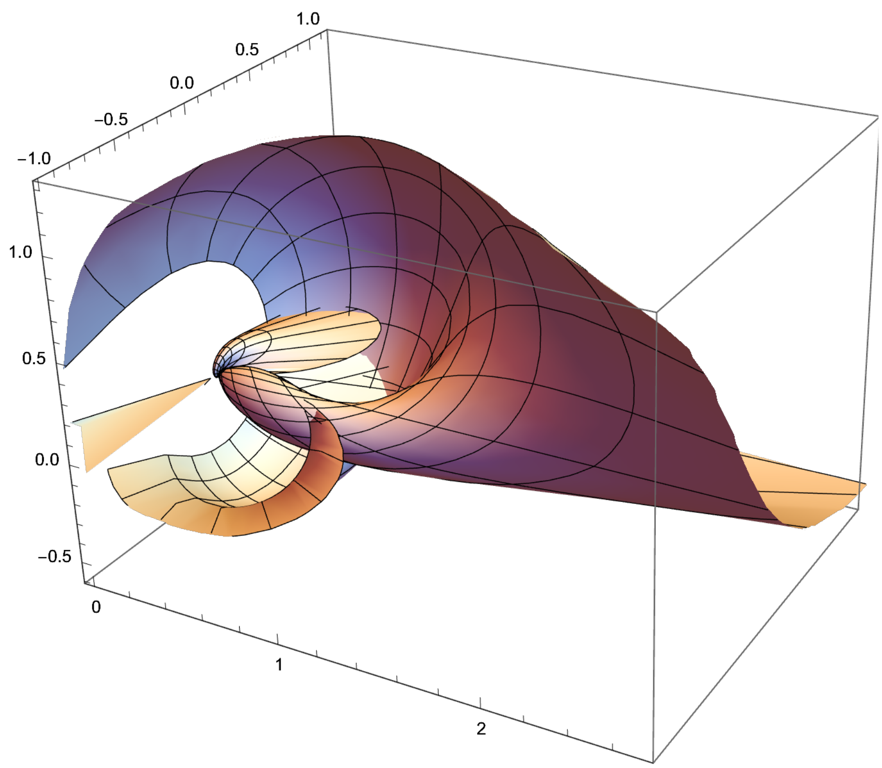
SphericalPlot3D[

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\, 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right) + 4\pi^2 r^2 \theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2\left(4\pi - 2\left(\pi + \sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta} - \frac{64\pi^4 r\sqrt{r^2\,(4\pi-\theta)\,\theta}}{4\pi-\theta} + 8\pi^2 r\, 2\left(\pi + \sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi - 2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}\right)}\right),$$

{β, -π / 2, π / 2}, {θ, -2 π, 2 π}]



```
SphericalPlot3D[
 1/(4 π^2) (Sqrt[(64 π^4 r^2 - (256 π^5 r^2)/(4 π - θ) + 16 π^3 r^2 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 4 π^2 r^2 θ^2 + r^2
      (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^4 + 16 π^3 r Sqrt[r^2 (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ] -
      (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) + 8 π^2 r 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])
      Sqrt[r^2 (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ])]), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



q

```
Solve[(-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) /
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) == √(-(256 π^7 η^2 θ^3) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (320 π^6 η^2 θ^4) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 +
        24 π^2 θ^8 - 8 π θ^9 + θ^10) - (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 -
        512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)), η]
```

General::ivar : 1 is not a valid variable. ≫

General::ivar : 1 is not a valid variable. ≫

$$\mathrm{Solve}\Big[\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)==$$

$$\sqrt{\Big(-\frac{256\pi^7\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^6}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big)},\ \{\eta,-1,1\}\Big]$$

$$\text{ContourPlot3D}\Big[\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right) == \sqrt{}\Big(-\left(256\pi^7\eta^2\theta^3\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^4\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-\left(128\pi^5\eta^2\theta^5\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^6\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(128\pi^6\sqrt{}\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big),\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\},\{\eta,-1,1\}\Big]$$

$$\int\int\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\,d\theta\,d\beta == \text{D}\Big[\text{D}\Big[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\Big],\beta\Big]$$

$$r := \Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{D}\Big[\text{D}\Big[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\Big],\beta\Big]$$

$$-\Bigg(\Bigg(\Bigg(8\pi\theta\Big(2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Big)\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)\Bigg)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-\Bigg(2\theta^2\Big(2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Big)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(8\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$
$$\left(2\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)$$
$$\left(\left(8\,\pi\,\theta\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$
$$\left.\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta^2}\right)$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(2\,\theta^2\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$
$$\left.\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta^2}\right)$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^2-$$

$$\Bigg(8\,\pi\,\Theta\,\big(16\,\pi^2-24\,\pi\,\Theta+6\,\Theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\big)\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^3+$$

$$\Bigg(2\,\Theta^2\,\big(16\,\pi^2-24\,\pi\,\Theta+6\,\Theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\big)\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^3+$$

$$\Bigg(4\,\pi\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^2-$$

$$\Bigg(2\,\Theta\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^2\Bigg)\Bigg)\Big/$$

$$\Bigg(8\,\pi\,\Bigg(\Bigg(4\,\pi\,\Theta\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\big)^2-$$

$$\Bigg(\Theta^2\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\;\mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)^{3/2}\right)+$$

$$\left(\left(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2+$$

$$\left(8\,\pi\,\theta\,\left(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$
\begin{aligned}
&\left.\frac{6\pi^2 \sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.\\
&\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/\\
&\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-\\
&\left(16\pi\theta\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.\\
&\quad\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]-\right.\\
&\quad\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\theta}\right)\\
&\quad\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\\
&\quad\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/\\
&\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+\\
&\left(4\theta^2\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]-\right.\right.\\
&\quad\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\theta}\right)\\
&\quad\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\\
&\quad\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/\\
&\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+\\
&\left(8\pi\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\right.\right.\\
&\quad\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.\\
&\quad\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/\\
&\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-\\
&\left(4\theta\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\right.\right.\\
&\quad\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.
\end{aligned}
$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(24\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)$$

$$\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(128\pi^3\Theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(32\pi^2\Theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\left(8\pi\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\Theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\Theta\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\Theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)^2\right)\Big/$$

$$\left.\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)^3\right)\Big/$$

$$\left(4\pi\sqrt{\left(\left(4\pi\Theta\left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.}\right.$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(\theta^2\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg)\Bigg)$$

SphericalPlot3D[

$$-\Bigg(\Bigg(\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(8\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)$$

$$\left(\left(8\,\pi\,\theta\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\pi\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Big/$$

$$\Bigg(8\,\pi\,\Bigg(\Bigg(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg)+$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2(4\pi-2\theta)\,\text{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2(4\pi-2\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$
$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\right.\right.$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$
$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2(4\pi-2\theta)\,\text{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2(4\pi-2\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$
$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2+$$
$$\left(8\pi\theta\left(\frac{\pi(4\pi-2\theta)\,\text{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(\frac{\pi(4\pi-2\theta)\,\text{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)$$

$$\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+\right.$$

$$\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(8\,\pi\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+\right.$$

$$\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(4\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+\right.$$

$$\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(24\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(128\pi^3\theta\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(32\pi^2\theta^2\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\Bigg(8\pi\left(-32\pi^3\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\theta\left(-32\pi^3\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\mathrm{Sin}[\beta]^2-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3\Bigg)\Bigg/$$

$$\Bigg(4\pi\sqrt{\Bigg(\Bigg(\Bigg(4\pi\theta\ \Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\mathrm{Sin}[\beta]^2-}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

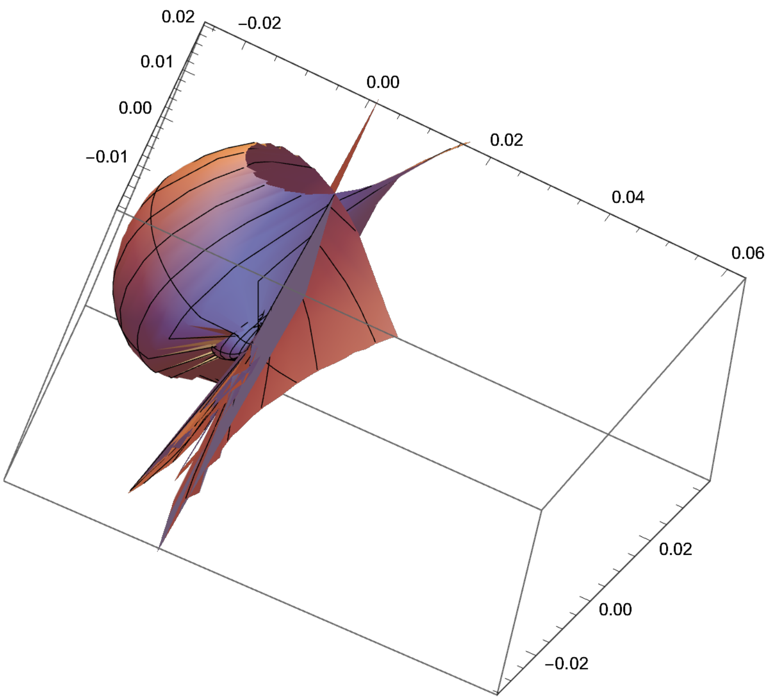
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

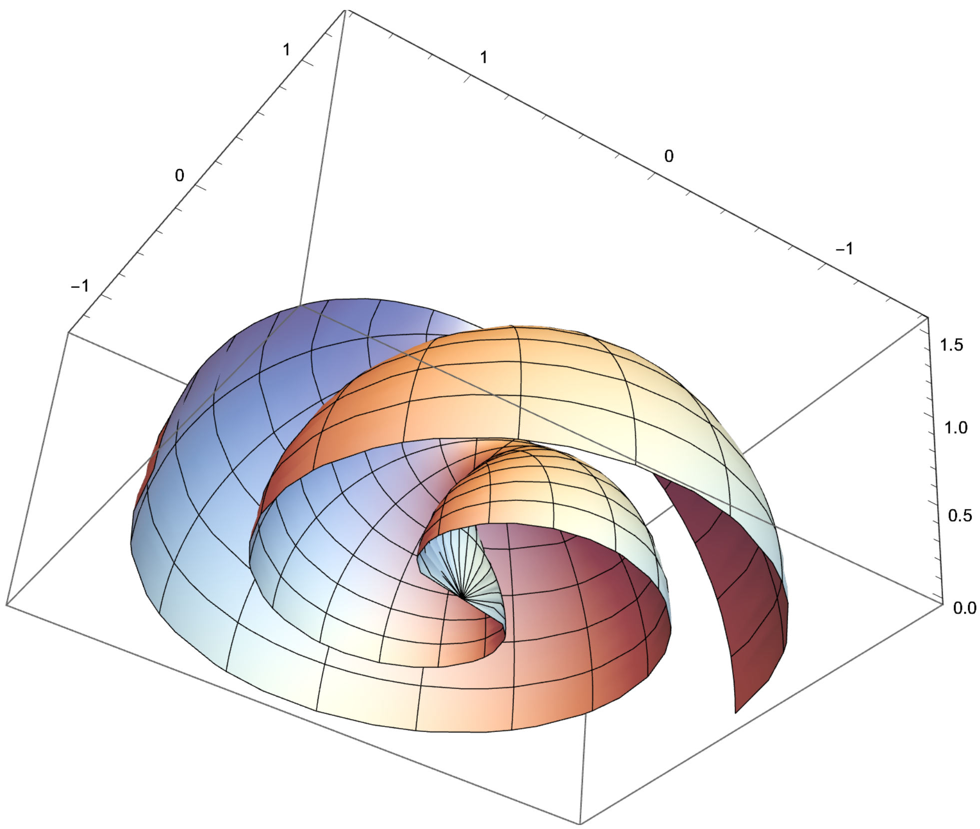
$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)\right),$$

$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]$$

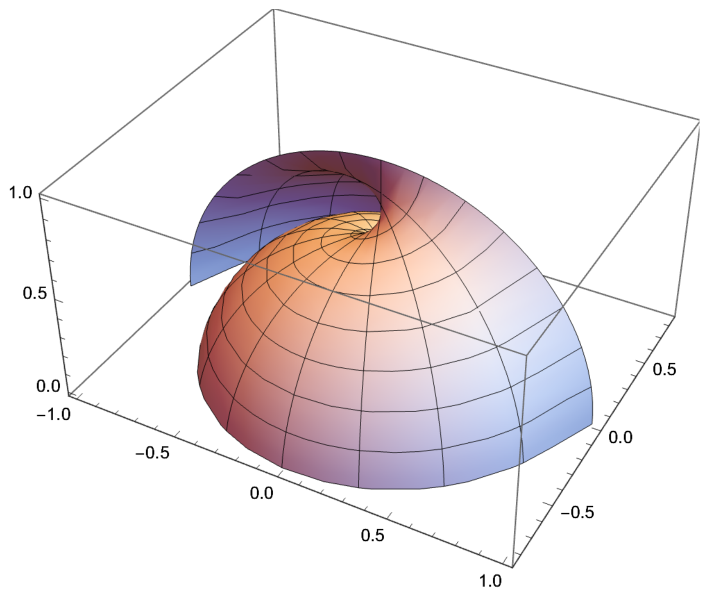


$$\left(\frac{\text{i}\,\sqrt{\theta}}{2\,\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\,\pi}}\right)^{\frac{2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\,\pi}}$$

$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{1}{2\,\pi}\left(\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2+\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2\right)\right],\{\beta,-\pi/2,\pi/2\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[\left(\frac{\text{i}\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}{4\pi}},\{\beta,-\pi/2,\pi/2\},\{\theta,-2\pi,2\pi\}\right]$$

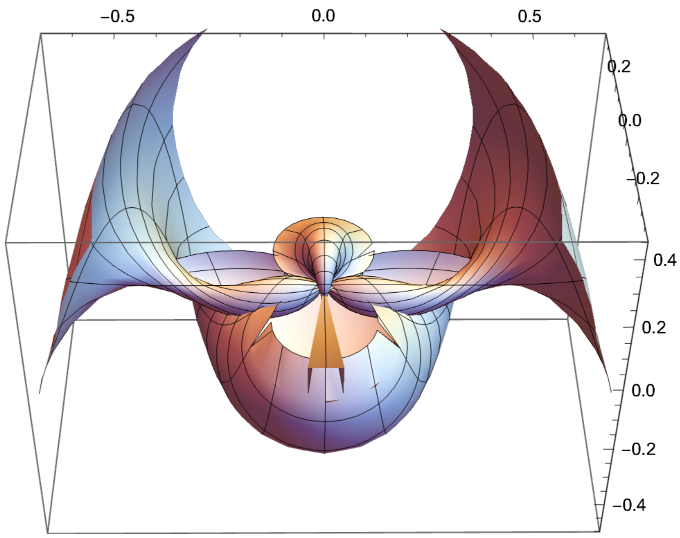


$$\texttt{Solve}\left[\left(\frac{\text{i}\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}{4\pi}}==\texttt{ArcSin}\left[\frac{1}{2\pi}\left(\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]^2+\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]^2\right)\right],\beta\right]$$

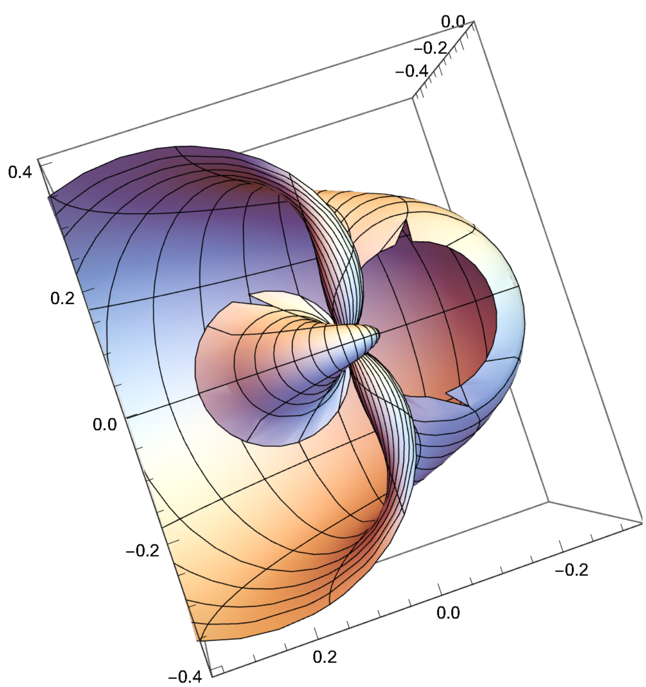
Solve::tdep : The equations appear to involve the variables to be solved for in an essentially non−algebraic way. ≫

$$\texttt{Solve}\left[\left(\frac{\text{i}\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}}{2\pi}}==\texttt{ArcSin}\left[\frac{1}{2\pi}\left(\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]^2+\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]^2\right)\right],\beta\right]$$

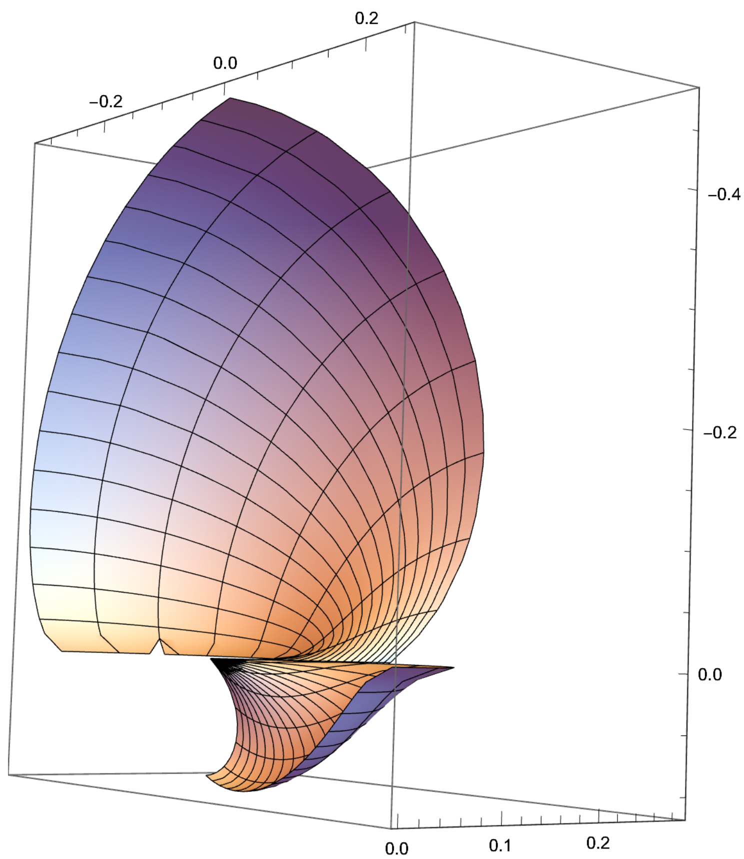
SphericalPlot3D$\left[\frac{\theta\left(2\pi r^2 - r^2\theta\right)}{\sqrt{r^2 (4\pi-\theta)\theta}}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$



SphericalPlot3D$\left[\frac{\theta\left(2\pi r^2 - r^2\theta\right)}{\sqrt{r^2 (4\pi-\theta)\theta}}, \{\beta, -\pi, \pi\}, \{\theta, -\pi, \pi\}\right]$



$$\text{SphericalPlot3D}\left[\frac{\theta\left(2\pi r^2 - r^2\theta\right)}{\sqrt{r^2\,(4\pi-\theta)\,\theta}}, \{\beta, -\pi/2, \pi/2\}, \{\theta, -\pi/2, \pi/2\}\right]$$

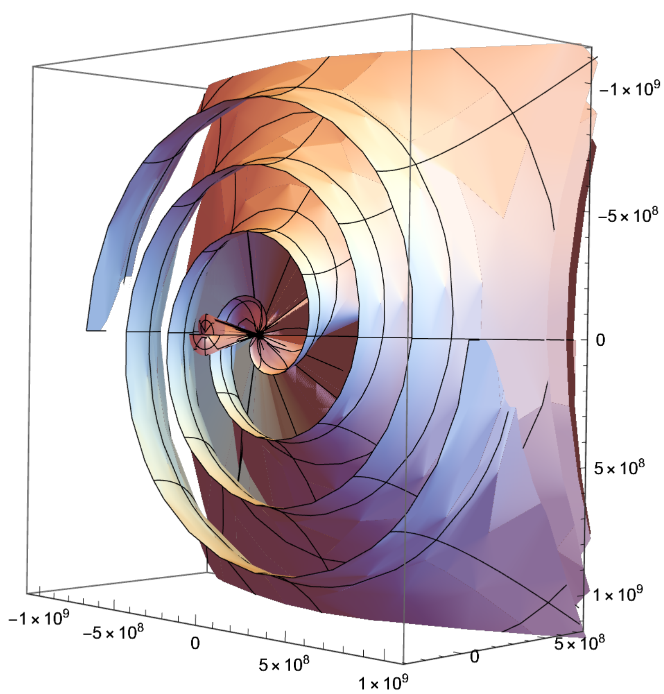


$$\text{Solve}\left[1 - r\,\text{Sin}[\beta]\Big/\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\pi r - r\theta}}{2\pi} == \theta\,r - \left(2\pi r - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\right), v\right]$$

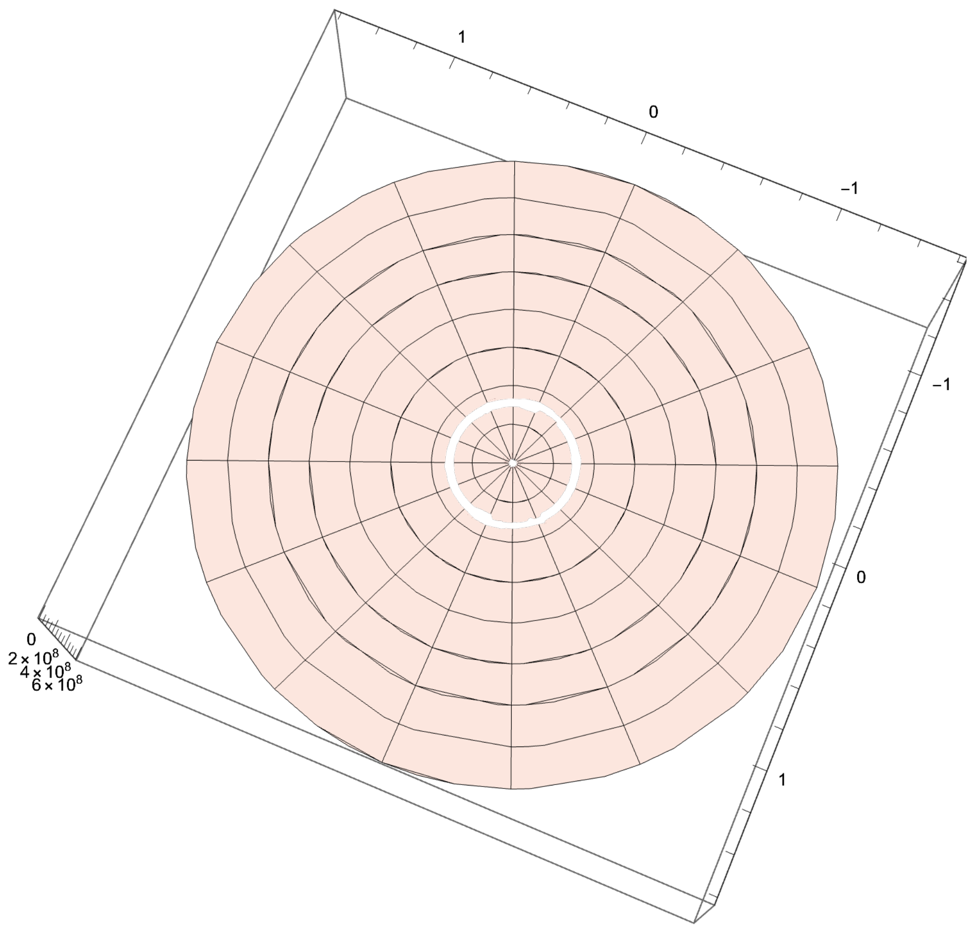
$$\left\{\left\{v \to -\frac{1.\,\sqrt{-6.91664\times10^{33}\,\theta + 5.50409\times10^{32}\,\theta^2 + 2.17293\times10^{34}\,\text{Sin}[\beta]^2}}{\sqrt{-7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2 + 2.41771\times10^{17}\,\text{Sin}[\beta]^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{-6.91664\times10^{33}\,\theta + 5.50409\times10^{32}\,\theta^2 + 2.17293\times10^{34}\,\text{Sin}[\beta]^2}}{\sqrt{-7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2 + 2.41771\times10^{17}\,\text{Sin}[\beta]^2}}\right\}\right\}$$

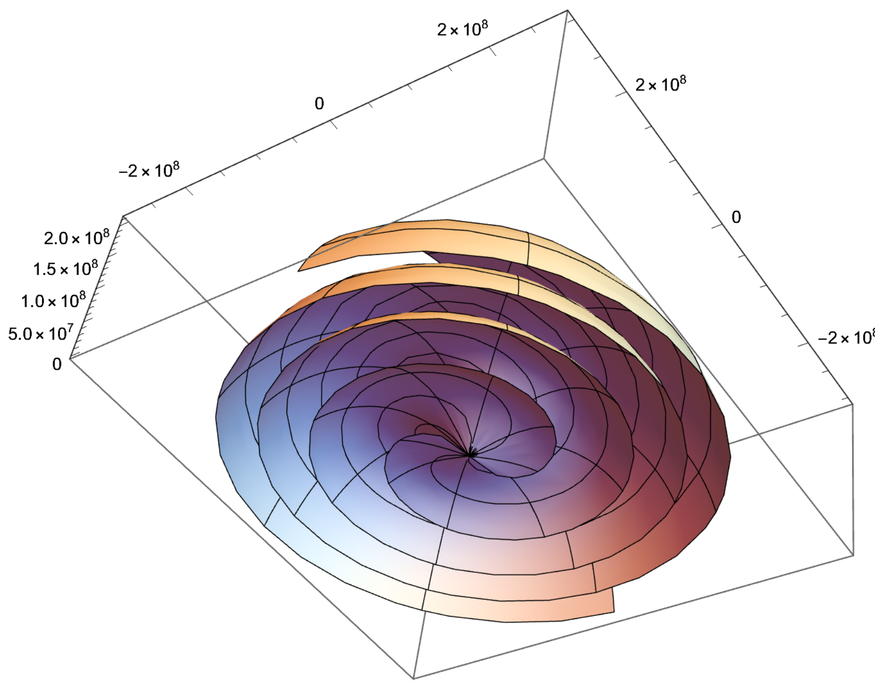
$$\text{SphericalPlot3D}\Big[\Big(\sqrt{\left(-6.916640561054567\text{`}*\text{^}33\,\theta + 5.504087674408673\text{`}*\text{^}32\,\theta^2 + 2.1729267174130213\text{`}*\text{^}34\,\text{Sin}[\beta]^2\right)}\Big) \Big/ \Bigg(\sqrt{\Bigg(-7.695800507960096\text{`}*\text{^}16\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + 6.124123459454841\text{`}*\text{^}15\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2 + 2.4177070339300032\text{`}*\text{^}17\,\text{Sin}[\beta]^2\Bigg)}\Bigg), \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Big]$$



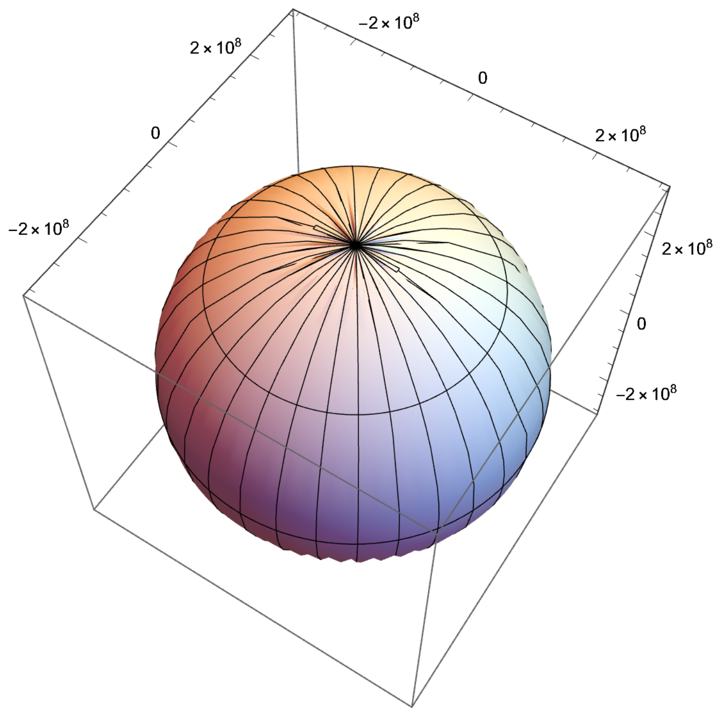
$$\text{RevolutionPlot3D}\Big[\Big(\sqrt{\Big(-6.916640561054567\text{`}*\text{^}33\,\Big(\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+5.504087674408673\text{`}*\text{^}32\,\Big(\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)^2+2.1729267174130213\text{`}*\text{^}34\,\text{Sin}[\beta]^2\Big)}\Big)\Big/\Big(\sqrt{\Big(-7.695800507960096\text{`}*\text{^}16\,\Big(\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+6.124123459454841\text{`}*\text{^}15\,\Big(\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)^2+2.4177070339300032\text{`}*\text{^}17\,\text{Sin}[\beta]^2\Big)}\Big),\ \{\beta,-\pi/2,\pi/2\}\Big]$$


1
0
−1
−1
0
1
0
2 × 10^8
4 × 10^8
6 × 10^8

```
SphericalPlot3D[(√(-6.916640561054567`*^33 θ +
    5.504087674408673`*^32 θ^2 + 2.1729267174130213`*^34 Sin[β]^2)) /
  (√(-7.695800507960096`*^16 θ + 6.124123459454841`*^15 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
    2.4177070339300032`*^17 Sin[β]^2)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



```
SphericalPlot3D[(√(-6.916640561054567`*^33 θ +
      5.504087674408673`*^32 θ^2 + 2.1729267174130213`*^34 Sin[β]^2)) /
   (√(-7.695800507960096`*^16 θ + 6.124123459454841`*^15 θ^2 +
      2.4177070339300032`*^17 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



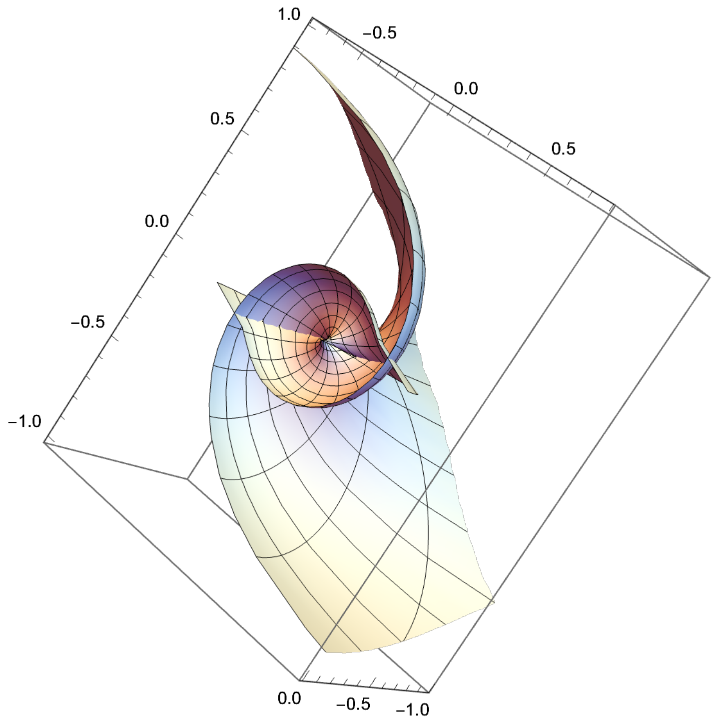
$$\text{Solve}\left[1 - r\,\text{Sin}[\beta] \Big/ \frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \theta\,r - \left(2\,\pi\,r\; - \;2\,\pi\,\sqrt{\left(r\,{}^{\wedge}2 - \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,{}^{\wedge}2\right)}\right),\; r\right]$$

Solve::verif : Potential solution {r → 0} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

Solve::verif : Potential solution {r → ComplexInfinity} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\Big\{\Big\{r \to \left(8\,\pi^2\,\theta - 6\,\pi\,\theta^2 + \theta^3 - 2\,\sqrt{16\,\pi^5\,\theta\,\text{Sin}[\beta]^2 - 20\,\pi^4\,\theta^2\,\text{Sin}[\beta]^2 + 8\,\pi^3\,\theta^3\,\text{Sin}[\beta]^2 - \pi^2\,\theta^4\,\text{Sin}[\beta]^2}\right) \Big/ \left(2\,\left(-16\,\pi^3\,\theta + 20\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big\},\; \Big\{r \to \left(8\,\pi^2\,\theta - 6\,\pi\,\theta^2 + \theta^3 + 2\,\sqrt{16\,\pi^5\,\theta\,\text{Sin}[\beta]^2 - 20\,\pi^4\,\theta^2\,\text{Sin}[\beta]^2 + 8\,\pi^3\,\theta^3\,\text{Sin}[\beta]^2 - \pi^2\,\theta^4\,\text{Sin}[\beta]^2}\right) \Big/ \left(2\,\left(-16\,\pi^3\,\theta + 20\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)\right)\Big\}\Big\}$$

```
SphericalPlot3D[
 (8 π^2 θ - 6 π θ^2 + θ^3 + 2 Sqrt[16 π^5 θ Sin[β]^2 - 20 π^4 θ^2 Sin[β]^2 + 8 π^3 θ^3 Sin[β]^2 - π^2 θ^4 Sin[β]^2]) /
  (2 (-16 π^3 θ + 20 π^2 θ^2 - 8 π θ^3 + θ^4)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

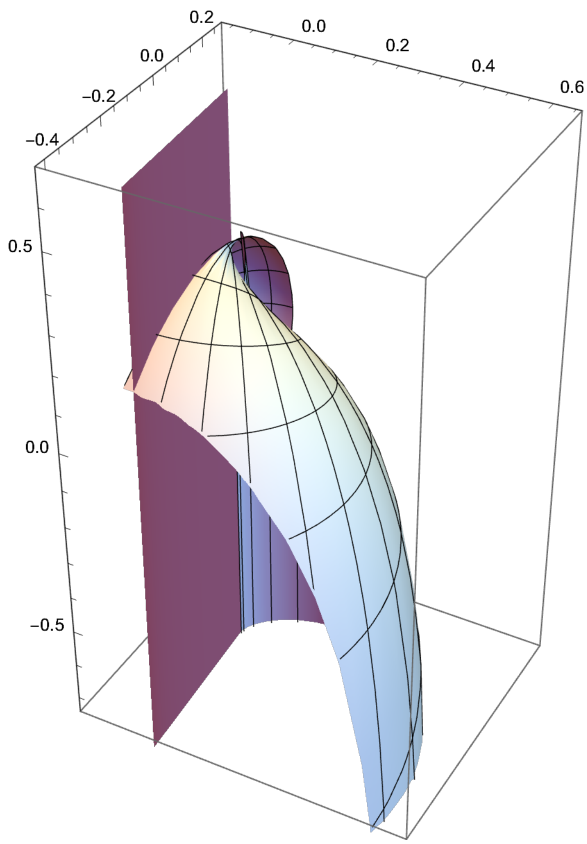



```
c := 2.99792458 * (10^8)
```

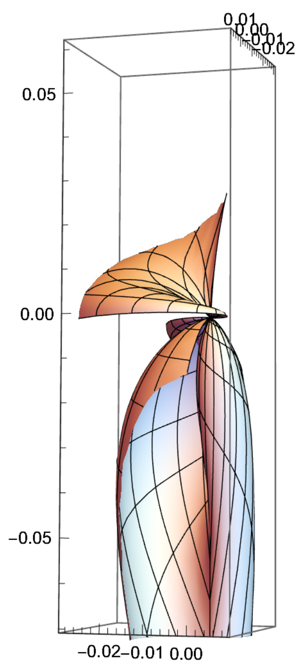
```
Solve[1 - (2 π Sin[β])/Sqrt[4 π θ - θ^2] == θ r - (2 π r - 2 π Sqrt[(r^2 - Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π)^2)]), r]
```

$$\left\{\left\{r \to \left(-4\pi\Theta+\Theta^2+2\pi\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\Theta}-\frac{2\pi^2\sqrt{(4\pi-\Theta)\Theta}\,\mathrm{Sin}[\beta]^3}{\Theta}\right)\Big/\left(16\pi^2\Theta-12\pi\Theta^2+2\Theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\Theta\,\mathrm{Sin}[\beta]^2\right)\right\}\right\}$$

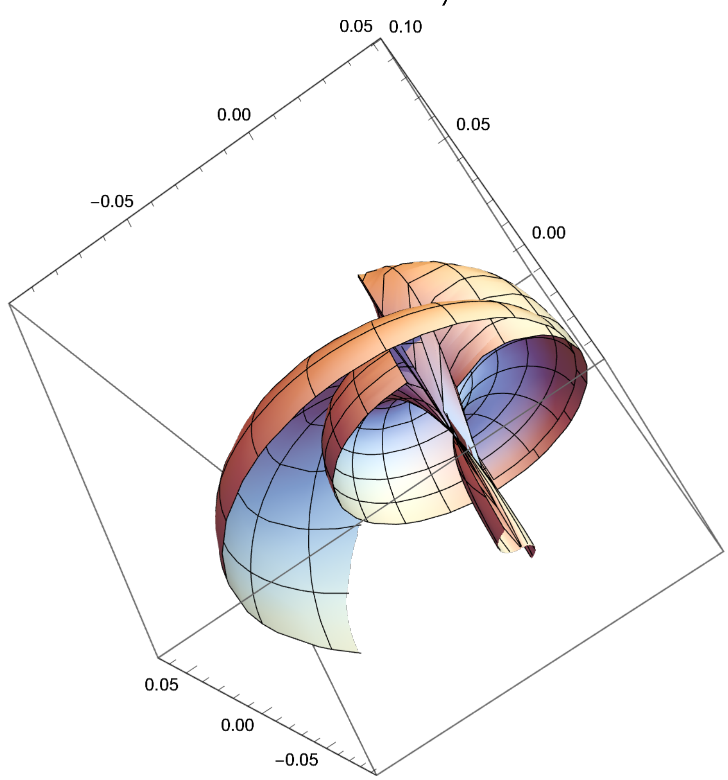
```
SphericalPlot3D[(-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) /
  (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



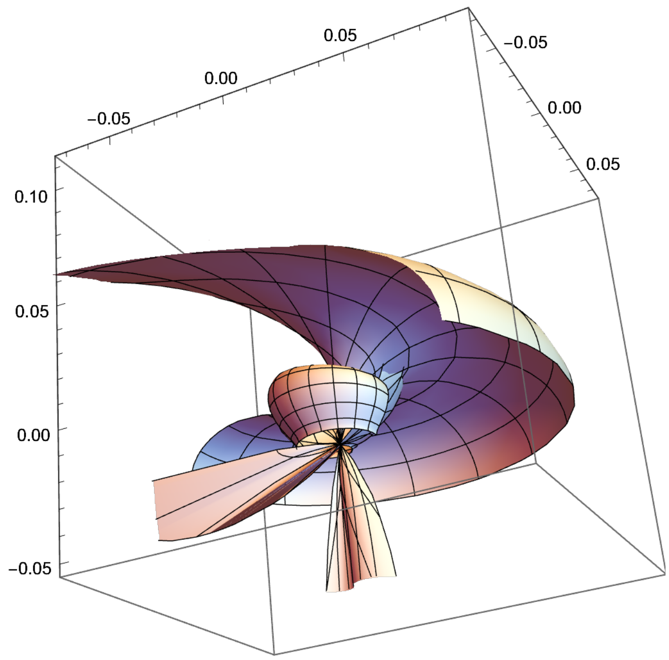
```
SphericalPlot3D[
 (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 ((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
        (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
       2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))^3 -
    16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



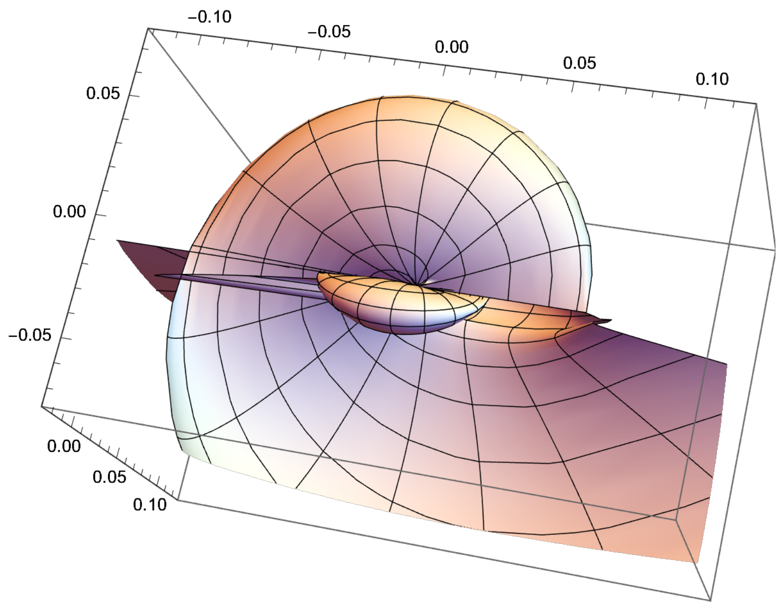
$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\Bigg(-4\,\pi\,\theta + \Bigg(\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/ \\
&\qquad \left(6\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \\
&\qquad \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2 + \\
&\quad 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta] + 4\,\pi^2\,\texttt{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{4\,\pi-\theta} - \\
&\quad \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{\theta}\Bigg)\Big/ \\
&\ \Bigg(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\Bigg(\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/ \\
&\qquad \left(6\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \\
&\qquad \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)^3 - \\
&\quad 16\,\pi^3\,\texttt{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\texttt{Sin}[\beta]^2\Bigg),\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Bigg]
\end{aligned}
$$



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\Bigg(-4\,\pi\,\theta+\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2+\\
&\quad 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\\
&\quad\Bigg(2\,\pi^2\sqrt{\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+\right.\right.\right.\right.}\\
&\qquad\qquad\left.\left.3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\qquad\left.\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\\
&\quad\text{Sin}[\beta]^3\Bigg)\Big/\left(4\,\pi-\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.\right.\\
&\qquad\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\qquad\left.\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)-\\
&\quad\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\Bigg(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\\
&\quad 2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.\\
&\qquad\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\qquad\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^3-\\
&\quad 16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Bigg),\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Bigg]
\end{aligned}
$$

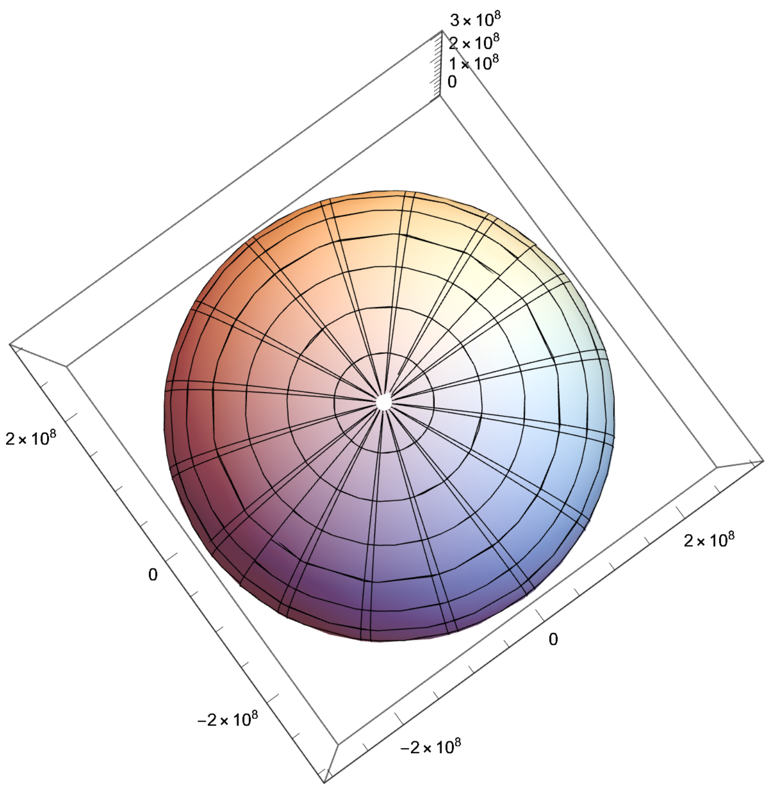

0.05
0.00
−0.05
−0.05
0.00
0.05
0.10
0.05
0.00
−0.05

$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\Bigg(-4\,\pi\,\theta+\Bigg(\frac{4\,\pi}{3}-\left(-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}\right)\Big/\\
&\quad\left(6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\Bigg)^{2}+\\
&\quad 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^{2}\,\text{Sin}[\beta]^{2}-\\
&\quad\Bigg(2\,\pi^{2}\sqrt{\Bigg((4\,\pi-\theta)\,\Bigg(\frac{4\,\pi}{3}-\left(-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}\right)\Big/\Bigg(6\,\Bigg(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+}\\
&\qquad 3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\Bigg)^{1/3}\Bigg)+\\
&\qquad\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\Bigg)\Bigg)\\
&\quad\text{Sin}[\beta]^{3}\Bigg)\Big/\Bigg(4\,\pi-\Bigg(\frac{4\,\pi}{3}-\left(-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}\right)\Big/\\
&\quad\left(6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\Bigg)\Bigg)-\\
&\quad\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^{3}}{\theta}\Bigg)\Big/\Bigg(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+\\
&\quad 2\,\Bigg(\frac{4\,\pi}{3}-\left(-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}\right)\Big/\\
&\quad\left(6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\Bigg)^{3}-\\
&\quad 16\,\pi^{3}\,\text{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\text{Sin}[\beta]^{2}\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\Bigg]
\end{aligned}
$$

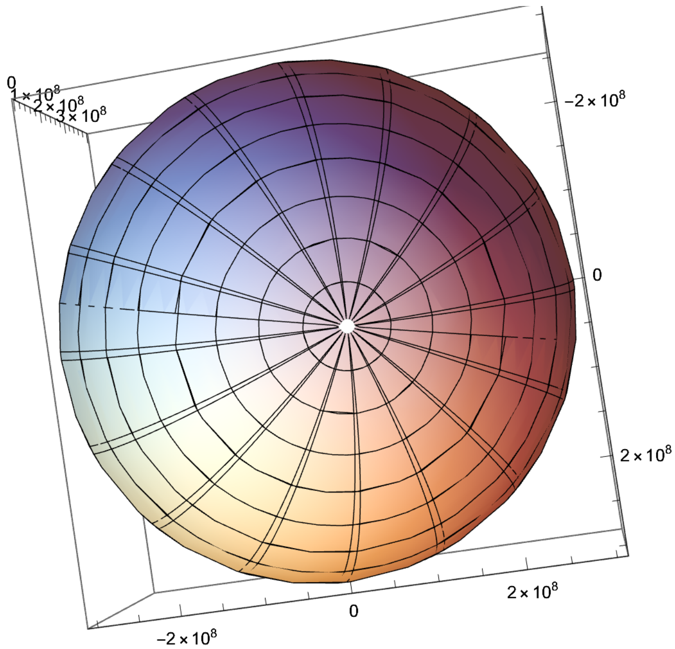



```
SphericalPlot3D[
 (√(-6.916640561054567`*^33 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
          3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
        2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
     5.504087674408673`*^32 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
             18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
     2.1729267174130213`*^34 Sin[β]^2)) /
  (√(-7.695800507960096`*^16 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
          (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
     6.124123459454841`*^15 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
             18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
```

```
        2.4177070339300032`*^17 Sin[β]^2)) +
  (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
      (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
      (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) /
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2),
 {β, -π / 2, π /
  2}, {θ,
 -2
  π, 2
  π}]
```



```
SphericalPlot3D[
 (Sqrt[(-6.916640561054567`*^33 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
            3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
      5.504087674408673`*^32 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
              18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))^2 +
      2.1729267174130213`*^34 Sin[β]^2)] /
   (Sqrt[(-7.695800507960096`*^16 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
           (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
      6.124123459454841`*^15 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
              18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))^2 +
      2.4177070339300032`*^17 Sin[β]^2)]) +
  ((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
        (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) /
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
   (θ / (2 π)), {β, -π / 2, π / 2}, {θ,
 -2
  π,
 2
  π}]
```



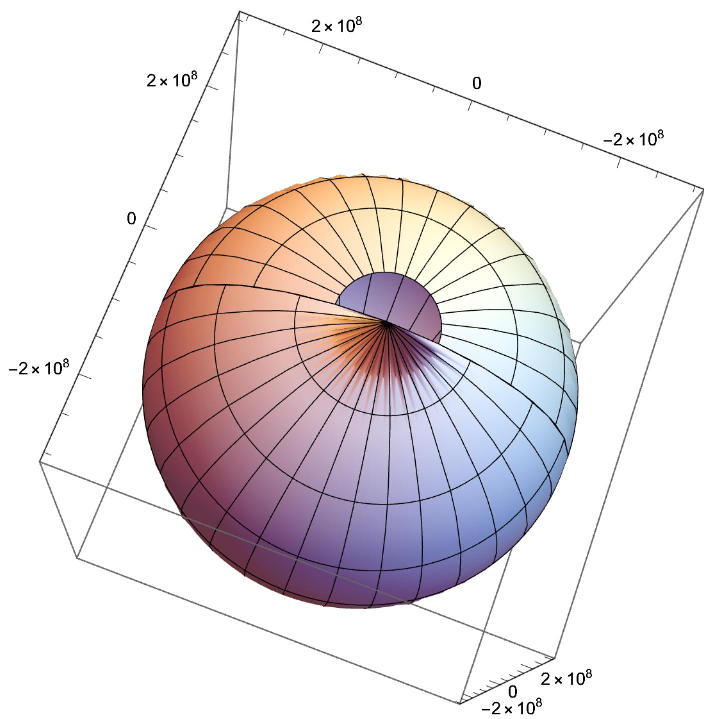
TotalVelocity = PhenomenalVelocity + InstantaneousVelocity + AverageVelocity

$$\left(\sqrt{}\left(-1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\,\theta^2 + 3.5481432270250993\text{`}*\text{^}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172\text{`}\ \theta + \theta^2 + 39.47841760435743\text{`}\ \mathrm{Sin}[\beta]^2}\right) +$$

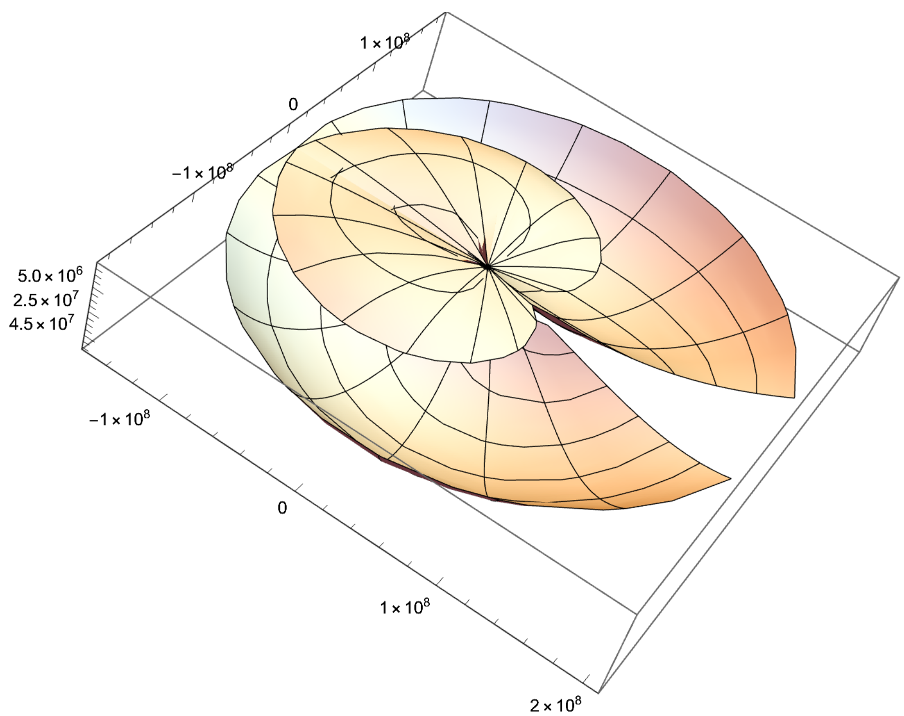
$$\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} + \left(\left(\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\ (\theta\,/\,(2\,\pi))\right)$$

$$r := \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)$$

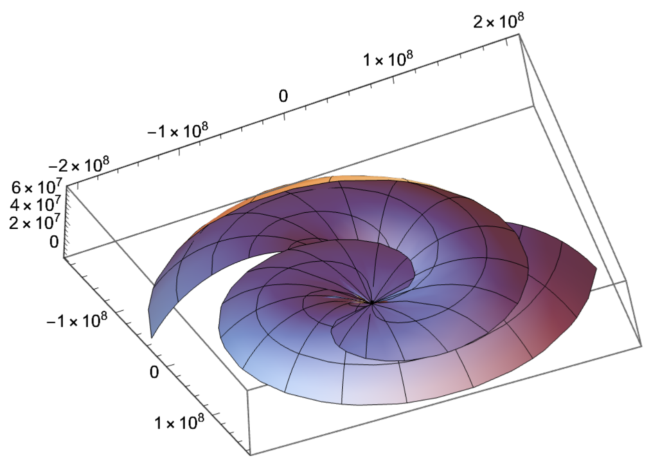
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
       Sin[β]^2)) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) +
  (4 π r^2 - 2 r^2 θ) / (2 Sqrt[4 π r^2 θ - r^2 θ^2]) + (((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
        (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3) / (4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3) / θ) /
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
   (θ / (2 π))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
      Sin[β]^2)) / (√(-12.566370614359172` θ +
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)) +
  (4 π r^2 - 2 r^2 θ)/(2 √(4 π r^2 θ - r^2 θ^2)) + (((-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 -
       (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) /
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
   (θ / (2 π))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
       Sin[β]^2)) / (√(-12.566370614359172` θ +
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)) +
   (4 π r^2 - 2 r^2 θ)/(2 √(4 π r^2 θ - r^2 θ^2)) + (((-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 -
         (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) /
       (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
    (θ / (2 π))), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

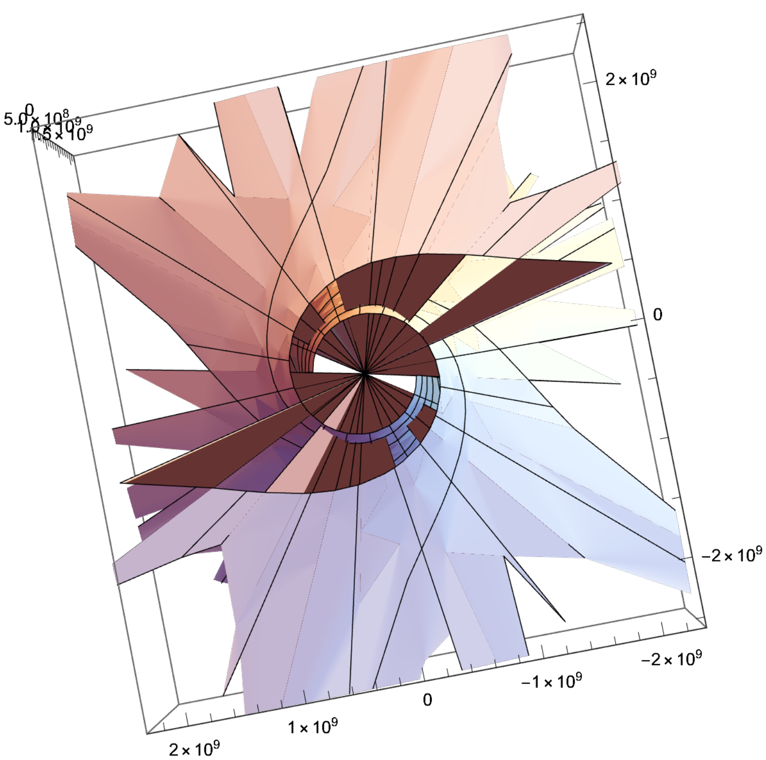


$$\texttt{SphericalPlot3D}\Big[\left(\sqrt{\left(-1.1294090667581471\text{`*^}18\,\theta+8.987551787368176\text{`*^}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)}\right)\Big/$$

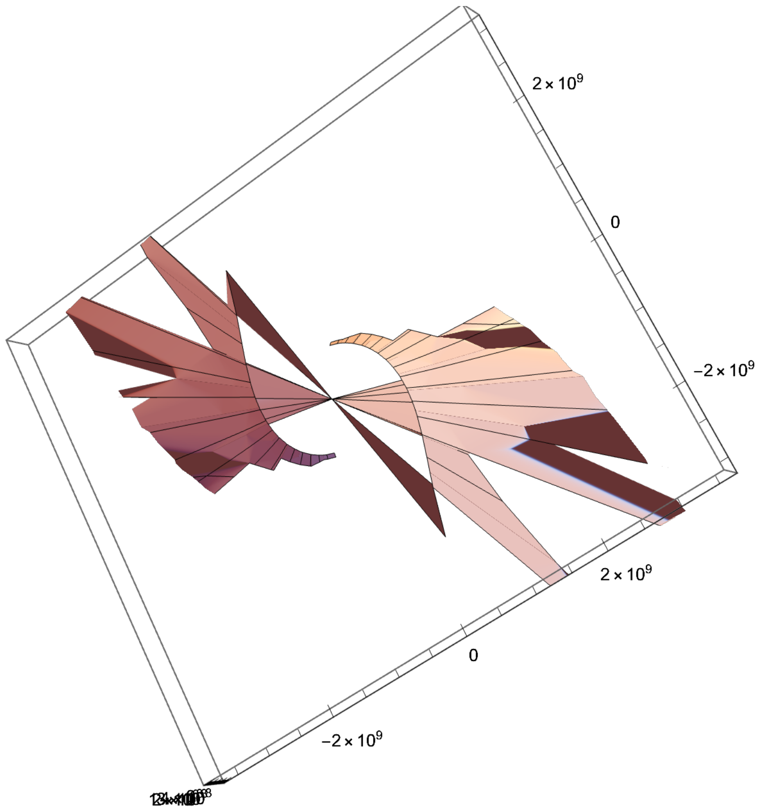
$$\left(\sqrt{\left(-12.566370614359172\text{`}\,\theta+(\theta)^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}\right)+\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\left(\left(\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\right.\right.\right.$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)\Big/$$

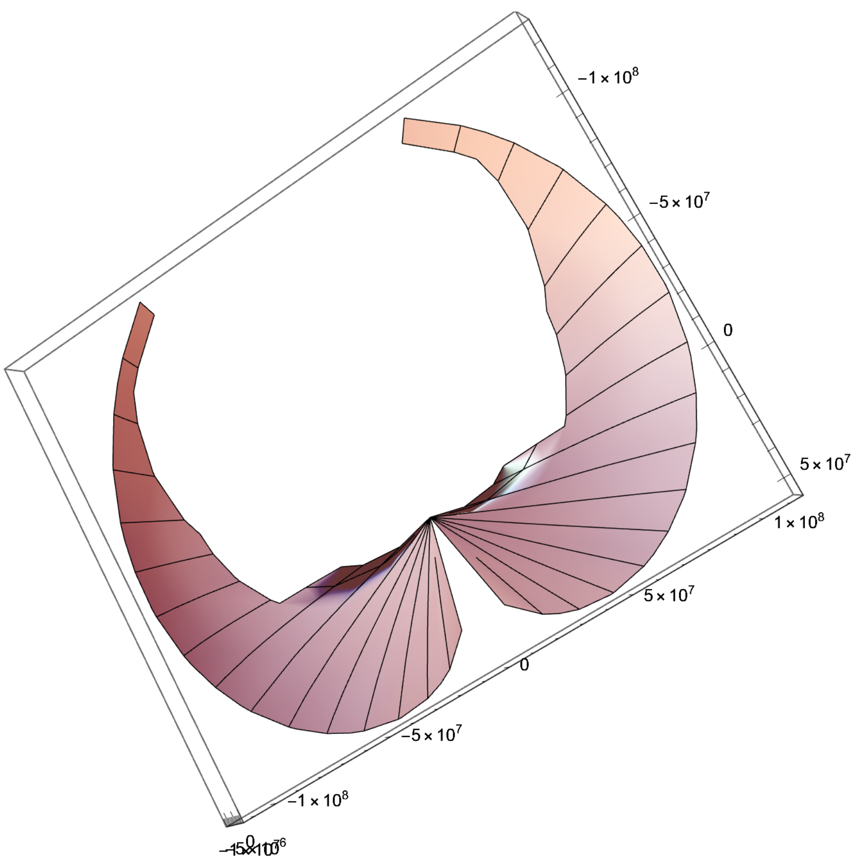
$$\left.(\theta\,/\,(2\,\pi))\right),\ \{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$



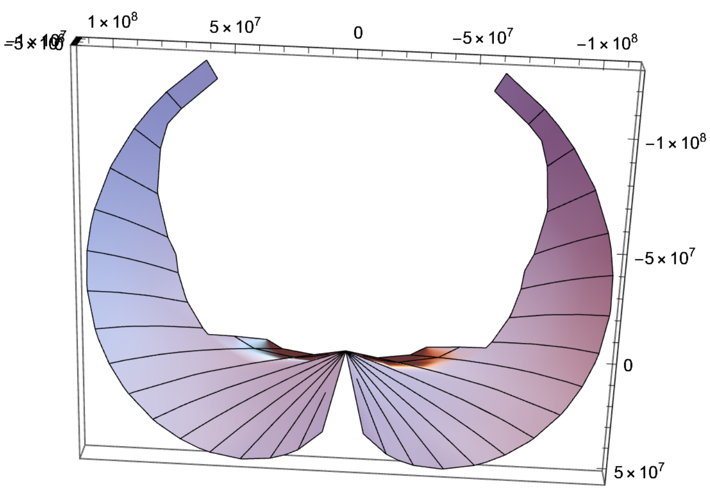
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + (θ)^2 + 39.47841760435743` Sin[β]^2)) +
  (4 π r^2 - 2 r^2 θ) / (2 Sqrt[4 π r^2 θ - r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2]) +
  (((-4 π θ + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
        (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ] Sin[β]^3)/θ) /
     (16 π^2 θ - 12 π θ^2 + 2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
    (θ / (2 π))), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```


2 × 10^9
0
−2 × 10^9
2 × 10^9
0
−2 × 10^9

```
SphericalPlot3D[
 (√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
        Sin[β]^2)) / (√ (-12.566370614359172` θ +
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)) +
   (4 π r^2 - 2 r^2 θ) / (2 √(4 π r^2 θ - r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) + ((((-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] +
        4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) /
      (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
    (θ / (2 π))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\texttt{SphericalPlot3D}\Big[\left(\sqrt{\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\text{`}\,\theta+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}\right)+\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}+\left(\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)\Big/(\theta\,/\,(2\,\pi))\right),\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\}\Big]$$

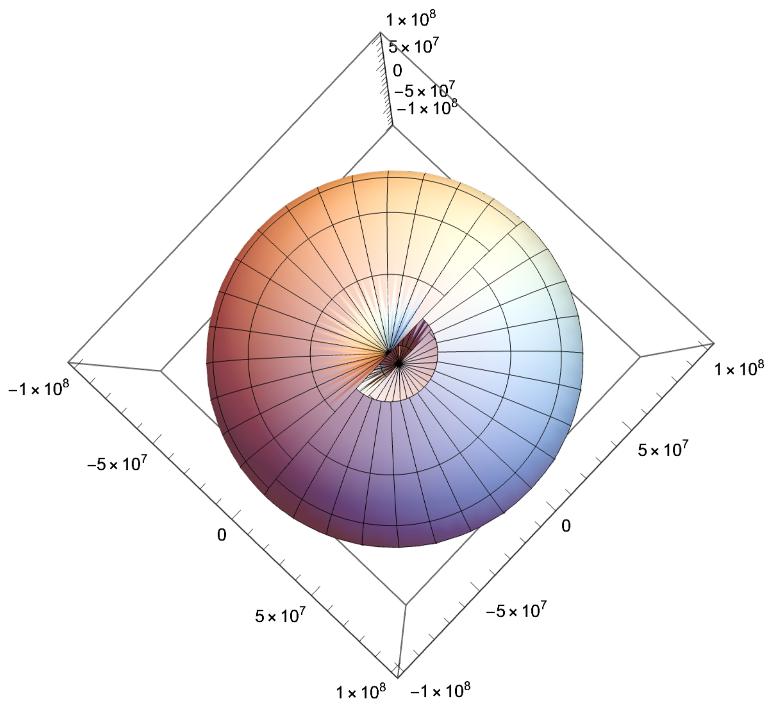


$$r:=\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)$$

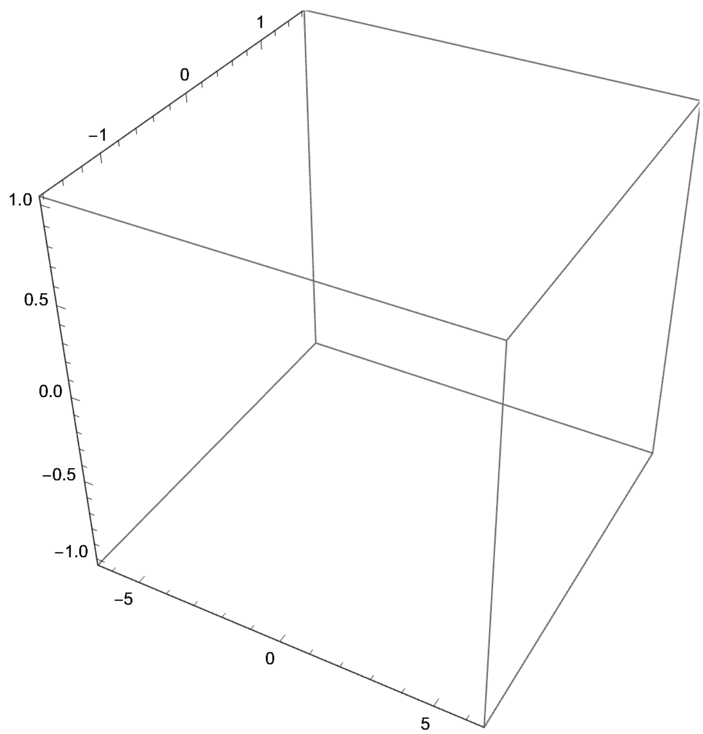
$$D\left[k\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{k\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

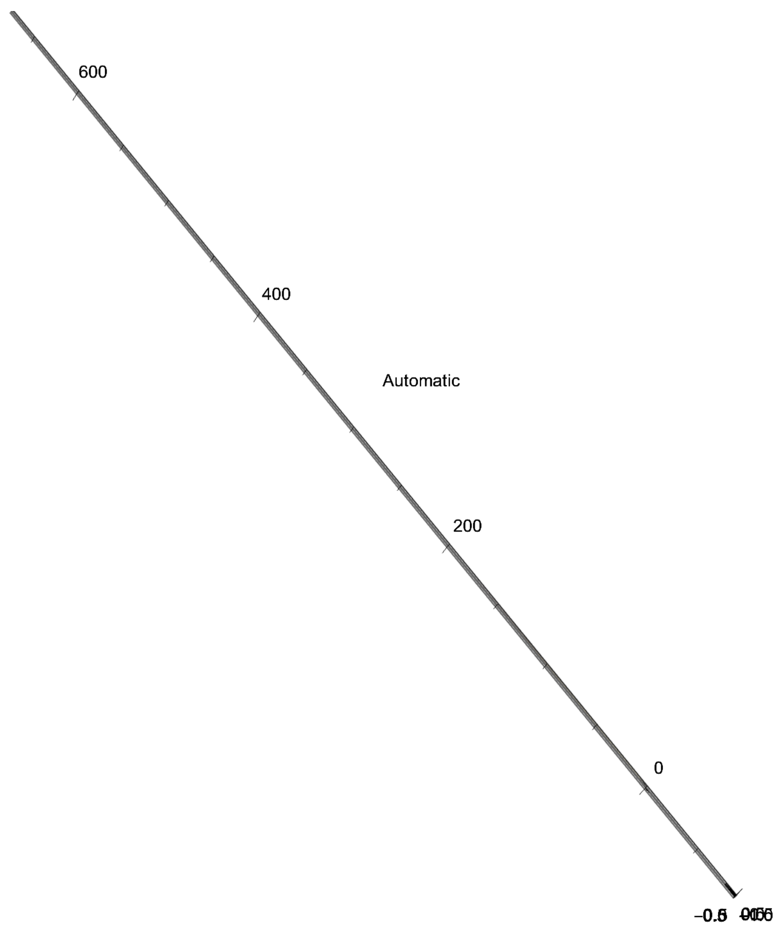
```
SphericalPlot3D[((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
    (2 π (4 π r^2 - 2 r^2 θ))/(4 π √(4 π r^2 θ - r^2 θ^2)) + r / (θ / (2 π))) / 3, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
ContourPlot3D[((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
   k (4 π r^2 - 2 r^2 θ) / (4 π √(4 π r^2 θ - r^2 θ^2)) + r / (θ / (k))) / 3,
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}, {k, -2 π, 2 π}]
```



```
SphericalPlot3D[
 2 π ((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
       (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
      (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) -
  2 π Sqrt[((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
         (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
        (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)^2 -
      (1/(2 π) Sqrt[4 π - θ] Sqrt[θ] ((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
             (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
            (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)))^2],
 {θ, -4 π, 4 π}, {β, -π, π}, AxesLabel → Automatic]
```

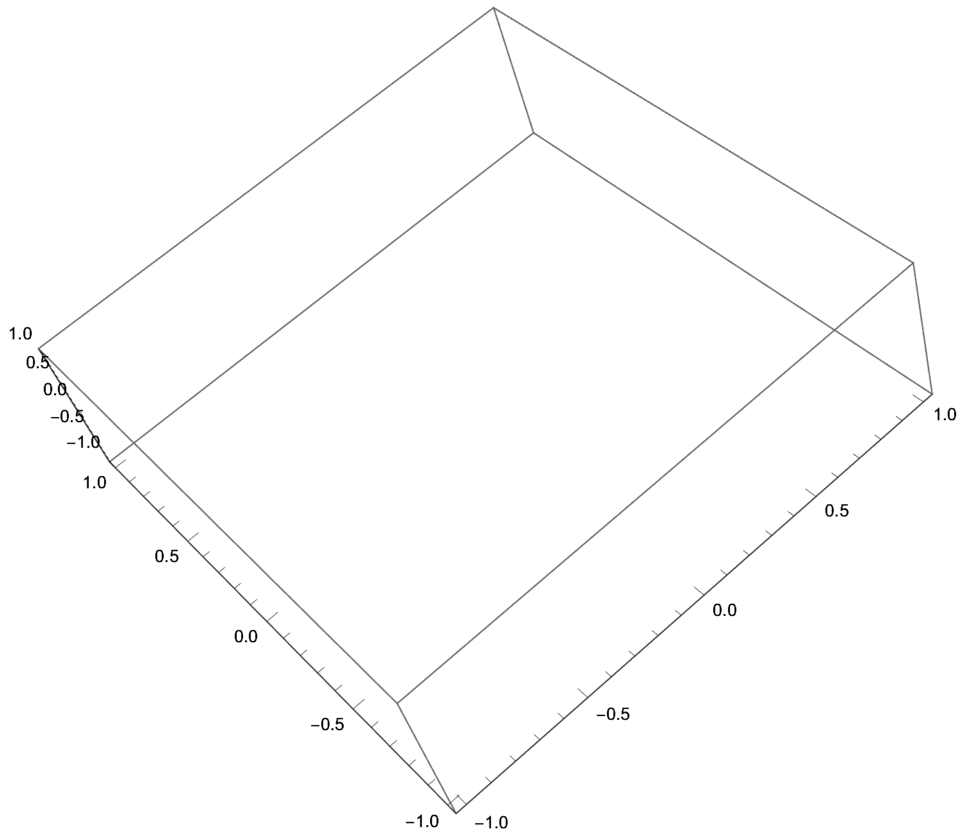


Solve[y == Abs[x + ⅈ y] Sin[β], x]

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

{{x → - ⅈ y - y Csc[β]}, {x → - ⅈ y + y Csc[β]}}

```
RevolutionPlot3D[-ⅈ y + y Csc[β], {y, -10, 10}, {β, -8 π, 8 π}]
```



$$\text{ContourPlot3D}\Big[\frac{1}{2\,\pi}\ \sqrt{4\,\pi-\theta}$$

$$\sqrt{\Bigg(1\Big/\ \Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\,\pi^2\ \text{Sin}[\beta]^2-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi-\theta}-}$$

$$\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\ \text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\Bigg)^2\times$$

$$2\,\pi\ \Bigg(\Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\,\pi^2\ \text{Sin}[\beta]^2-$$

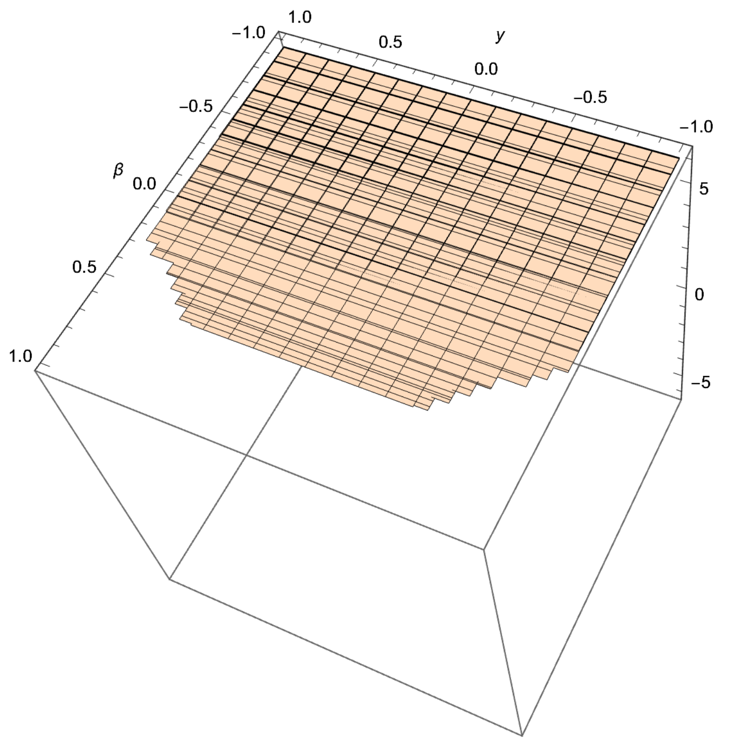
$$\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\ \text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\Bigg)^2+$$

$$\sqrt{\left(-y^2\left(\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)^2+\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)^4\right)\right)}$$

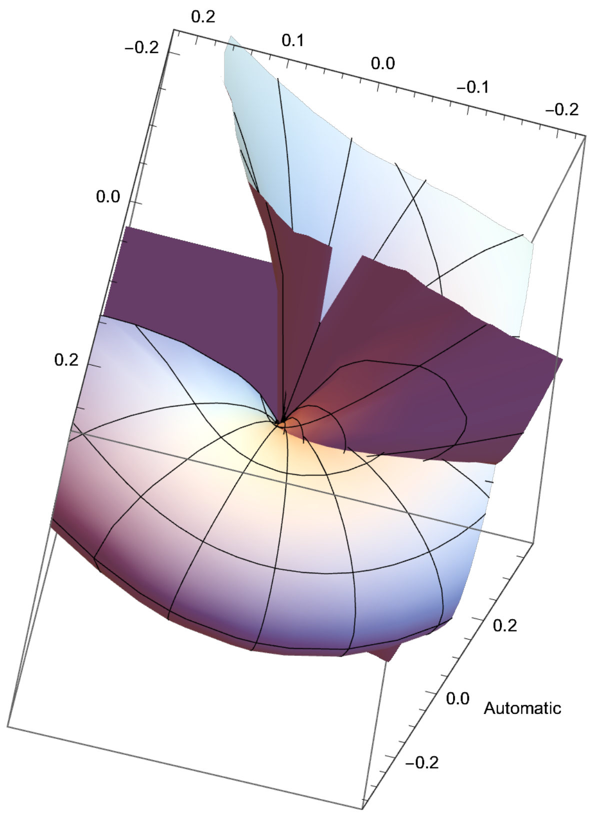
$$\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right),\ \{\beta,$$

```
-1, 1}, {θ, -2
 π,
2
 π}, {y,
-1,
1},
AxesLabel →
 Automatic]
```



1.0
0.5
y
0.0
−0.5
−1.0
−1.0
−0.5
β
0.0
0.5
1.0
5
0
−5

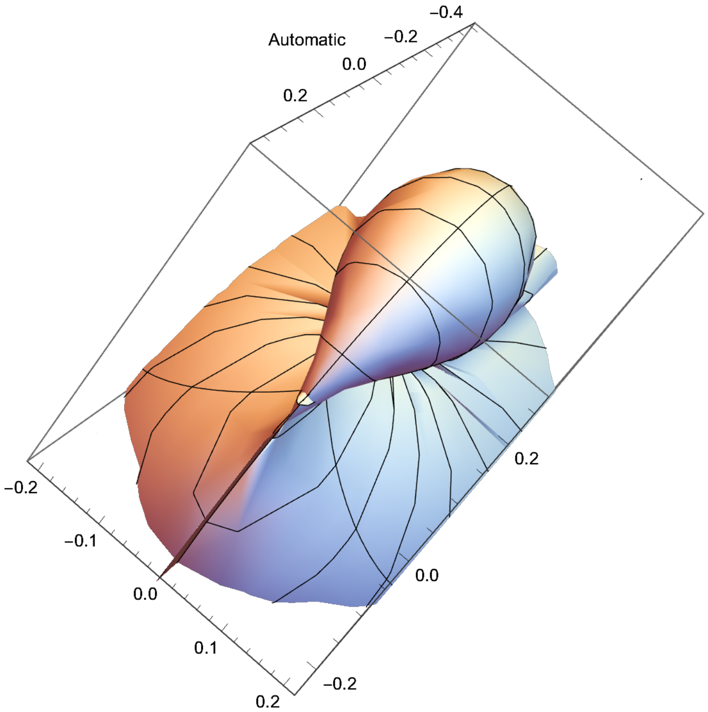
$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right),$$
$$\{\beta,-\pi,\pi\},\{\theta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$



$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}$$

$$\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right),$$

$$\{\theta,-2\pi,2\pi\},\ \{\beta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$



$$\text{ContourPlot3D}\Big[$$

$$\frac{1}{2\pi}\sqrt{4\pi-\theta}\ \sqrt{\frac{2\pi\left(\text{Abs}[x+i\,y]^2+\sqrt{-y^2\,\text{Abs}[x+i\,y]^2+\text{Abs}[x+i\,y]^4}\right)}{\text{Abs}[x+i\,y]^2}}\ \text{Abs}[x+i\,y],$$

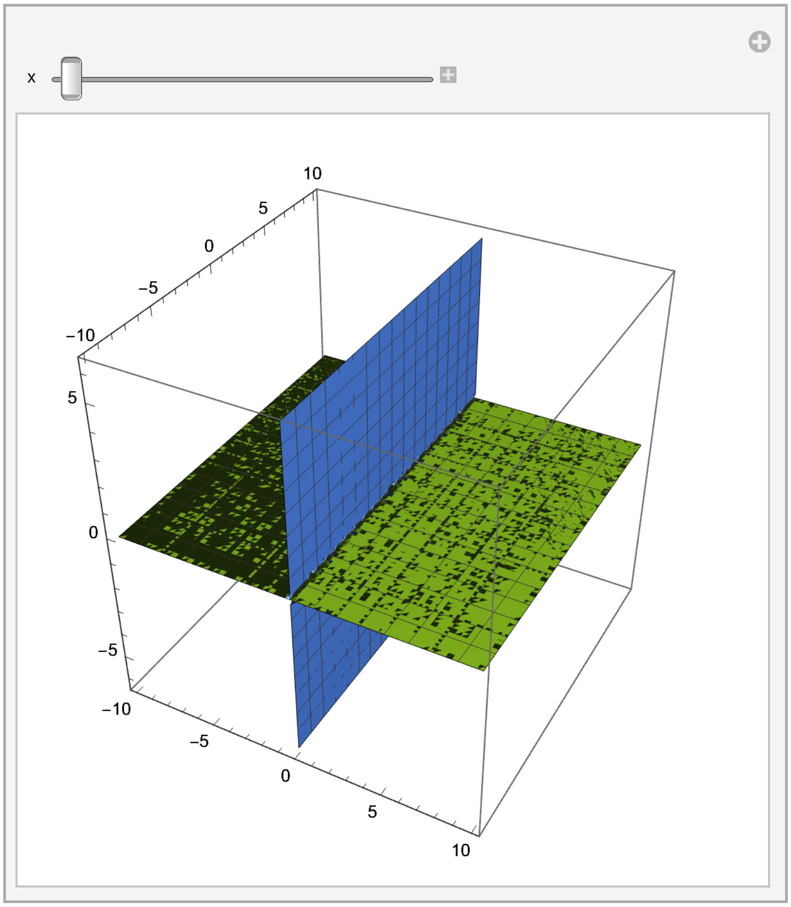
$$\{x,-1,1\},\{y,-1,1\},\{\theta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$

$$\text{Solve}[n\,\pi\,\theta==m\,\pi\,r-m\,\pi\,x,\ n]$$

$$\left\{\left\{n\to\frac{m\,r-m\,x}{\theta}\right\}\right\}$$

In[∘]:=
```
Manipulate[
 ContourPlot3D[(m r - m x)/θ, {m, -10, 10}, {r, -10, 10}, {θ, -2 π, 2 π}], {x, -10, 10}]
```

Out[∘]=



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

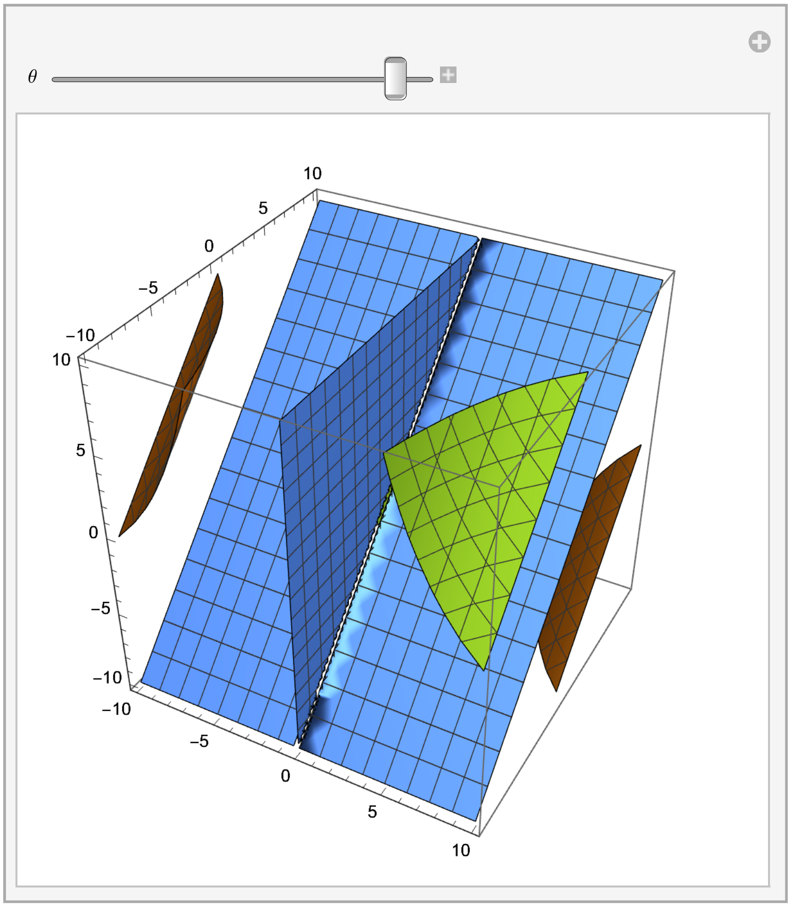
General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

```
Manipulate[
 ContourPlot3D[(m r - m x)/θ, {m, -10, 10}, {x, -10, 10}, {r, -10, 10}], {θ, -2 π, 2 π}]
```

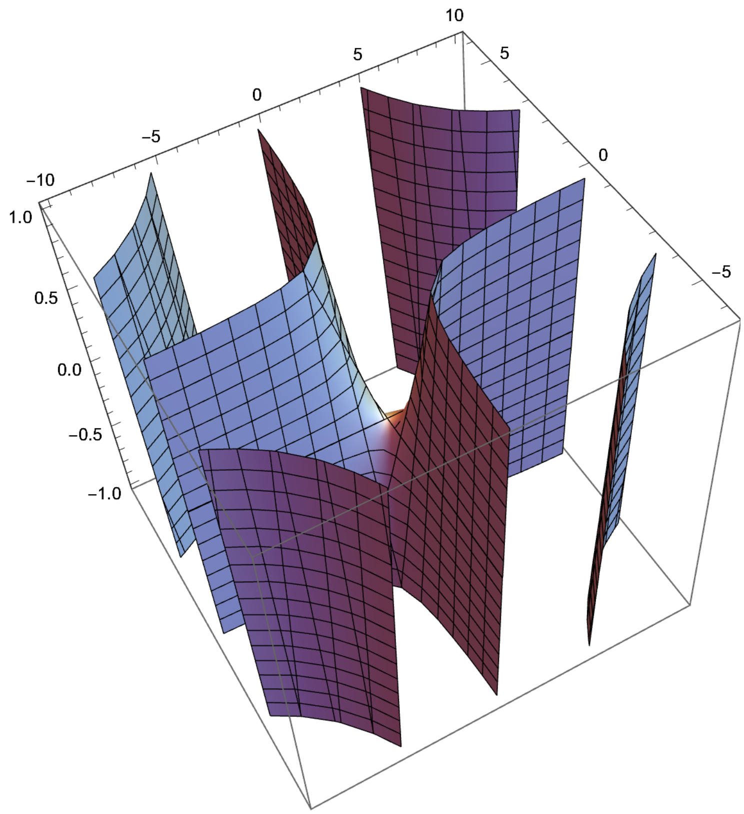


$$\frac{m\,r - m\,x}{\theta}$$

```
Solve[n π θ == 2 π r - 2 π x, r]
```

$$\left\{\left\{r \to \frac{1}{2}\,(2\,x + n\,\theta)\right\}\right\}$$

```
ContourPlot3D[1/2 (2 x + n θ), {x, -1, 1}, {n, -10, 10}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\Big[\Big(\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\;\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\text{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta^2}\right)\Big)\Big/$$

$$\Big(2\pi\sqrt{4\pi r^2\theta-r^2\theta^2}\;\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\Big)^3\Big)-$$

$$\left(\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right.$$

$$\left(\frac{\pi\,(4\pi-2\theta)\,\text{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$

$$\frac{3\pi^2\,(4\pi-2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$

$$\left.\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)\right)\Big/$$

$$\left(4\pi\,\sqrt{4\pi r^2\theta-r^2\theta^2}\,\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)-$$

$$\left(\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\text{Sin}[\beta]^2\right)\left(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\right.\right.$$

$$\left.\left.\text{Sin}[\beta]-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\right)\Big/$$

$$\left(4\pi\,\sqrt{4\pi r^2\theta-r^2\theta^2}\,\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)+$$

$$\left(\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right.$$

$$\left(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\right.$$

$$\left.\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\right)\Big/$$

$$\left(8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

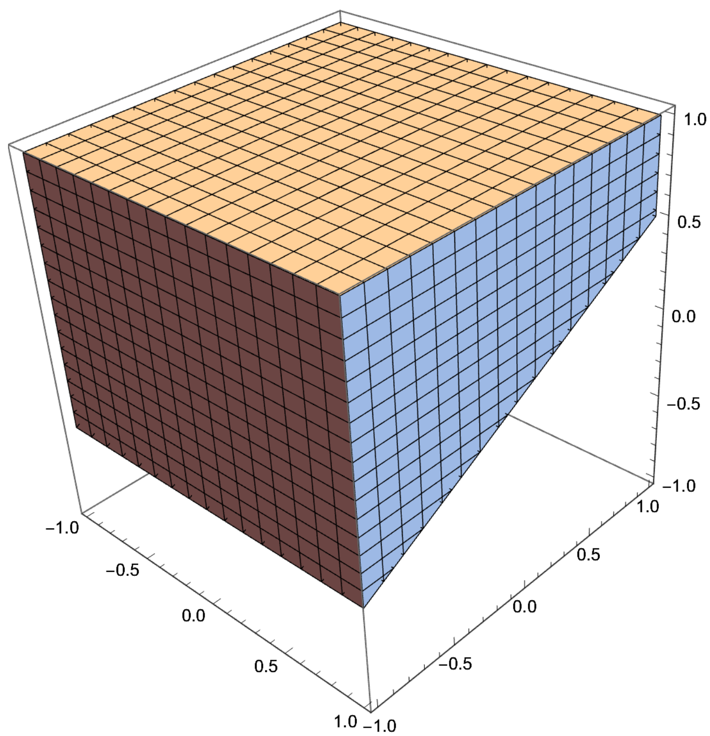
$$\left.\left.\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)-$$

$$\left((8\pi r-4r\theta)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right.$$

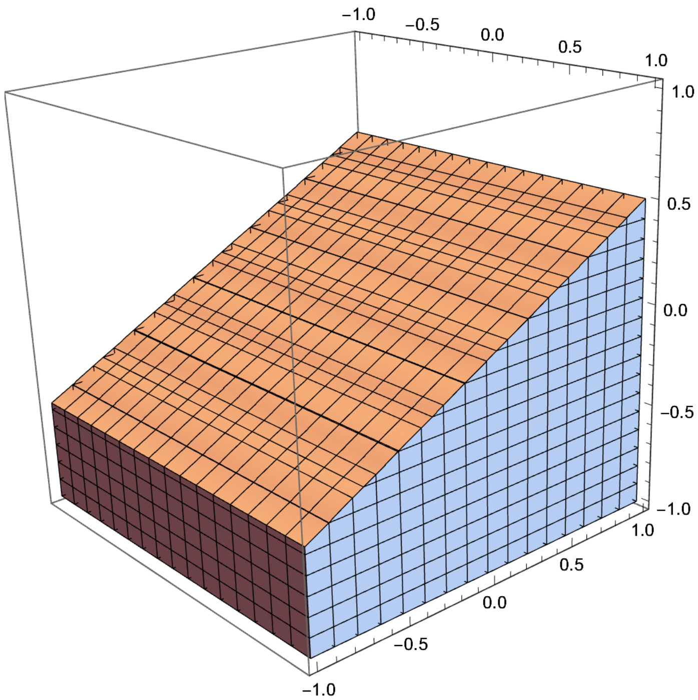
$$\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\bigg/$$
$$\left(4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)-$$
$$\left(\left(8\pi r\theta-2r\theta^2\right)\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$
$$\left.\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\bigg/$$
$$\left(4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)+$$
$$\left(4\pi\left(8\pi r\theta-2r\theta^2\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\bigg/\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)-$$
$$\left(\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right)\bigg/$$
$$\left(8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)+$$
$$\left((8\pi r-4r\theta)\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right)\bigg/$$
$$\left(4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)==$$

$$\left(r - \frac{r\,\theta}{2\,\pi}\right) \Big/ \left(\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right), r]$$

RegionPlot3D$\left[\overline{AC} < \overline{AB} + \overline{DE}, \{\overline{AB}, -1, 1\}, \{\overline{AC}, -1, 1\}, \{\overline{DE}, -1, 1\}\right]$



RegionPlot3D$\left[\overline{AC} \geq \overline{AB} + \overline{DE}, \{\overline{AB}, -1, 1\}, \{\overline{AC}, -1, 1\}, \{\overline{DE}, -1, 1\}\right]$



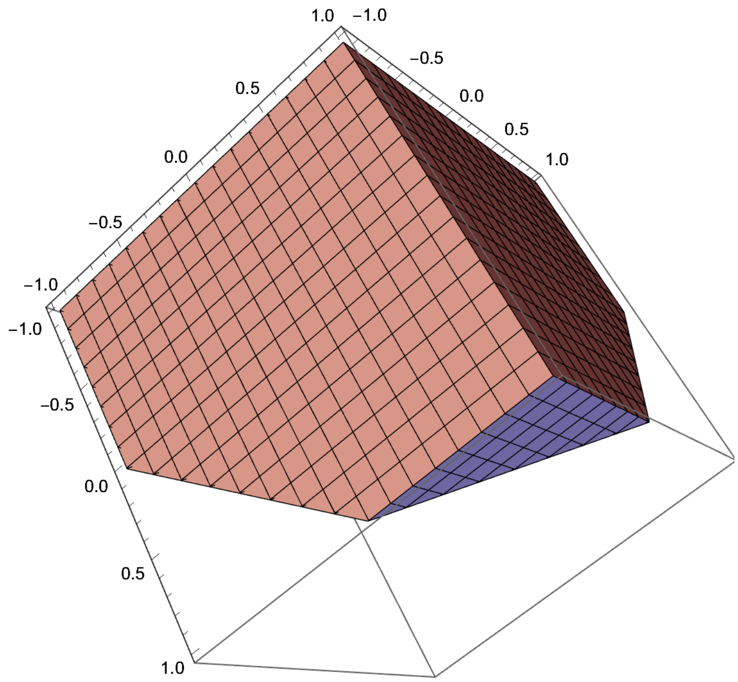
RegionPlot3D$\left[g > \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}, \{r, -1, 1\}, \{g, -1, 1\}, \{\theta, -1, 1\}\right]$

Greater::nord : Invalid comparison with $-1.15915 + 0.586208\, i$ attempted. ≫

RegionPlot3D::boolf : $g > \frac{\sqrt{4\pi r^2 \theta - \text{Power}[\ll 2 \gg]\,\text{Power}[\ll 2 \gg]}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}$ must be a Boolean function. ≫

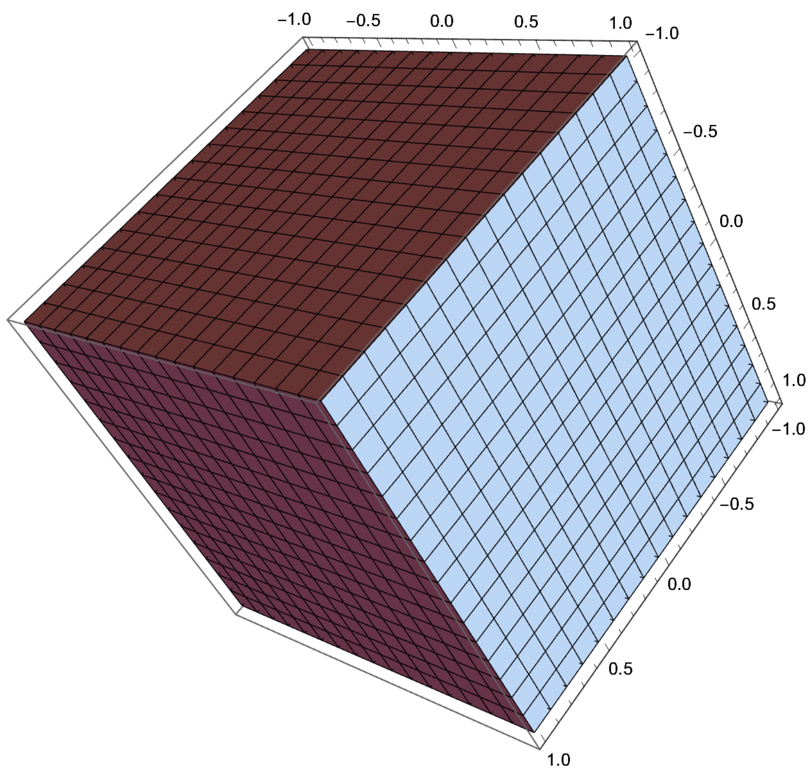
RegionPlot3D$\left[g > \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} + \frac{2\pi r - r\theta}{2\pi}, \{r, -1, 1\}, \{g, -1, 1\}, \{\theta, -1, 1\}\right]$

RegionPlot3D[AC ≥ AB + DE, {AB, -1, 1}, {AC, -1, 1}, {DE, -1, 1}]

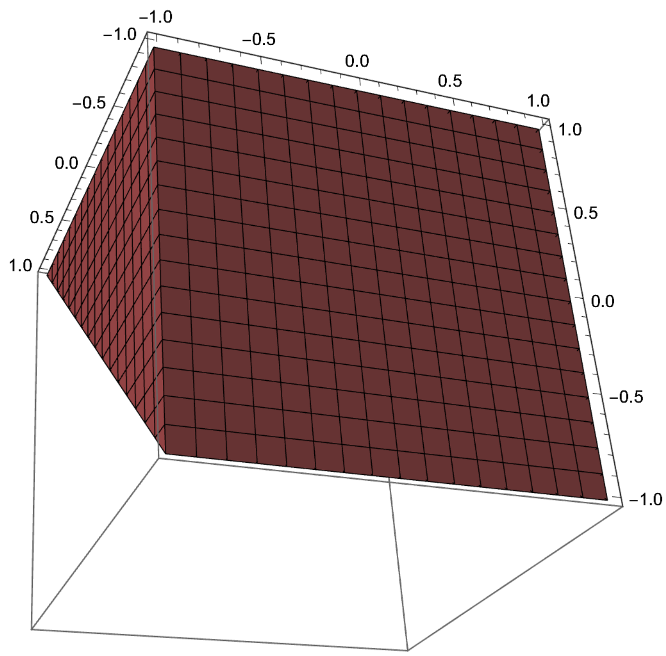


RegionPlot3D$\left[\overline{AC} \geq \overline{AB} + \overline{DE}, \left\{\overline{AB}, -1, 1\right\}, \left\{\overline{AC}, -1, 1\right\}, \left\{\overline{DE}, -1, 1\right\}\right]$

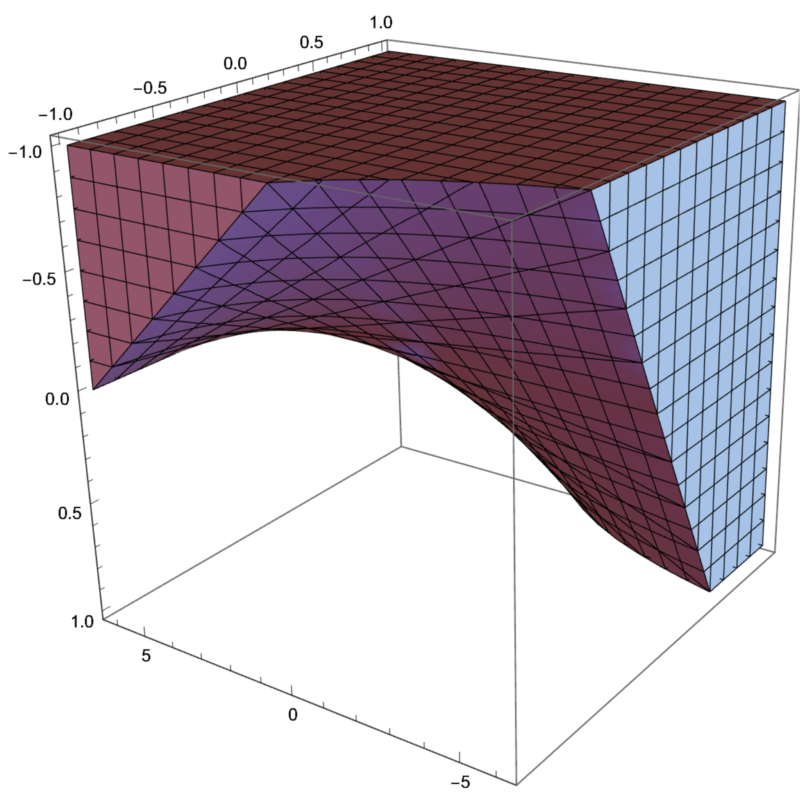
RegionPlot3D$\left[\overline{AB} + \overline{BC} \geq \overline{AB} + \overline{DE}, \left\{\overline{AB}, -1, 1\right\}, \left\{\overline{BC}, -1, 1\right\}, \left\{\overline{DE}, -1, 1\right\}\right]$



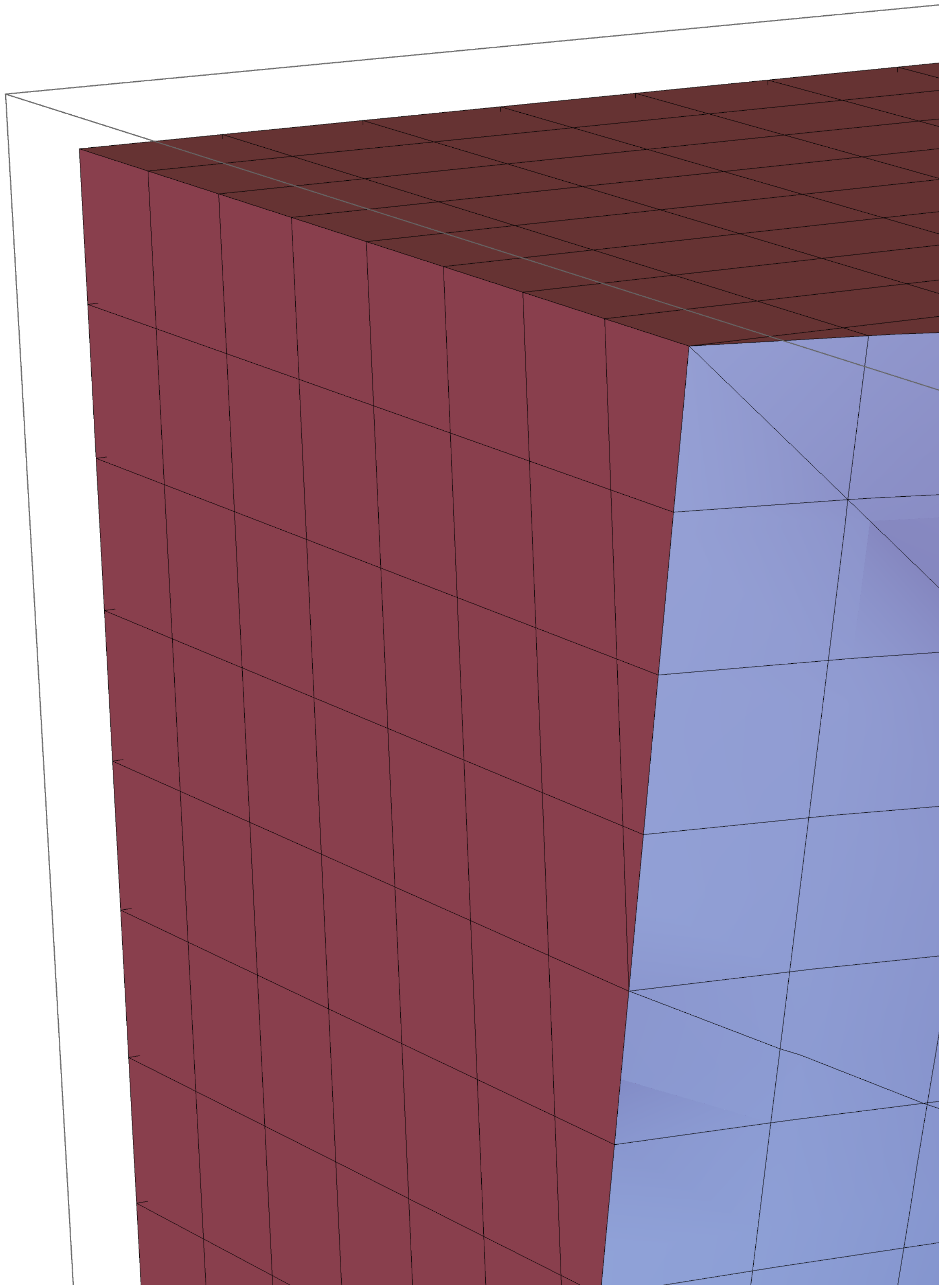
```
RegionPlot3D[AB + BC < AB + DE, {AB, -1, 1}, {BC, -1, 1}, {DE, -1, 1}]
```

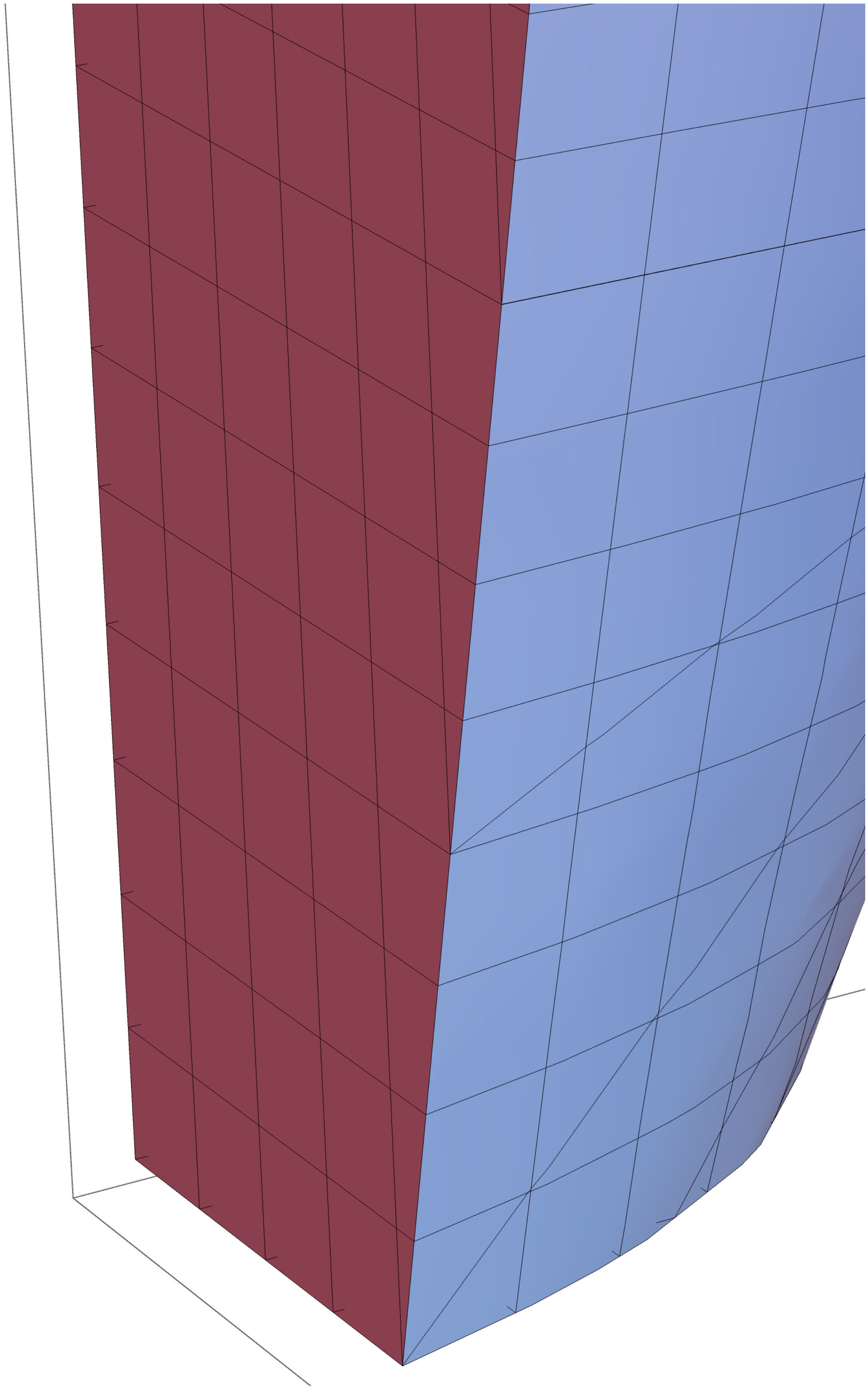


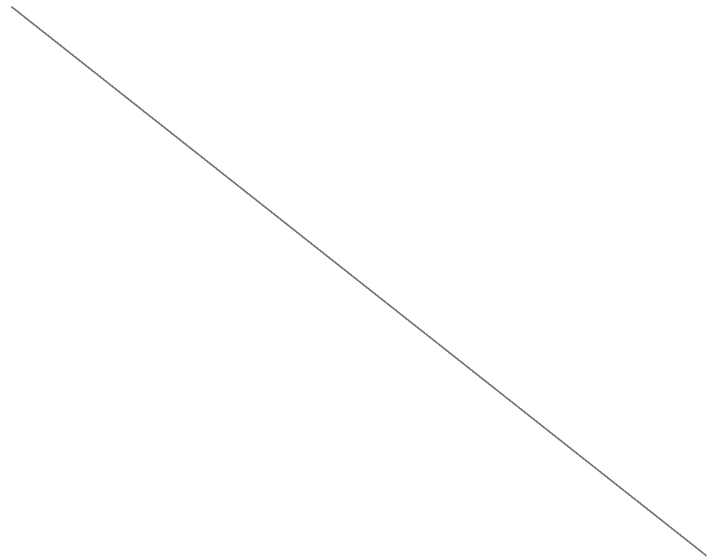

```
RegionPlot3D[2 π r - 2 π x > θ r, {r, -1, 1}, {x, -1, 1}, {θ, -2 π, 2 π}]
```




```
RegionPlot3D[2 π r - 2 π x > θ r, {r, -.1, .1}, {x, -.1, .1}, {θ, -8 π, 8 π}]
```







```
RegionPlot3D[
 2 π ((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
       (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) - 2 π x <
  θ ((-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
       (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/ (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)),
 {β, -π, π}, {x, -1, 1}, {θ, -2 π, 2 π}]
```

Less::nord : Invalid comparison with $6.03319 + 1.76763\times10^{-17}\, i$ attempted. ≫

RegionPlot3D::boolf : $\dfrac{2\pi\left(-4\pi\theta+\theta^2+2 \ll3\gg + \ll1\gg - \ll1\gg - 2 \ll3\gg \text{Power}[\ll2\gg]\right)}{\ll6\gg + 8\,\text{Power}[\ll2\gg]\,\theta\,\text{Power}[\ll2\gg]} - 2\pi x < \dfrac{\theta(\ll1\gg)}{\ll1\gg}$ must be a Boolean function. ≫

```
RegionPlot3D[
 (2 π (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
       (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ))/
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) - 2 π x <
  (θ (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
       (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ))/
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), {β,
  -π, π}, {x, -1, 1}, {θ, -2 π, 2 π}]
```

```
RegionPlot3D[2 π r - 2 π (2 π r - r 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/(2 π) < 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) r,
 {r, -1, 1}, {β, -π / 2, π / 2}, {θ, -4 π, 4 π}]
```

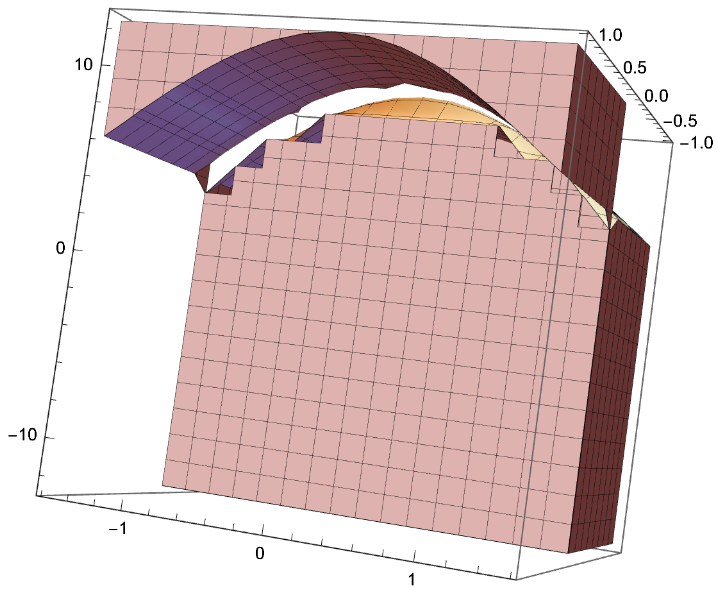
$$\text{RegionPlot3D}\left[2\pi\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}-2\pi x>\theta\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}},\{x,-1,1\},\{\eta,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

Greater::nord : Invalid comparison with 6.28319 + 3.6276 i attempted. ≫

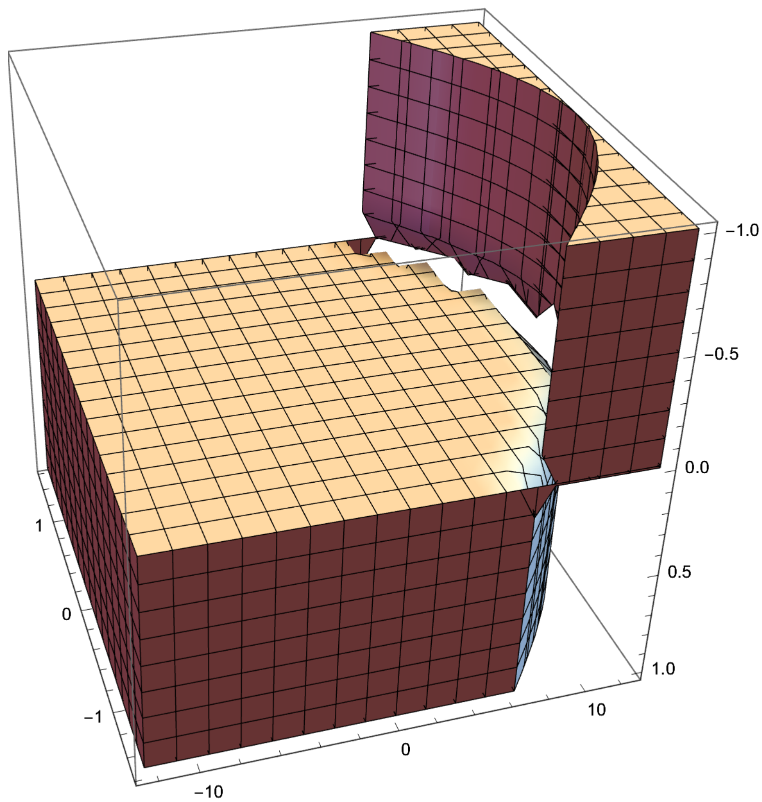
RegionPlot3D::boolf : $\frac{2\pi(2\pi\eta)}{\sqrt{\text{Times}[\ll 3\gg]+\text{Times}[\ll 2\gg]}}-2\pi x>\frac{\theta(2\pi\eta)}{\sqrt{4\pi\theta-\text{Power}[\ll 2\gg]}}$ must be a Boolean function. ≫

$$\text{RegionPlot3D}\left[\frac{2\pi(2\pi\eta)}{\sqrt{4\pi\theta-\theta^2}}-2\pi x>\frac{\theta(2\pi\eta)}{\sqrt{4\pi\theta-\theta^2}},\{x,-1,1\},\{\eta,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

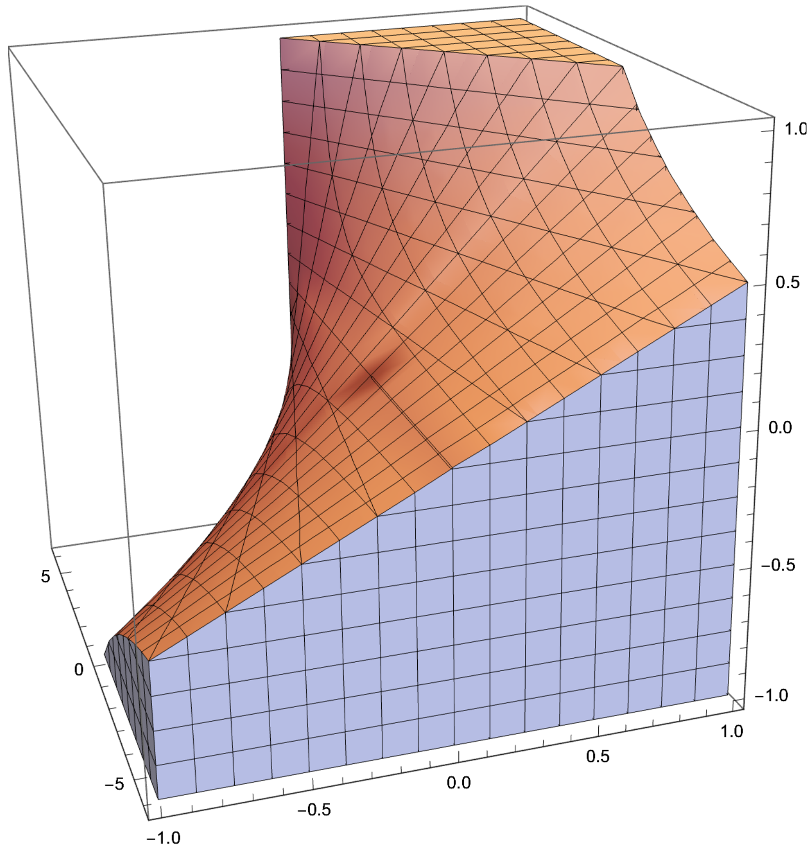
$$\text{RegionPlot3D}\left[2\pi r-2\pi\frac{2\pi r-r\theta}{2\pi}>2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)r,\right.$$
$$\left.\{r,-1,1\},\{\beta,-\pi/2,\pi/2\},\{\theta,-4\pi,4\pi\}\right]$$



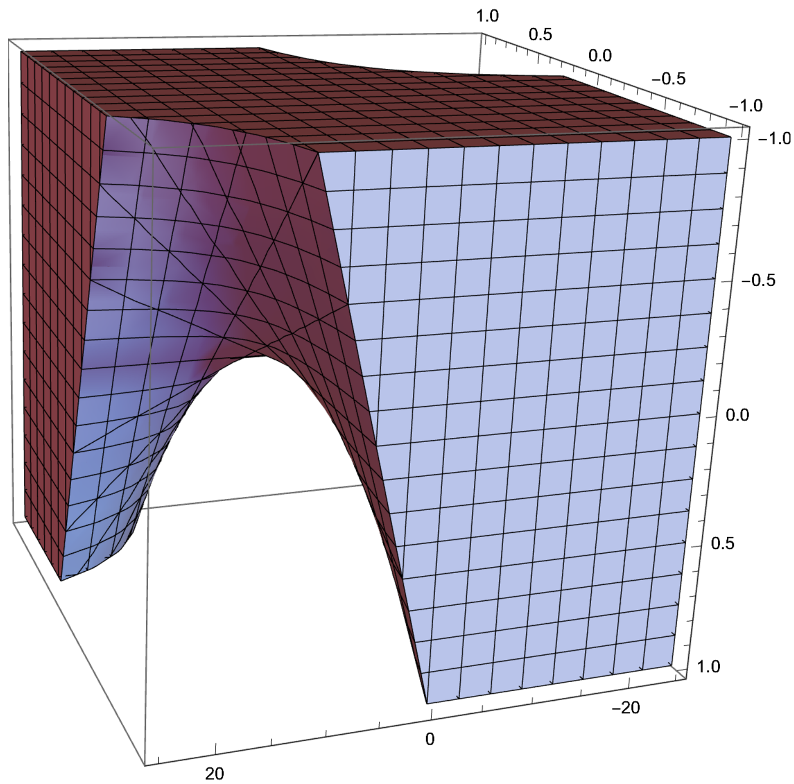
$$\text{RegionPlot3D}\left[2\pi r - 2\pi\,\frac{2\pi r - r\theta}{2\pi} < 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) r,\ \{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}, \{\theta, -4\pi, 4\pi\}\right]$$




```
RegionPlot3D[2 π r - 2 π x < θ r, {r, -1, 1}, {x, -1, 1}, {θ, -2 π, 2 π}]
```

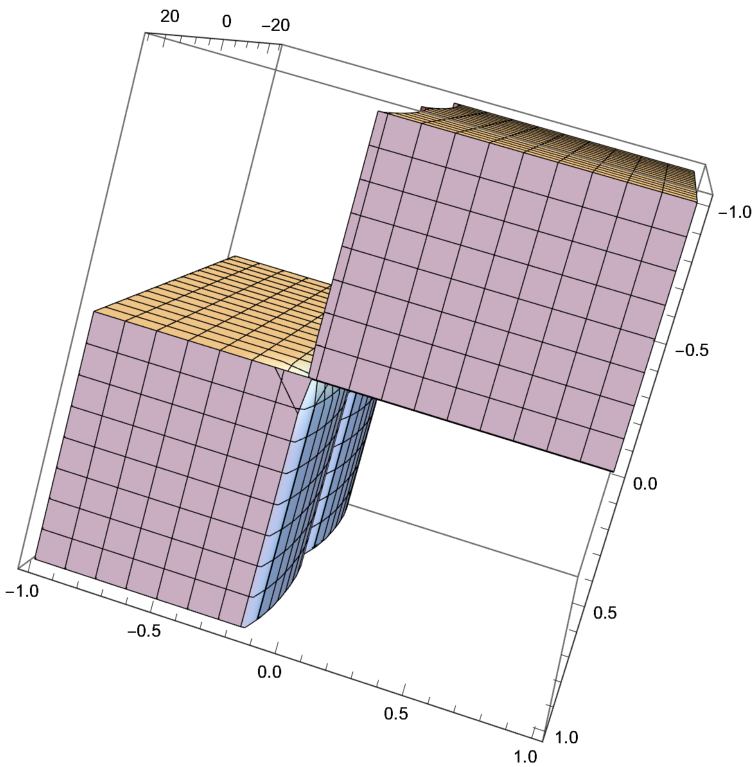

1.0
0.5
0.0
−0.5
−1.0
5
0
−5
−1.0
−0.5
0.0
0.5
1.0

```
RegionPlot3D[2 π r + 2 π x < θ r, {r, -1, 1}, {x, -1, 1}, {θ, -8 π, 8 π}]
```

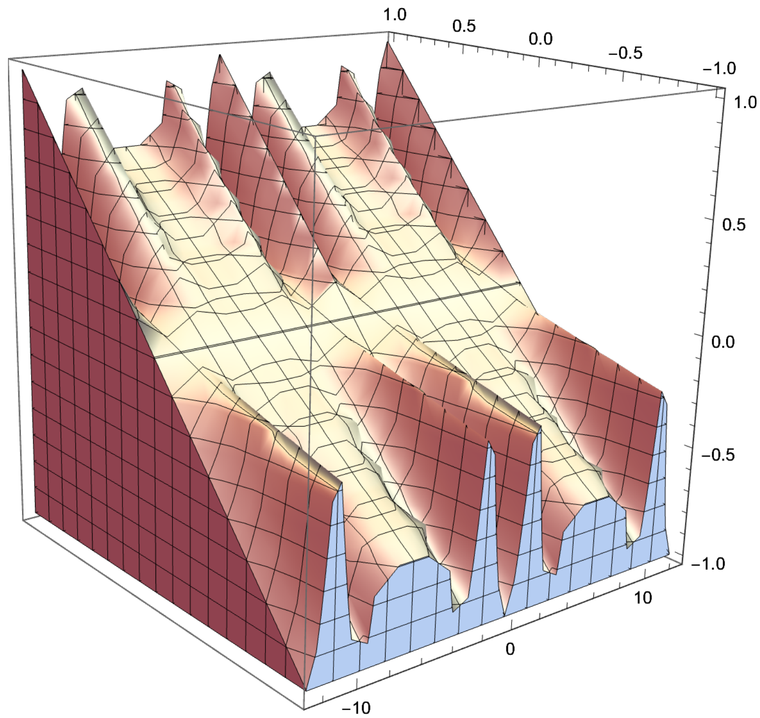


$$\text{RegionPlot3D}\Big[2\pi r + 2\pi x\left(\frac{4\pi}{3} - \frac{-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) r,$$

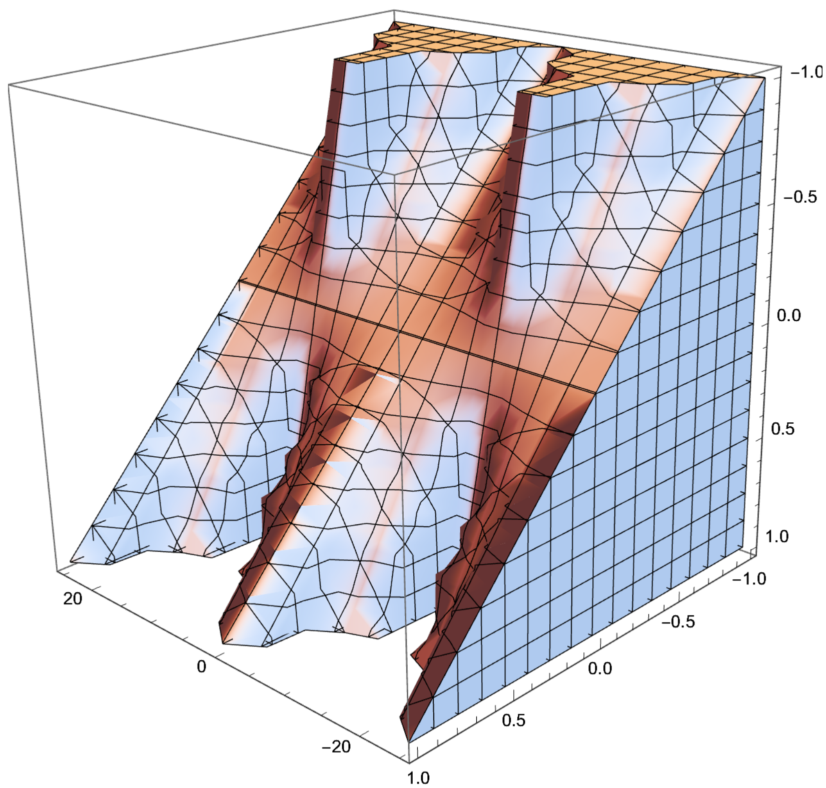
$$\{r, -1, 1\}, \{x, -1, 1\}, \{\beta, -8\pi, 8\pi\}\Big]$$



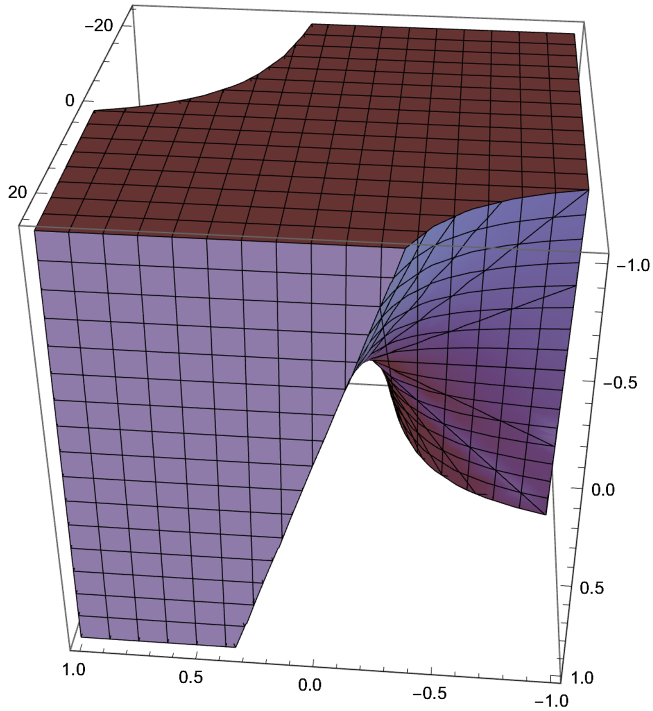
```
RegionPlot3D[2 π r + 2 π x ≤ (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) r,
 {r, -1, 1}, {x, -1, 1}, {β, -4 π, 4 π}]
```



```
RegionPlot3D[2 π r + 2 π x ≤ (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) r,
 {r, -1, 1}, {x, -1, 1}, {β, -8 π, 8 π}]
```



```
RegionPlot3D[2 π r + 2 π x ≤ θ r, {r, -1, 1}, {x, -1, 1}, {θ, -8 π, 8 π}]
```




```
Cos[α] ^2 + Sin[α] ^2
```

$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2$

$$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2 == 2\,\pi\,\frac{\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta\verb|^|2}}$$

$$\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

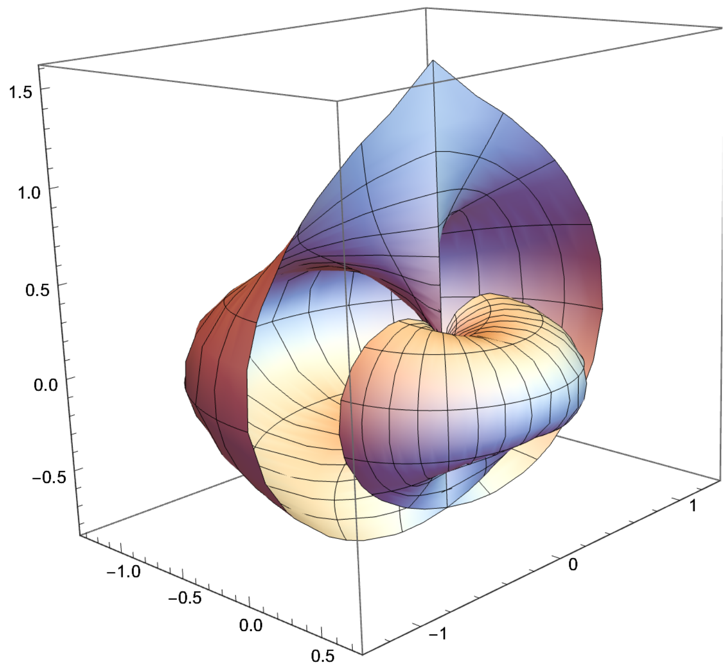
$$\text{Solve}\left[\text{Cos}[\theta]^2 + \text{Sin}[\theta]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

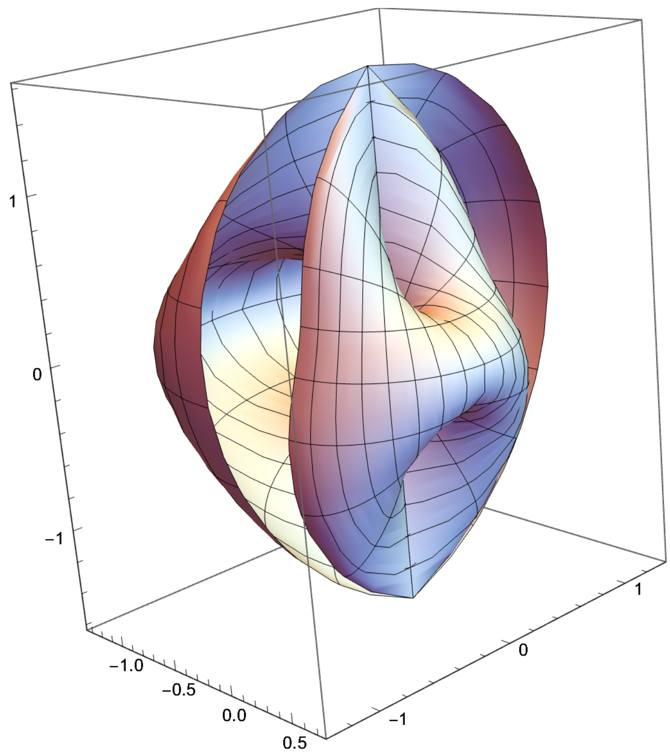
$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}\;\text{Cos}[\theta]^2 + \sqrt{(4\,\pi - \theta)\,\theta}\;\text{Sin}[\theta]^2}{2\,\pi}\right]\right\}\right\}$$

```
SphericalPlot3D[
 ArcSin[(Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ] Cos[θ]^2 + Sqrt[(4 π - θ) θ] Sin[θ]^2) / (2 π)],
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

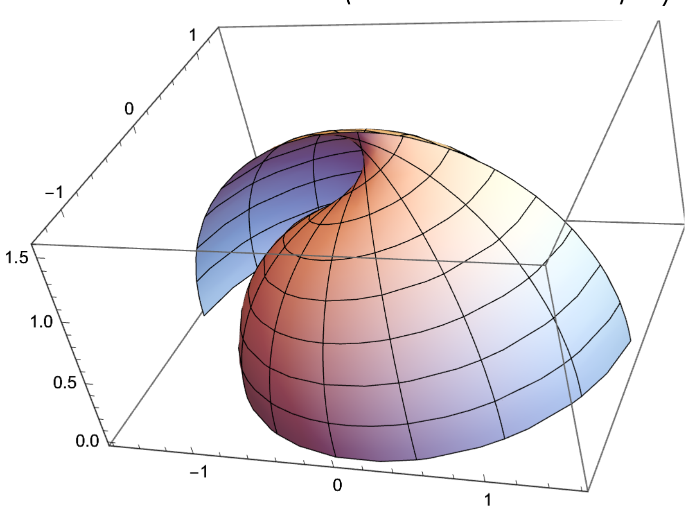
$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}\,\text{Cos}[\theta]^2+\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\theta]^2}{2\pi}\right],\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



```
SphericalPlot3D[
 ArcSin[1/(2 π) (Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] Cos[θ]^2 +
    Sqrt[(4 π - θ) θ] Sin[θ]^2)], {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[ArcSin[1/(2 π) (Sqrt[(4 π - θ) θ] Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2 +
    Sqrt[(4 π - θ) θ] Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2)], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

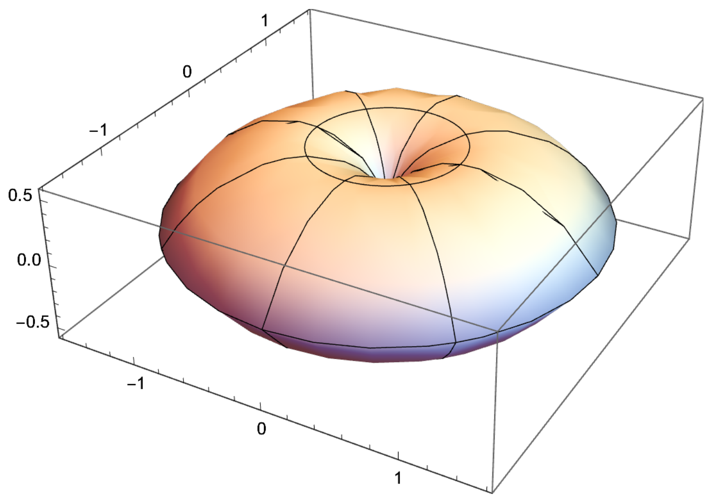


$$\text{Solve}\left[\text{Cos}[\alpha]^2 + \text{Sin}[\alpha]^2 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \beta\right]$$

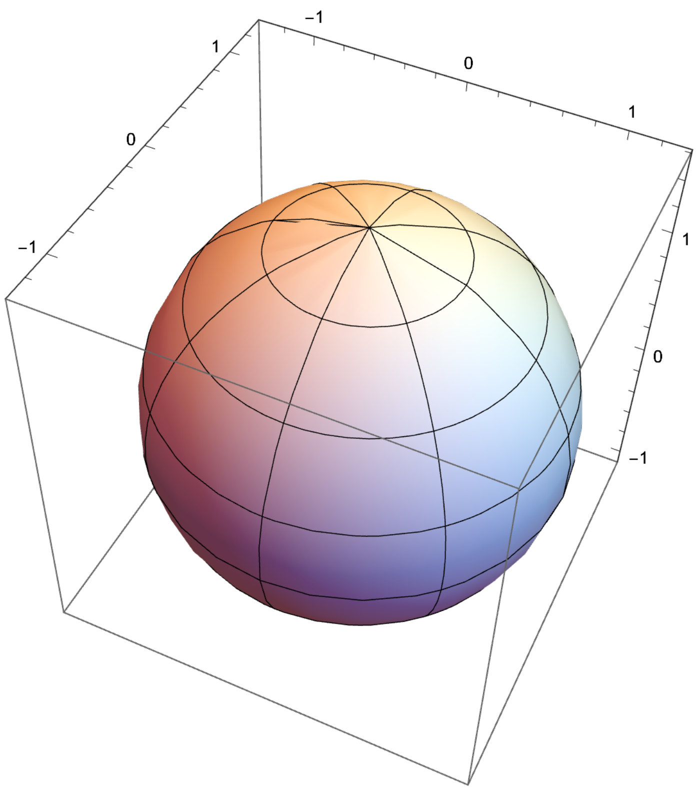
Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\ \theta}\ \text{Cos}[\alpha]^2 + \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\alpha]^2}{2\,\pi}\right]\right\}\right\}$$

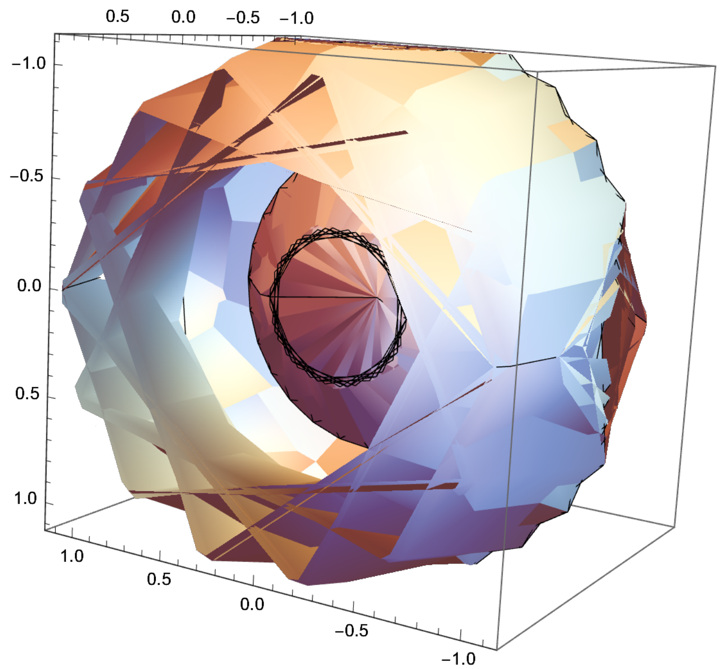
$$\text{SphericalPlot3D}\Big[\ \text{ArcSin}\left[\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Cos}[\alpha]^2 + \sqrt{\left(4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Sin}[\alpha]^2\right)\right],\ \{\beta, -2\,\pi, 2\,\pi\},\ \{\alpha, -2\,\pi, 2\,\pi\}\Big]$$



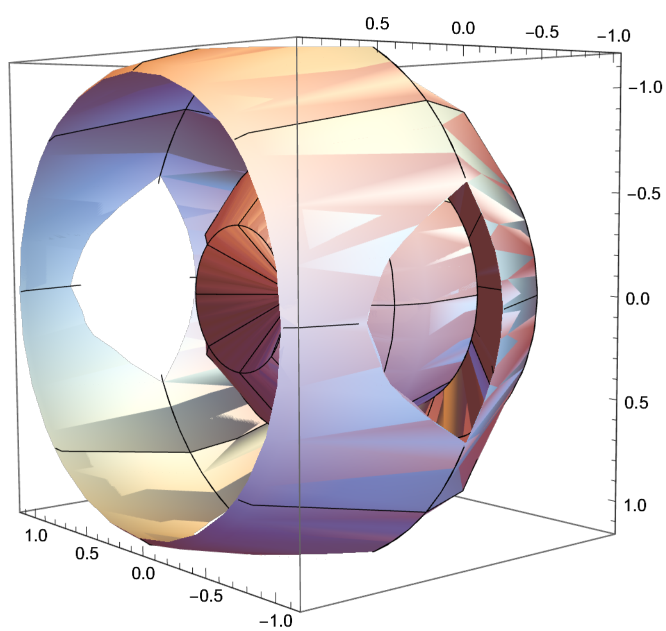
$$\texttt{SphericalPlot3D}\left[\texttt{ArcSin}\left[\frac{1}{2\pi}\left(\sqrt{\left(\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\right)\right)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\right)\right)\texttt{Cos}[\alpha]^2+\sqrt{\left(\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\right)\right)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\right)\right)}\;\texttt{Sin}[\alpha]^2\right)\right],\ \{\theta,-2\pi,2\pi\},\ \{\alpha,-2\pi,2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\alpha]^2}{2\pi}\right],\ \{\theta,-16\pi,16\pi\},\{\alpha,-16\pi,16\pi\}\right]$$

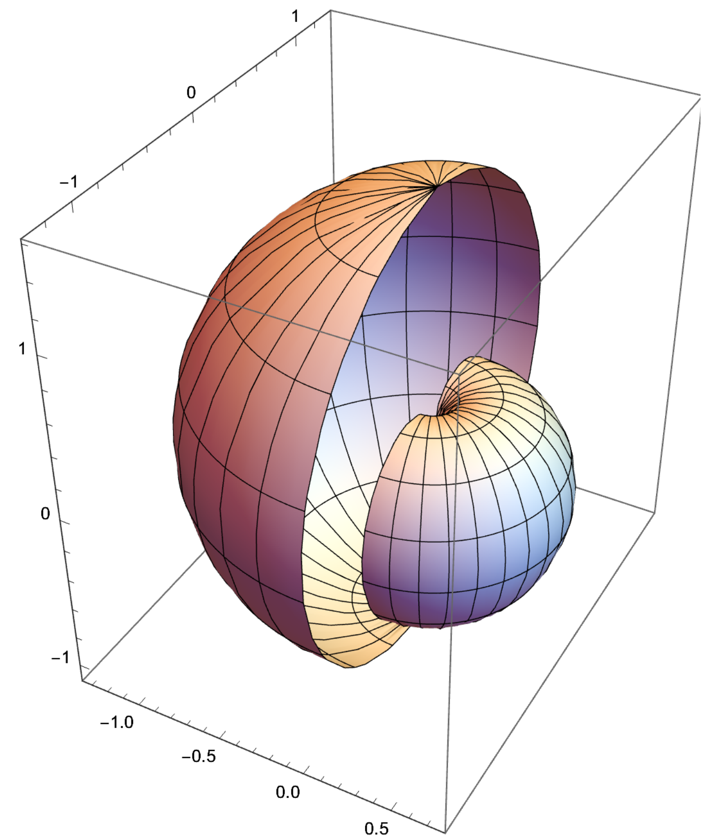


$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\alpha]^2}{2\pi}\right],\ \{\theta,-16\pi,16\pi\},\{\alpha,-2\pi,2\pi\}\right]$$



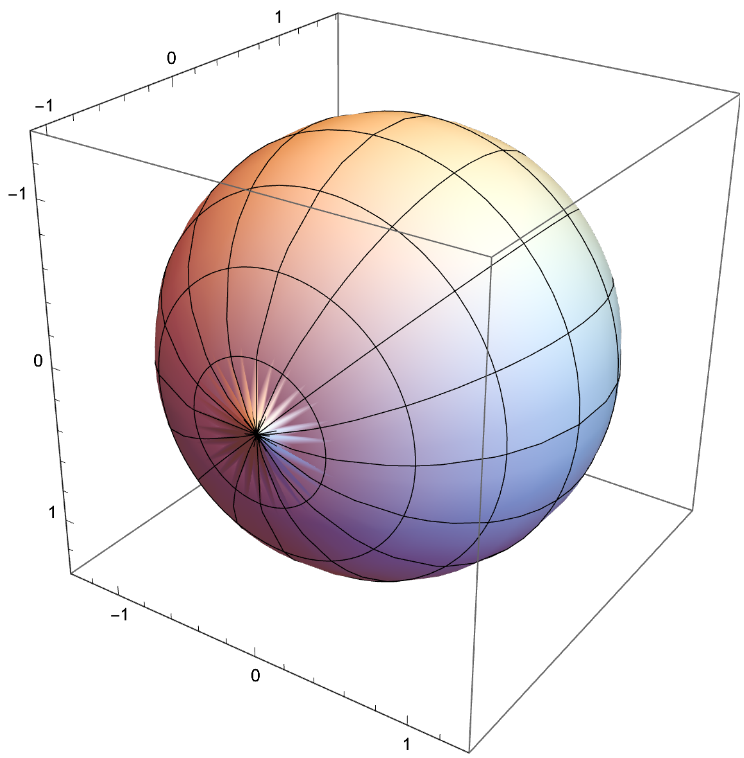
```
SphericalPlot3D[ArcSin[(Sqrt[(4 π - θ) θ] Cos[α]^2 + Sqrt[(4 π - θ) θ] Sin[α]^2) / (2 π)],
 {θ, -2 π, 2 π}, {α, -π / 2, π / 2}]
```

$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\;\text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\alpha]^2}{2\pi}\right],\ \{\theta,-2\pi,2\pi\},\{\alpha,-\pi/2,\pi/2\}\right]$$



```
SphericalPlot3D[
 ArcSin[(Sqrt[(4 π - θ) θ] Cos[α]^2 + Sqrt[(4 π - θ) θ] Sin[α]^2)/(2 π)], {θ, -2 π, 2 π}, {α, -π, π}]
```

$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\alpha]^2+\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\alpha]^2}{2\pi}\right],\{\theta,-2\pi,2\pi\},\{\alpha,-\pi,\pi\}\right]$$

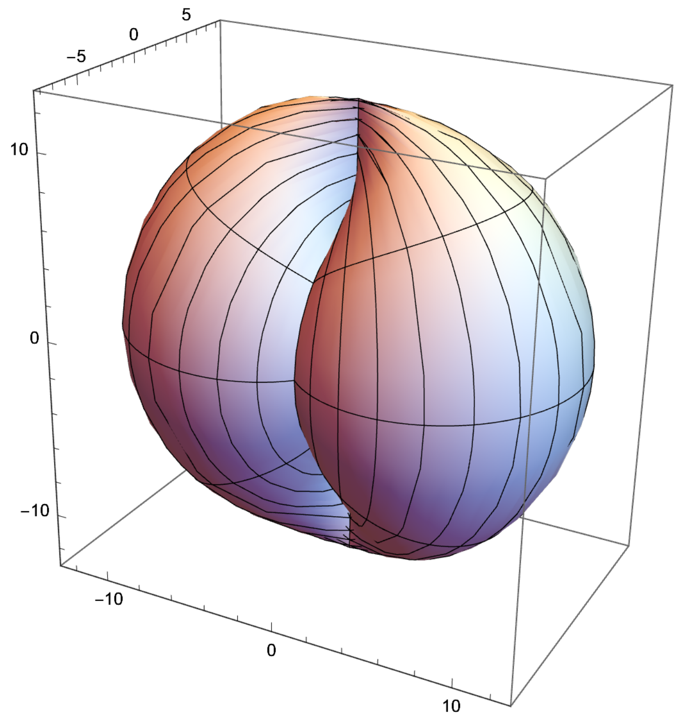


$$\text{Solve}\left[\text{Cos}[\alpha]^2+\text{Sin}[\alpha]^2==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\theta\right]$$

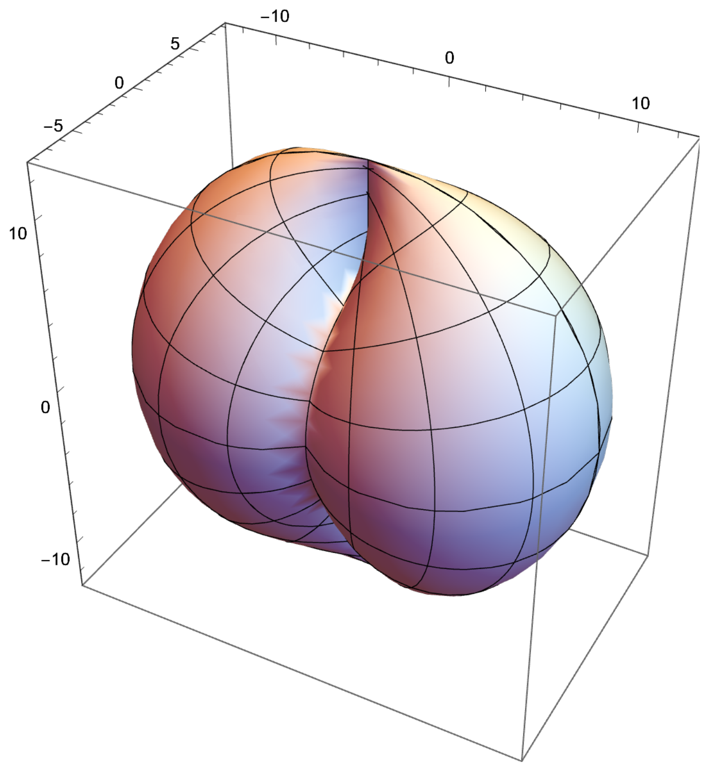
$$\Big\{\Big\{\theta\to\Big(4\pi\,\text{Cos}[\alpha]^4+8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+4\pi\,\text{Sin}[\alpha]^4-\sqrt{\Big(\big(-4\pi\,\text{Cos}[\alpha]^4-8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2-4\pi\,\text{Sin}[\alpha]^4\big)^2-16\pi^2\big(\text{Cos}[\alpha]^4+2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+\text{Sin}[\alpha]^4\big)\,\text{Sin}[\beta]^2\Big)}\Big)\Big/\Big(2\big(\text{Cos}[\alpha]^4+2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+\text{Sin}[\alpha]^4\big)\Big)\Big\},$$

$$\Big\{\theta\to\Big(4\pi\,\text{Cos}[\alpha]^4+8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+4\pi\,\text{Sin}[\alpha]^4+\sqrt{\Big(\big(-4\pi\,\text{Cos}[\alpha]^4-8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2-4\pi\,\text{Sin}[\alpha]^4\big)^2-16\pi^2\big(\text{Cos}[\alpha]^4+2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+\text{Sin}[\alpha]^4\big)\,\text{Sin}[\beta]^2\Big)}\Big)\Big/\Big(2\big(\text{Cos}[\alpha]^4+2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2+\text{Sin}[\alpha]^4\big)\Big)\Big\}\Big\}$$

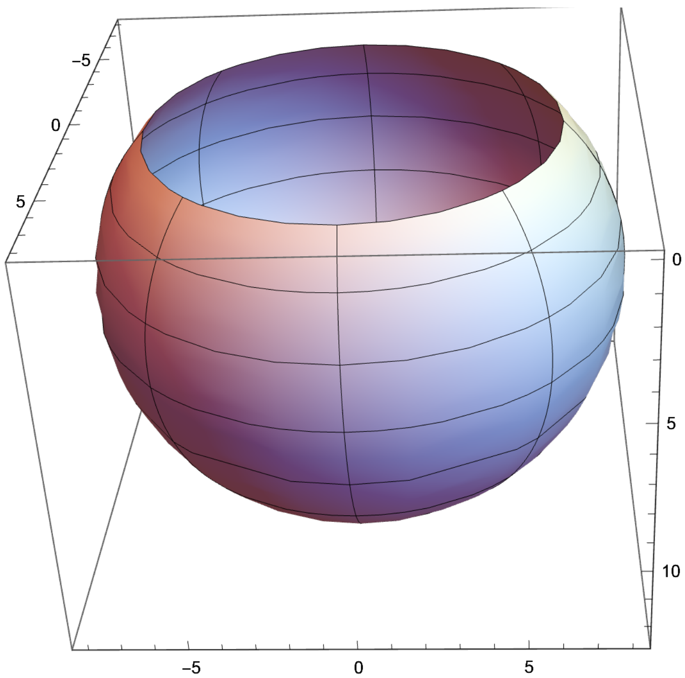
```
SphericalPlot3D[(4 π Cos[α]^4 + 8 π Cos[α]^2 Sin[α]^2 +
    4 π Sin[α]^4 + √((-4 π Cos[α]^4 - 8 π Cos[α]^2 Sin[α]^2 - 4 π Sin[α]^4)^2 -
       16 π^2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4) Sin[β]^2)) /
  (2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4)), {α, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[(4 π Cos[α]^4 + 8 π Cos[α]^2 Sin[α]^2 +
    4 π Sin[α]^4 + √((-4 π Cos[α]^4 - 8 π Cos[α]^2 Sin[α]^2 - 4 π Sin[α]^4)^2 -
      16 π^2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4) Sin[β]^2)) /
  (2 (Cos[α]^4 + 2 Cos[α]^2 Sin[α]^2 + Sin[α]^4)), {α, -π, π}, {β, -π, π}]
```



$$\text{SphericalPlot3D}\Big[\Big(4\pi\,\text{Cos}[\alpha]^4 + 8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2 + 4\pi\,\text{Sin}[\alpha]^4 + \sqrt{\Big(\big(-4\pi\,\text{Cos}[\alpha]^4 - 8\pi\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2 - 4\pi\,\text{Sin}[\alpha]^4\big)^2 - 16\pi^2\,\big(\text{Cos}[\alpha]^4 + 2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2 + \text{Sin}[\alpha]^4\big)\,\text{Sin}[\beta]^2\Big)}\Big)\Big/ \Big(2\,\big(\text{Cos}[\alpha]^4 + 2\,\text{Cos}[\alpha]^2\,\text{Sin}[\alpha]^2 + \text{Sin}[\alpha]^4\big)\Big),\ \{\beta, -\pi/2, \pi/2\},\ \{\alpha, -2\pi, 2\pi\}\Big]$$



$$\frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

$$r := \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{D}\Big[\text{D}\Big[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\Big], \beta\Big]$$

$$-\Bigg(\Bigg(\Bigg(8\pi\theta\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta] + 8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta} - \frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\left(2\,\theta^2\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\right.$$

$$\left.\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left.\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left.\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)$$

$$\left(\left(8\,\pi\,\theta\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\left.\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left.\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{\pi^2\ (4\pi-2\theta)\ \text{Sin}[\beta]^3}{\theta\ \sqrt{(4\pi-\theta)\ \theta}} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{(4\pi-\theta)^2} + \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(8\pi\theta\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\ \text{Sin}[\beta]^2\right)\ \Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+ 4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(2\theta^2\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\ \text{Sin}[\beta]^2\right)\ \Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+ 4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(4\pi\ \Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\theta\ \Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Big/$$

$$\Bigg(8\pi\ \Bigg(\Bigg(4\pi\theta\ \Bigg(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\pi^2\ \text{Sin}[\beta]^2 - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(\Theta^2\ \Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg)+$$

$$\Bigg(\Bigg(8\,\pi\,\Theta\ \Bigg(2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{4\,\pi-\Theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{\Theta}\Bigg)$$

$$\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]^3}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{\Theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\Theta^2\ \Bigg(2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{4\,\pi-\Theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{\Theta}\Bigg)$$

$$\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Sin}[\beta]^3}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{(4\,\pi-\Theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{\Theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\mathrm{Sin}[\beta]^2\right)^2+$$

$$\Bigg(8\,\pi\,\Theta\ \Bigg(\frac{\pi\,(4\,\pi-2\,\Theta)\ \mathrm{Cos}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\Theta)\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{(4\,\pi-\Theta)^2}+$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]^2}{\Theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\ \mathrm{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\left(\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(8\,\pi\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(4\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(24\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4 -$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2 - 24\,\pi\,\theta + 6\,\theta^2 + 8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4 -$$

$$\Bigg(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(32\,\pi^2\,\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 -$$

$$\Bigg(8\,\pi\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3 +$$

$$\Bigg(4\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left.\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\right) \Big/$$

$$\left(4\,\pi\,\sqrt{\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 - \left(\theta^2\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)}\right)$$

SphericalPlot3D[

$$-\left(\left(\left(\left(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right) \Big/\right.\right.\right.$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta] + 8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right) \Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2 -$$

$$\left(8\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta] + 16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(2\theta^2\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3\right)$$

$$\left(\left(8\pi\theta\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\theta^2\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$

$$\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(8\pi\theta\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(2\theta^2\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\pi\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Big/$$

$$\left(8\pi\left(\left(4\pi\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg) +$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta] + 8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta} -$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\theta^2\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta] + 8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta] -$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi + 2\,\theta + \frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2} + \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 +$$

$$\Bigg(8\,\pi\,\theta\,\Bigg(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2} +$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\Bigg)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 -$$

$$\Bigg(2\,\theta^2\,\Bigg(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}} - \frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}} -$$

$$\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(8\,\pi\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(4\,\theta\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(24\,\pi\,\theta\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(32\,\pi^2\,\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\Bigg(8\,\pi\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\right)\Big/$$

$$\left(4\,\pi\sqrt{\left(\left(\left(4\,\pi\,\theta\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.\right.}\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

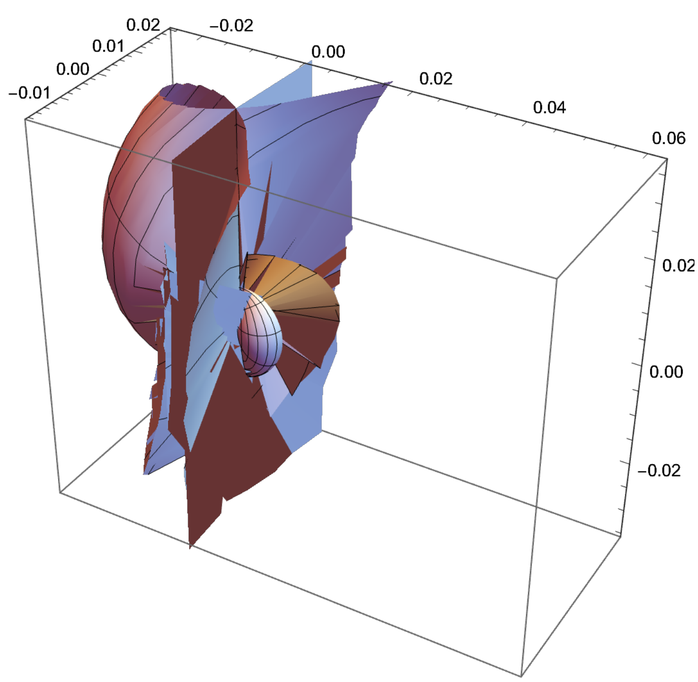
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right),$$

$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\}\Big]$$



$$\mathrm{SphericalPlot3D}\Big[$$

$$-\left(\left(\left(\left(8\,\pi\,\theta\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.\right.\right.\right.$$

$$\left.\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.\right.$$

$$\left.\left.4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)$$

$$\left(\left(8\,\pi\,\theta\,\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\frac{\pi^2\ (4\pi-2\theta)\ \text{Sin}[\beta]^3}{\theta\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{(4\pi-\theta)^2}+$$

$$\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta^2}\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\ \text{Sin}[\beta]^2-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2-$$

$$\left(2\theta^2\ \left(-4\pi+2\theta+\frac{\pi\ (4\pi-2\theta)\ \text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\ \theta}}-\frac{\pi^2\ (4\pi-2\theta)\ \text{Sin}[\beta]^3}{(4\pi-\theta)\ \sqrt{(4\pi-\theta)\ \theta}}-\right.\right.$$

$$\frac{\pi^2\ (4\pi-2\theta)\ \text{Sin}[\beta]^3}{\theta\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{(4\pi-\theta)^2}+$$

$$\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta^2}\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+\right.$$

$$\left.\left.4\pi^2\ \text{Sin}[\beta]^2-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2-$$

$$\left(8\pi\theta\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\ \text{Sin}[\beta]^2\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\ \text{Sin}[\beta]^2-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^3+$$

$$\left(2\theta^2\ \left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\ \text{Sin}[\beta]^2\right)\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\ \text{Sin}[\beta]^2-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^3+$$

$$\left(4\pi\ \left(-4\pi\theta+\theta^2+2\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\pi^2\ \text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\ \text{Sin}[\beta]^2+8\pi^2\theta\ \text{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\,\operatorname{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Big/$$

$$\left(8\,\pi\,\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\,\operatorname{Sin}[\beta]^2-\right.\right.\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\,\operatorname{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2\right)^{3/2}\right)+$$

$$\left(\left(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]+8\,\pi^2\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\operatorname{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\operatorname{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\operatorname{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]+8\,\pi^2\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Cos}[\beta]\,\operatorname{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$
$$\left.\left.\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2+$$
$$\left(8\pi\theta\left(\frac{\pi\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(\frac{\pi\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}-\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\,\sqrt{(4\pi-\theta)\,\theta}}-\right.\right.$$
$$\frac{3\pi^2\,(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$
$$\left(16\pi\theta\left(16\pi^2-24\pi\theta+6\theta^2+8\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$
$$\left(2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\right.$$
$$\left.\frac{6\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta+\theta^2+2\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(8\,\pi\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(4\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(24\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(32\,\pi^2\,\theta^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3-$$

$$\left(8\,\pi\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3\right)\Big/$$

$$\left(4\,\pi\,\sqrt{\left(\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.\right.\right.\right.}\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

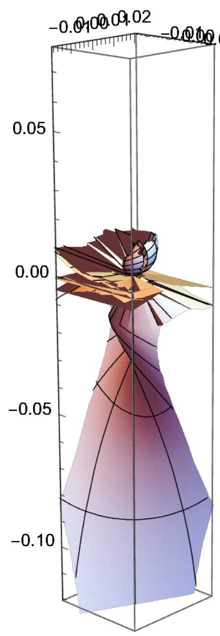
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)\right),$$

$$\{\beta,-\pi/2,\pi/2\},\{\theta,-2\,\pi,2\,\pi\}]$$

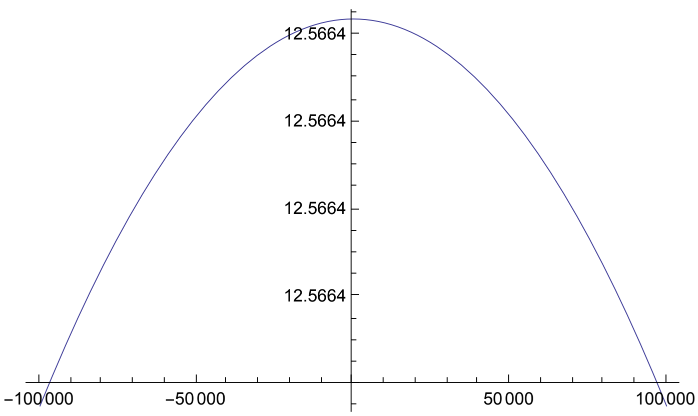



```
Solve[
  (4 π r^2 - 2 r^2 θ)/(4 π Sqrt[4 π r^2 θ - r^2 θ^2]) == (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ]
```

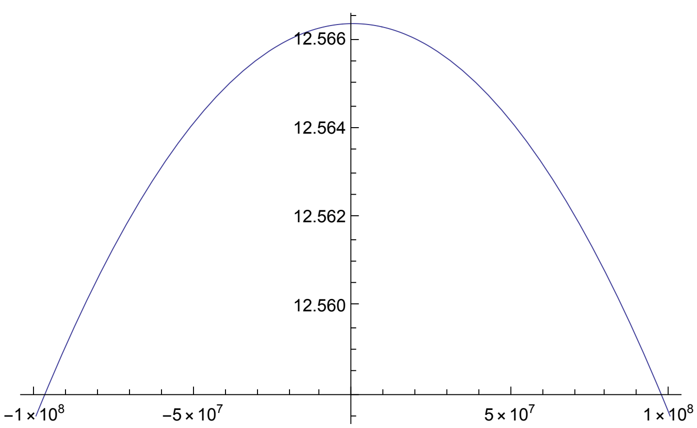
```
{{θ → (0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 -
          1.4322774071693905`*^32 √(3.548143227025099`*^18 + 1.` r^2))) /
     (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2)},
  {θ → (0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
          1.4322774071693905`*^32 √(3.548143227025099`*^18 + 1.` r^2))) /
     (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2)}}
```

```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 √(3.548143227025099`*^18 + 1.` r^2)))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^5, 1 * 10^5}]
```

```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 √(3.548143227025099`*^18 + 1.` r^2)))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^5, 1 * 10^5}]
```



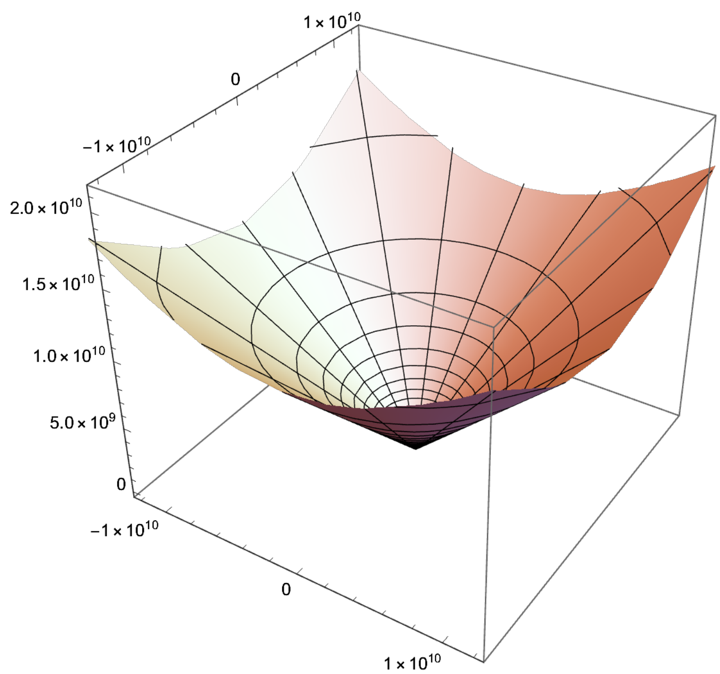

```
Plot[(0.5` (2.697911582835683`*^41 + 7.60372795068286`*^22 r^2 +
      1.4322774071693905`*^32 √(3.548143227025099`*^18 + 1.` r^2)))/
  (2.1469298221658919`*^40 + 6.050854446385924`*^21 r^2), {r, -1 * 10^8, 1 * 10^8}]
```



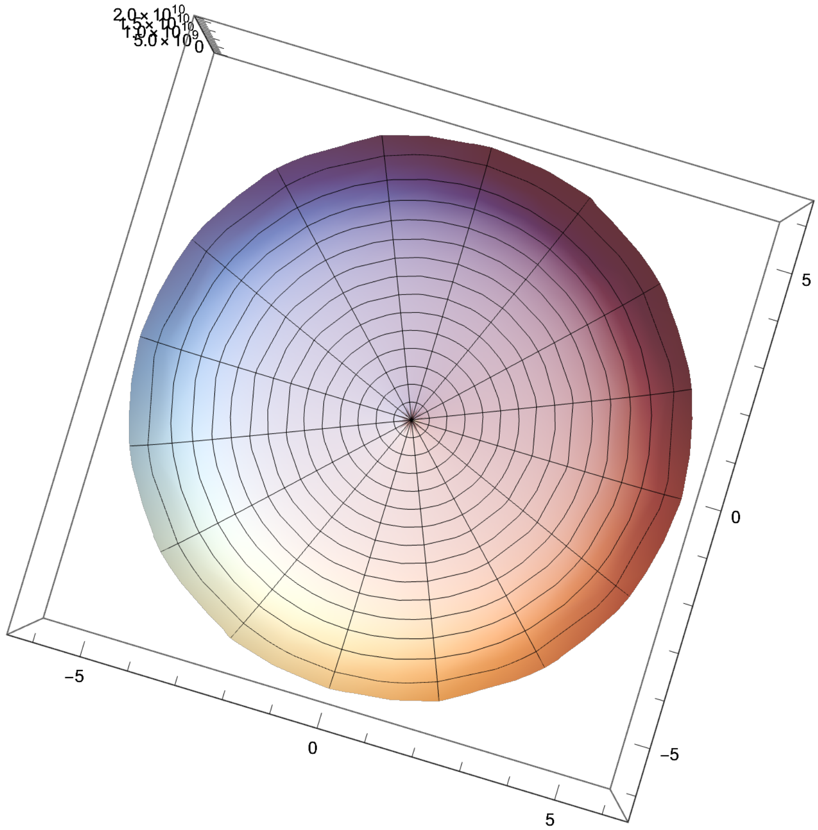
```
Solve[
 (4 π r^2 - 2 r^2 θ)/(4 π Sqrt[4 π r^2 θ - r^2 θ^2]) == (√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
       3.5481432270250993`*^18 Sin[β]^2)) /
   (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]), r]
```

$$\left\{\left\{r\to -\frac{1.\ \sqrt{2.69791\times 10^{41}-2.14693\times 10^{40}\,\theta}\ \sqrt{\theta}}{\sqrt{2.38878\times 10^{23}-7.60373\times 10^{22}\,\theta+6.05085\times 10^{21}\,\theta^2}}\right\},\ \left\{r\to \frac{\sqrt{2.69791\times 10^{41}-2.14693\times 10^{40}\,\theta}\ \sqrt{\theta}}{\sqrt{2.38878\times 10^{23}-7.60373\times 10^{22}\,\theta+6.05085\times 10^{21}\,\theta^2}}\right\}\right\}$$

```
RevolutionPlot3D[{-(1.` Sqrt[2.697911582835683`*^41 - 2.1469298221658919`*^40 θ] Sqrt[θ]) /
    (√ (2.3887815869760647`*^23 -
         7.60372795068286`*^22 θ + 6.050854446385924`*^21 θ^2)),
  (Sqrt[2.697911582835683`*^41 - 2.1469298221658919`*^40 θ] Sqrt[θ]) /
   (√ (2.3887815869760647`*^23 - 7.60372795068286`*^22 θ +
        6.050854446385924`*^21 θ^2))}, {θ, -2 π, 2 π}]
```



$$\texttt{RevolutionPlot3D}\Big[\Big(\sqrt{2.697911582835683\text{`}*\text{^}41 - 2.1469298221658919\text{`}*\text{^}40\,\theta}\;\sqrt{\theta}\Big)\Big/ \Big(\sqrt{\left(2.3887815869760647\text{`}*\text{^}23 - 7.60372795068286\text{`}*\text{^}22\,\theta + 6.050854446385924\text{`}*\text{^}21\,\theta^2\right)}\Big),\ \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



$$\texttt{D}\Big[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \theta\Big]$$

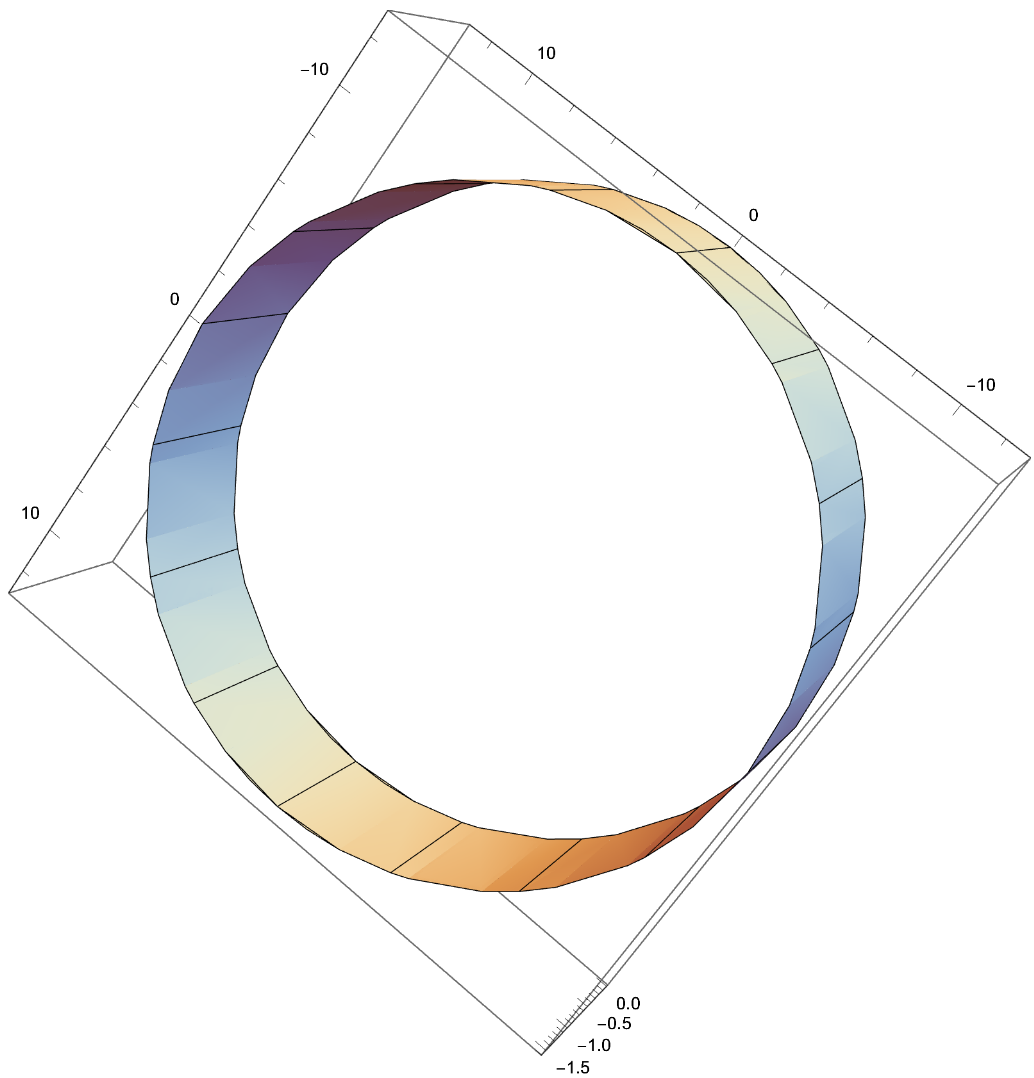
$$\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

```
Solve[(√(2.697911582835683`*^41 - 2.1469298221658919`*^40 θ) √θ) /
  (√(2.3887815869760647`*^23 -
      7.60372795068286`*^22 θ + 6.050854446385924`*^21 θ^2)) ==
  (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) -
    (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), β]
```

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to \text{ArcSin}\left[2.05971\times10^{-25}\left(7.72706\times10^{23}\sqrt{12.5664\,\theta-1.\,\theta^2}-\frac{2.41639\times10^{8}\sqrt{12.5664\,\theta-1.\,\theta^2}}{12.5664-1.\,\theta}-\frac{1.14922\times10^{35}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}}{\sqrt{12.5664-1.\,\theta}\sqrt{39.4784-12.5664\,\theta+\theta^2}}+\frac{1.82905\times10^{34}\sqrt{12.5664-1.\,\theta}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}}{\sqrt{39.4784-12.5664\,\theta+\theta^2}}+\frac{2.91102\times10^{33}\sqrt{\theta}\sqrt{12.5664\,\theta-1.\,\theta^2}\sqrt{39.4784-12.5664\,\theta+\theta^2}}{\sqrt{12.5664-1.\,\theta}}\right)\right]\right\}\right\}$$

```
RevolutionPlot3D[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 √(12.566370614359172` θ - 1.` θ^2) -
    (2.4163860935781455`*^8 √(12.566370614359172` θ - 1.` θ^2))/(12.566370614359172` - 1.` θ) -
    (1.1492234910439907`*^35 √θ √(12.566370614359172` θ - 1.` θ^2)) /
     (√(12.566370614359172` - 1.` θ) √(39.47841760435743` - 12.56637061435917` θ + θ^2)) +
    (1.8290459931697553`*^34 √(12.566370614359172` - 1.` θ)
       √θ √(12.566370614359172` θ - 1.` θ^2)) /
     (√(39.47841760435743` - 12.56637061435917` θ + θ^2)) +
    (2.911017109553914`*^33 √θ √(12.566370614359172` θ - 1.` θ^2)
       √(39.47841760435743` - 12.56637061435917` θ + θ^2)) /
     (√(12.566370614359172` - 1.` θ)))], {β, -4 π, 8 π / 2}]
```



$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[1000\,\beta]^2}\right)$$

$$\theta := \frac{4\pi}{3} - \frac{-4\pi^2 + 12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}$$

```
Play[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 Sqrt[12.566370614359172` θ - 1.` θ^2] -
     (2.4163860935781455`*^8 Sqrt[12.566370614359172` θ - 1.` θ^2]) /
      (12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]) /
      (Sqrt[12.566370614359172` - 1.` θ] Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (1.8290459931697553`*^34 Sqrt[12.566370614359172` - 1.` θ]
        Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]) /
      (Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (2.911017109553914`*^33 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]
        Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) /
      (Sqrt[12.566370614359172` - 1.` θ]))], {β, -2 π, 2 π}]
```

Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine-size real numbers. ≫

```
Play[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 Sqrt[12.566370614359172` θ - 1.` θ^2] -
     (2.4163860935781455`*^8 Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ] Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (1.8290459931697553`*^34 Sqrt[12.566370614359172` - 1.` θ]
        Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (2.911017109553914`*^33 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]
        Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ]))], {β, -2 π, 2 π}]
```

Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine–size real numbers. ≫


```
"ribbit.wav"

Export["ribbit.wav",
 Play[Sqrt[12.566370614359172` Sin[1000 θ] - 1.` Cos[1000 θ]^2], {β, -π, π}]]
```

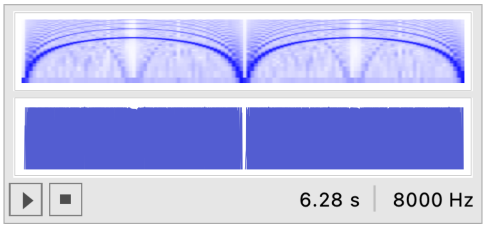
Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine–size real numbers. ≫

LinkObject::linkw : Unable to write data to closed link LinkObject[/Applications/Mathematica.app/SystemFiles/Converters/Binaries/MacOSX–x86–64/Audio.exe, 25, 9]. ≫

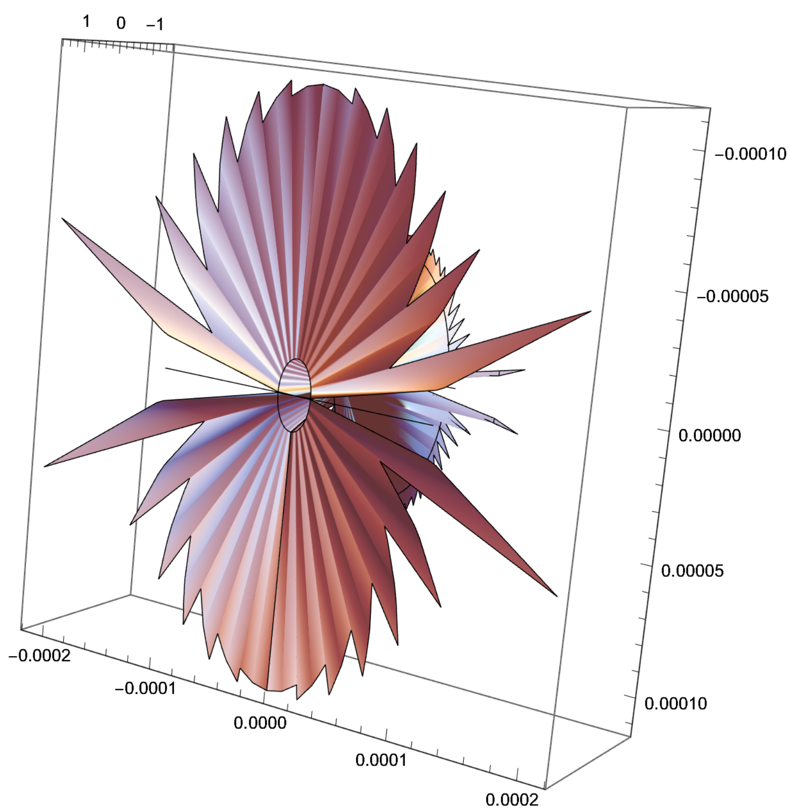
```
$Failed
```

$$\texttt{Play}\left[\sqrt{\texttt{12.566370614359172`}\ \texttt{Sin[1000}\,\theta\texttt{]} - \texttt{1.`}\ \texttt{Cos[1000}\,\theta\texttt{]}^2}\texttt{, \{}\beta\texttt{, -}\pi\texttt{, }\pi\texttt{\}}\right]$$

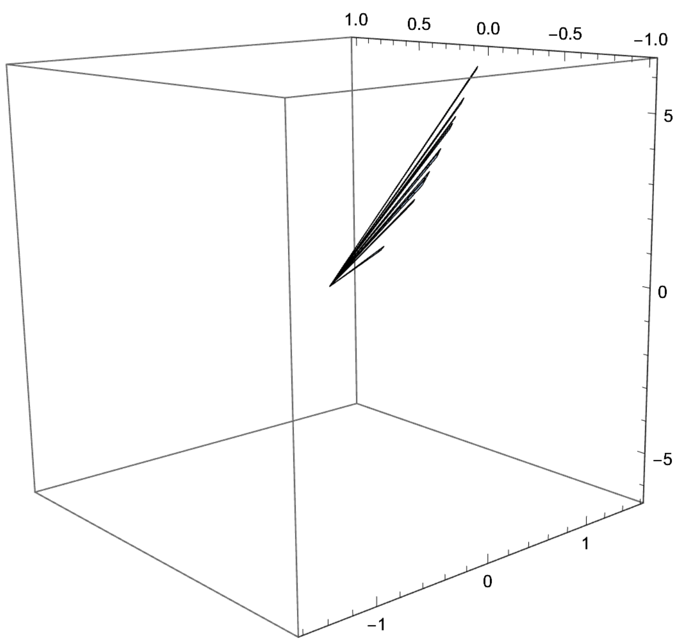
Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫



```
RevolutionPlot3D[ArcSin[
  2.0597093504953005`*^-25 (7.727058337314591`*^23 Sqrt[12.566370614359172` θ - 1.` θ^2] -
     (2.4163860935781455`*^8 Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (12.566370614359172` - 1.` θ) -
     (1.1492234910439907`*^35 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ] Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (1.8290459931697553`*^34 Sqrt[12.566370614359172` - 1.` θ]
        Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2])/
      (Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2]) +
     (2.911017109553914`*^33 Sqrt[θ] Sqrt[12.566370614359172` θ - 1.` θ^2]
        Sqrt[39.47841760435743` - 12.56637061435917` θ + θ^2])/
      (Sqrt[12.566370614359172` - 1.` θ]))], {θ, -2 π, 2 π}]
```



```
ContourPlot3D[
 (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) ==
  √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
        32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}, {η, -1, 1}]
```



$$\text{Export}\Big[\text{"r=r.3ds"},\ \text{ContourPlot3D}\Big[\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)==$$

$$\sqrt{}\Big(-\left(256\pi^7\eta^2\theta^3\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^4\right)\Big/$$
$$\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-$$
$$\left(128\pi^5\eta^2\theta^5\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^6\right)\Big/$$
$$\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+$$
$$\left(128\pi^6\sqrt{}\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)\right)\Big/$$
$$\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big),$$
$$\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\},\{\eta,-1,1\}\Big]\Big]$$

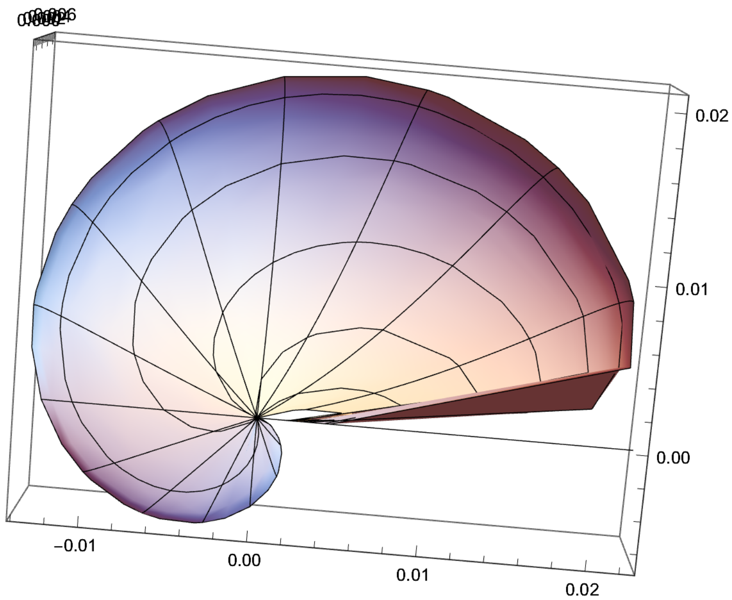
r=r.3ds

$$\text{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-(\eta)^2}\right)}{\theta^2}==\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\eta\right]$$

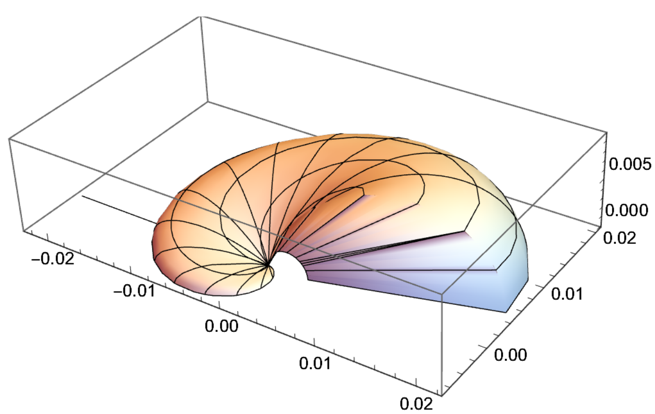
$$\Big\{\Big\{\eta\to-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4r^2-\frac{256\pi^5r^2}{4\pi-\theta}+16\pi^3r^2\theta+4\pi^2r^2\theta^2+r^2\theta^4+16\pi^3r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\Big\},$$
$$\Big\{\eta\to\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4r^2-\frac{256\pi^5r^2}{4\pi-\theta}+16\pi^3r^2\theta+4\pi^2r^2\theta^2+r^2\theta^4+16\pi^3r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\Big\}\Big\}$$

$$r:=\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{SphericalPlot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\,\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$

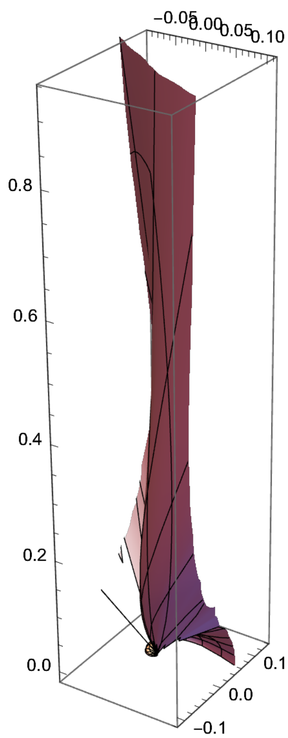


$$\text{SphericalPlot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\,\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Big]$$



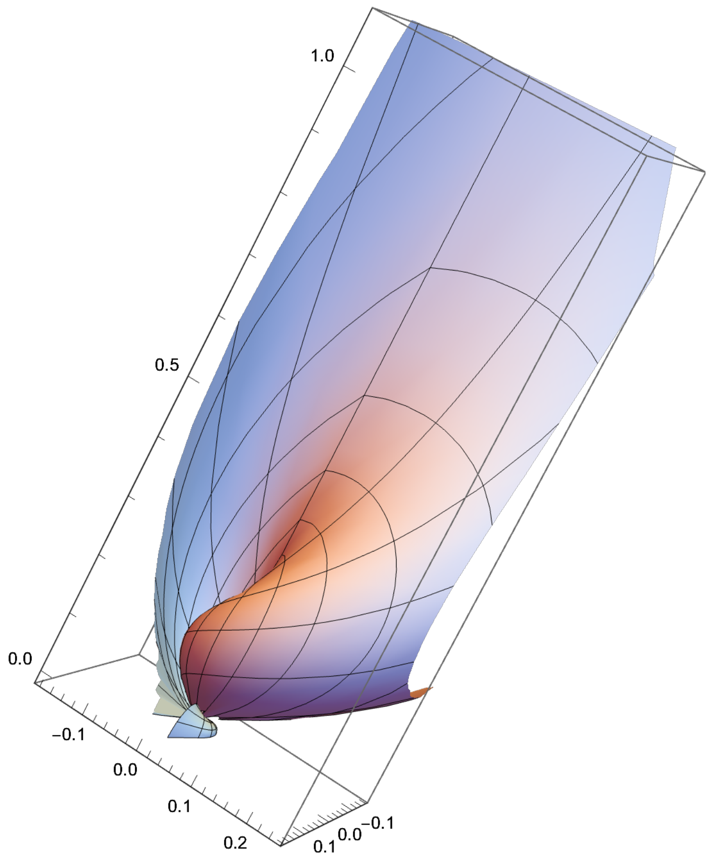
```
SphericalPlot3D[
```

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}\right)}\right), \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}]$$

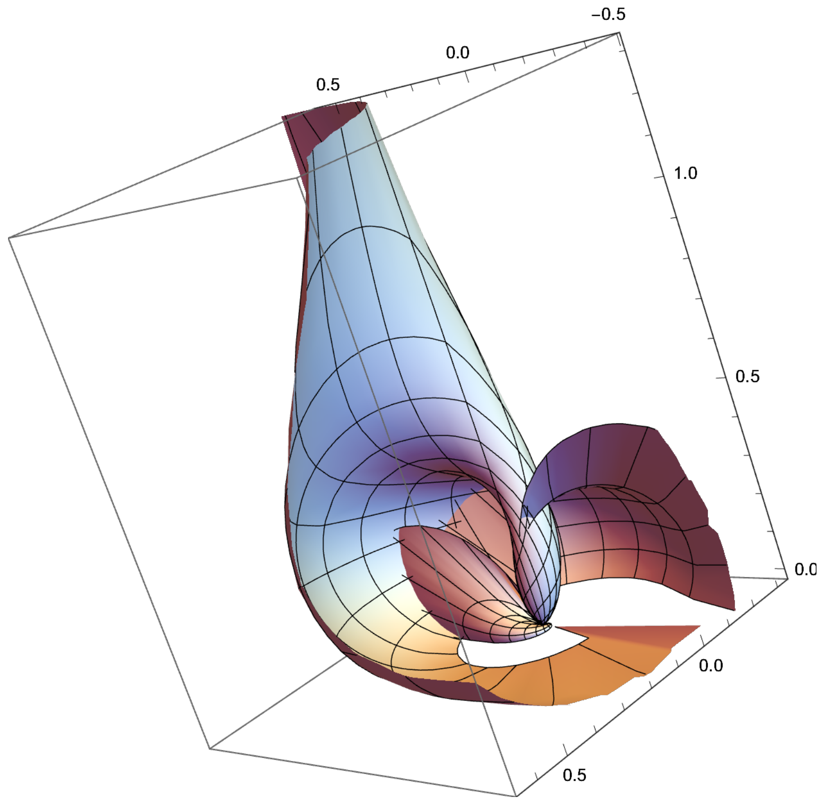


$$\text{SphericalPlot3D}\Big[\frac{1}{4\pi^2}\Bigg(\sqrt{\Bigg(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2\left(4\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\, 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}\Bigg)}\Bigg),$$

$$\{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Big]$$

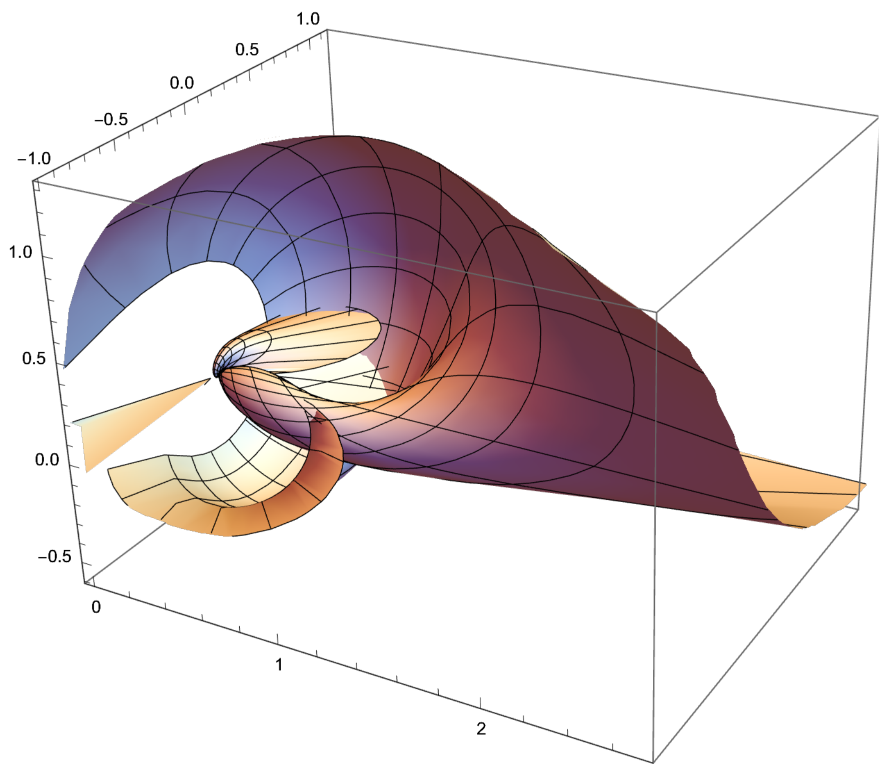


$$\text{SphericalPlot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\, 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) + 4\pi^2 r^2 \theta^2 + r^2\theta^4 + 16\pi^3 r \sqrt{r^2\left(4\pi - 2\left(\pi + \sqrt{\pi^2-\pi^2 \text{Sin}[\beta]^2}\right)\right)\theta} - \frac{64\pi^4 r\sqrt{r^2 (4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\, 2\left(\pi + \sqrt{\pi^2-\pi^2\text{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi - 2\left(\pi+\sqrt{\pi^2-\pi^2\text{Sin}[\beta]^2}\right)\right)\theta}\right)}\right),$$
$$\{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Big]$$



SphericalPlot3D$\Bigg[$

$$\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\, 2\left(\pi+\sqrt{\pi^2-\pi^2 \mathrm{Sin}[\beta]^2}\right) + 4\pi^2 r^2\theta^2 + r^2 \left(2\left(\pi+\sqrt{\pi^2-\pi^2\mathrm{Sin}[\beta]^2}\right)\right)^4 + 16\pi^3 r\sqrt{r^2\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\mathrm{Sin}[\beta]^2}\right)\right)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\, 2\left(\pi+\sqrt{\pi^2-\pi^2\mathrm{Sin}[\beta]^2}\right)\sqrt{r^2\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\mathrm{Sin}[\beta]^2}\right)\right)\theta}\right)}\right), \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Bigg]$$



q

```
Solve[(-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) == √(-(256 π^7 η^2 θ^3)/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (320 π^6 η^2 θ^4)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 +
       24 π^2 θ^8 - 8 π θ^9 + θ^10) - (128 π^5 η^2 θ^5)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 -
       512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6)/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8))/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)), η]
```

General::ivar : 1 is not a valid variable. ≫

General::ivar : 1 is not a valid variable. ≫

```
Solve[(-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/ (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2) ==
  Sqrt[(-(256 π^7 η^2 θ^3)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (320 π^6 η^2 θ^4)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
    (128 π^5 η^2 θ^5)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (16 π^4 η^2 θ^6)/(-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
    (128 π^6 Sqrt[256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8])/
     (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
      32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10))], {η, -1, 1}]
```

$$\text{ContourPlot3D}\Big[\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)==$$

$$\sqrt{}\Big(-\left(256\pi^7\eta^2\theta^3\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^4\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-\left(128\pi^5\eta^2\theta^5\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^6\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(128\pi^6\sqrt{}\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big),$$

$$\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\},\{\eta,-1,1\}\Big]$$

$$\int\int\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\,d\theta\,d\beta==D\left[D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right],\beta\right]$$

$$r:=\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$D\left[D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right],\beta\right]$$

$$-\Bigg(\Bigg(\Bigg(8\pi\theta\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\theta^2\left(2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]+8\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(8\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(2\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\;\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\Bigg)$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\;\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]^3}{\theta\;\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\;\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\;\mathrm{Sin}[\beta]^3}{\theta\;\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\pi\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Big/$$

$$\left(8\,\pi\,\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg)^{3/2}\Bigg)+$$

$$\Bigg(\Bigg(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\text{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2+$$

$$\Bigg(8\,\pi\,\theta\,\left(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2\,\theta^2\,\Bigg(\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{3\,\pi^2\,(4\,\pi-2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{(4\,\pi-\theta)^2}+$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta^2}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)$$

$$\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(8\,\pi\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(4\,\theta\,\Bigg(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-$$

$$\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\Bigg)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\Theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\Theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]^3}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\Theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\Theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\Theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\Theta+\frac{\pi\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{\pi^2\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]^3}{(4\,\pi-\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\Theta)\,\text{Sin}[\beta]^3}{\Theta\,\sqrt{(4\,\pi-\Theta)\,\Theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{(4\,\pi-\Theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\Bigg(24\,\pi\,\Theta\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\Theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)$$

$$\left(16\,\pi^2-24\,\pi\,\Theta+6\,\Theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\,\Bigg(-4\,\pi\,\Theta+\Theta^2+2\,\pi\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{4\,\pi-\Theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\Theta)\,\Theta}\,\text{Sin}[\beta]^3}{\Theta}\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\Theta-12\,\pi\,\Theta^2+2\,\Theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\Theta\,\text{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\Theta^2\,\left(-32\,\pi^3\,\text{Cos}[\beta]\,\text{Sin}[\beta]+16\,\pi^2\,\Theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\right)\,\left(16\,\pi^2-24\,\pi\,\Theta+6\,\Theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(128\pi^3\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(32\pi^2\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\left(8\pi\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\theta\left(-32\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\pi^2\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left.\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^3\right)\Big/$$

$$\left(4\pi\sqrt{\left(\left(4\pi\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.}\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)$$

SphericalPlot3D$\Big[$

$$-\left(\left(\left(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+\right.$$

$$\left.\left.4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta^2\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(8\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Big(2\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\Big)$$

$$\Big(\Big(8\,\pi\,\theta\,\Big(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Big)\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Big(2\,\theta^2\,\Big(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Big)\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\Big(8\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4$$

$$\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(2\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\right.\right.$$

$$\left.\left.\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\pi\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(2\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Big/$$

$$\left(8\,\pi\,\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)^{3/2}\right)+$$

$$\left(\left(8\,\pi\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]+8\,\pi^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\,\pi-\theta}-\right.\right.\right.$$

$$\left.\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$

$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\theta}}-\right.$$
$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]+8\pi^2\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]-\right.\right.$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{4\pi-\theta}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta}\right)$$
$$\left(-4\pi+2\theta+\frac{\pi(4\pi-2\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\frac{\pi^2(4\pi-2\theta)\,\mathrm{Sin}[\beta]^3}{\theta\sqrt{(4\pi-\theta)\theta}}-\right.$$
$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{(4\pi-\theta)^2}+\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2+$$
$$\left(8\pi\theta\left(\frac{\pi(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$
$$\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\sqrt{(4\pi-\theta)\theta}}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$
$$\left(2\theta^2\left(\frac{\pi(4\pi-2\theta)\,\mathrm{Cos}[\beta]}{\sqrt{(4\pi-\theta)\theta}}-\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$
$$\frac{3\pi^2(4\pi-2\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta\sqrt{(4\pi-\theta)\theta}}-\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{(4\pi-\theta)^2}+$$
$$\left.\frac{6\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]^2}{\theta^2}\right)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+\right.$$
$$\left.\left.4\pi^2\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$

$$\left(16\,\pi\,\theta\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta^2\,\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\text{Sin}[\beta]^2\right)\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^3+$$

$$\left(8\,\pi\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\left(4\,\theta\,\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]+8\,\pi^2\,\text{Cos}[\beta]\,\text{Sin}[\beta]-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{4\,\pi-\theta}-\frac{6\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Cos}[\beta]\,\text{Sin}[\beta]^2}{\theta}\right)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(16\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(4\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\Bigg(-4\,\pi+2\,\theta+\frac{\pi\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{\pi^2\,(4\,\pi-2\,\theta)\,\mathrm{Sin}[\beta]^3}{\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{(4\,\pi-\theta)^2}+\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta^2}\Bigg)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\Bigg(24\,\pi\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)$$

$$\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6\,\theta^2\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\left(16\,\pi^2-24\,\pi\,\theta+6\,\theta^2+8\,\pi^2\,\mathrm{Sin}[\beta]^2\right)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\left(128\,\pi^3\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(32\,\pi^2\,\theta^2\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3-$$

$$\left(8\,\pi\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3+$$

$$\left(4\,\theta\,\left(-32\,\pi^3\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]+16\,\pi^2\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^3\right)\Big/$$

$$\left(4\,\pi\,\sqrt{\left(\left(\left(4\,\pi\,\theta\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.\right.}\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

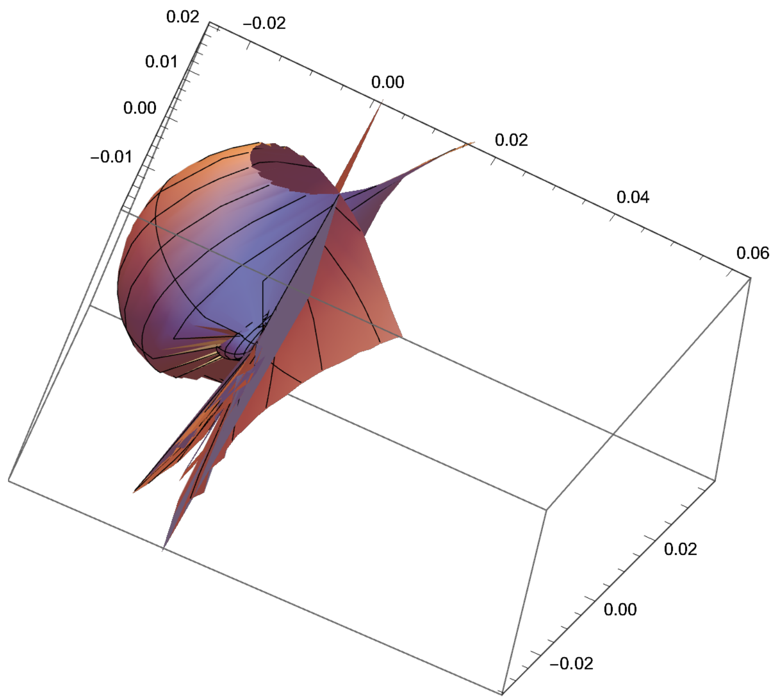
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathtt{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathtt{Sin}[\beta]^2\right)^2-$$

$$\left(\theta^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]+4\,\pi^2\,\mathtt{Sin}[\beta]^2-\right.\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathtt{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

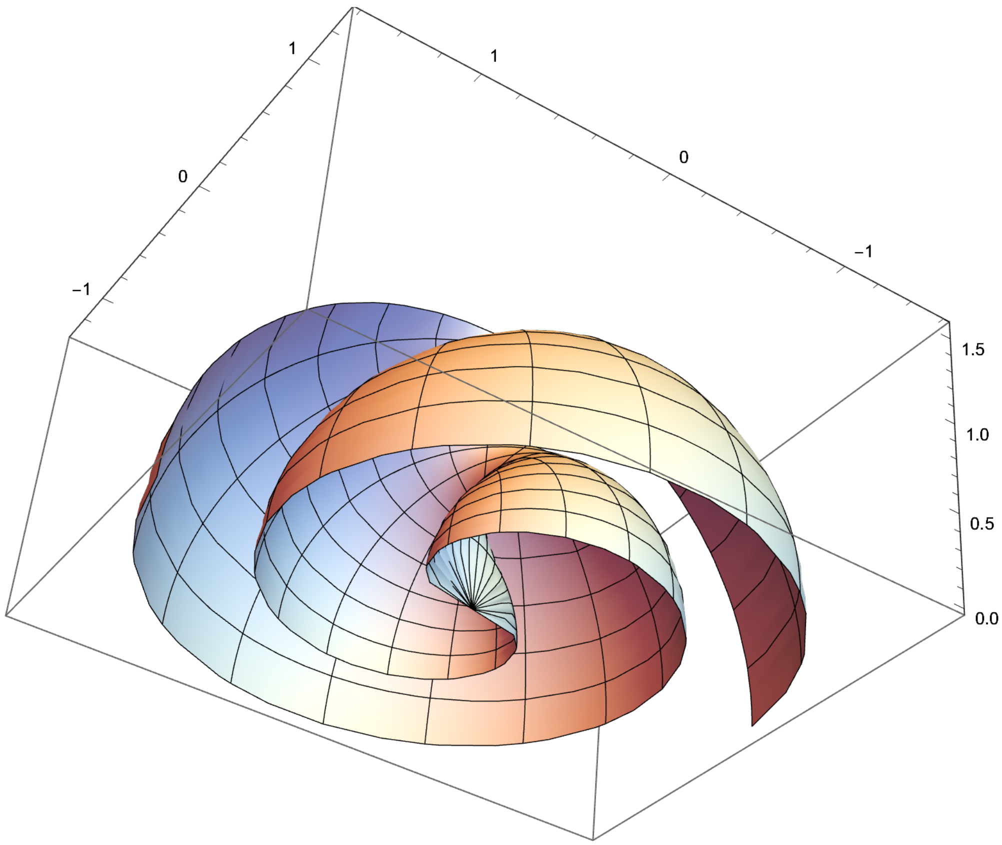
$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathtt{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathtt{Sin}[\beta]^2\right)^2\right)\right),$$

$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]$$

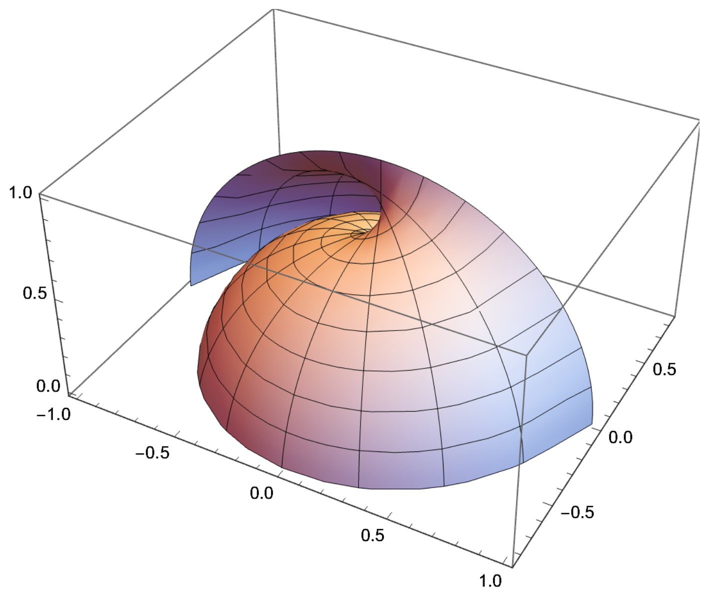


$$\left(\frac{\mathrm{i}\,\sqrt{\theta}}{2\,\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\,\pi}}\right)^{\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\right)}{4\,\pi}}$$

```
SphericalPlot3D[ArcSin[1/(2 π) (Sqrt[(4 π - θ) θ] Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2 +
    Sqrt[(4 π - θ) θ] Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]^2)], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



$$\text{SphericalPlot3D}\left[\left(\frac{i\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\pi}},\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\right]$$

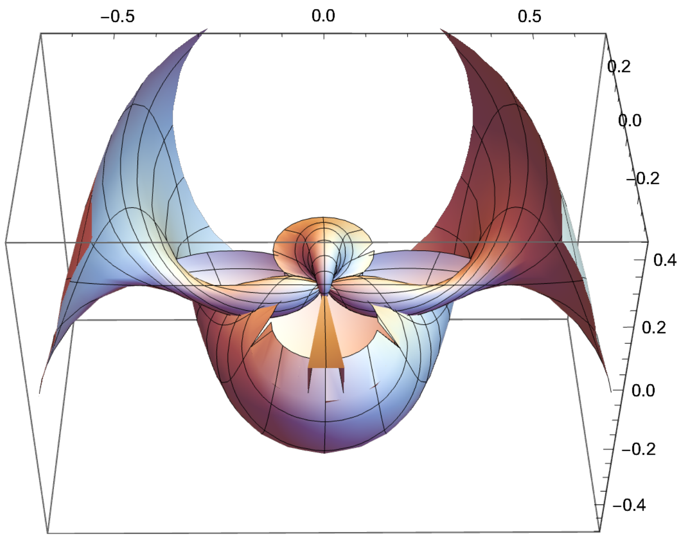


$$\text{Solve}\left[\left(\frac{i\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\pi}} == \text{ArcSin}\left[\frac{1}{2\pi}\left(\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2+\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2\right)\right],\ \beta\right]$$

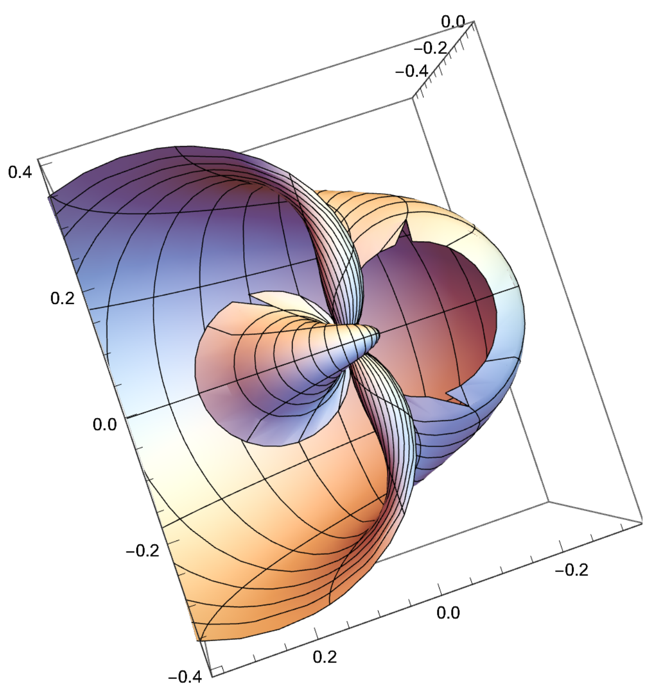
Solve::tdep : The equations appear to involve the variables to be solved for in an essentially non–algebraic way. ≫

$$\text{Solve}\left[\left(\frac{i\sqrt{\theta}}{2\sqrt{\pi}}+\sqrt{1-\frac{\theta}{4\pi}}\right)^{\frac{\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}}{2\pi}} == \text{ArcSin}\left[\frac{1}{2\pi}\left(\sqrt{(4\pi-\theta)\,\theta}\,\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2+\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2\right)\right],\ \beta\right]$$

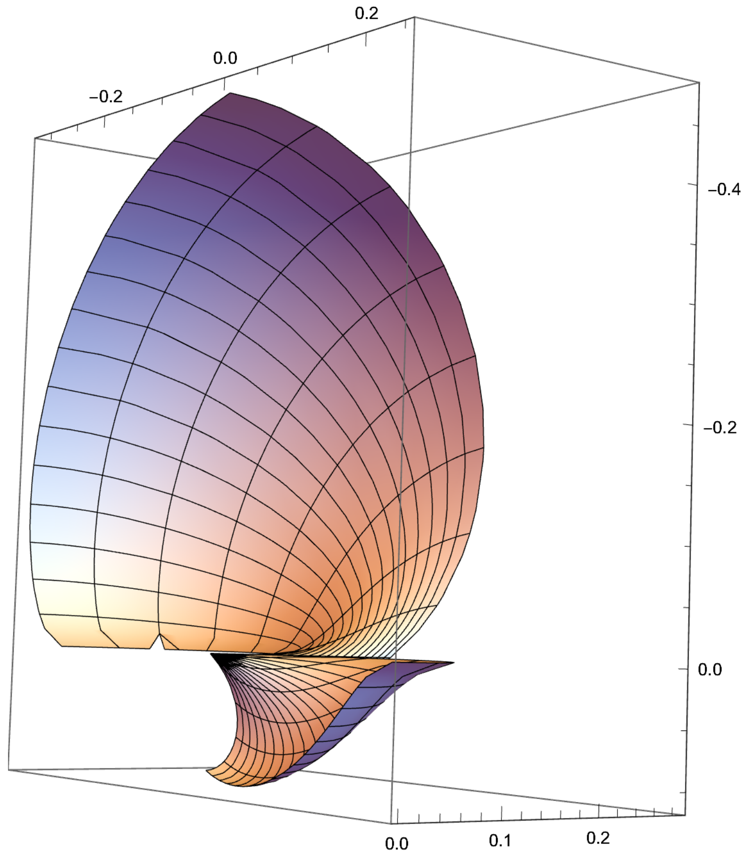
$$\texttt{SphericalPlot3D}\left[\frac{\theta\left(2\,\pi\,r^2-r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[\frac{\theta\left(2\,\pi\,r^2-r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -\pi,\ \pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[\frac{\theta\left(2\,\pi\,r^2 - r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -\pi/2,\ \pi/2\}\right]$$

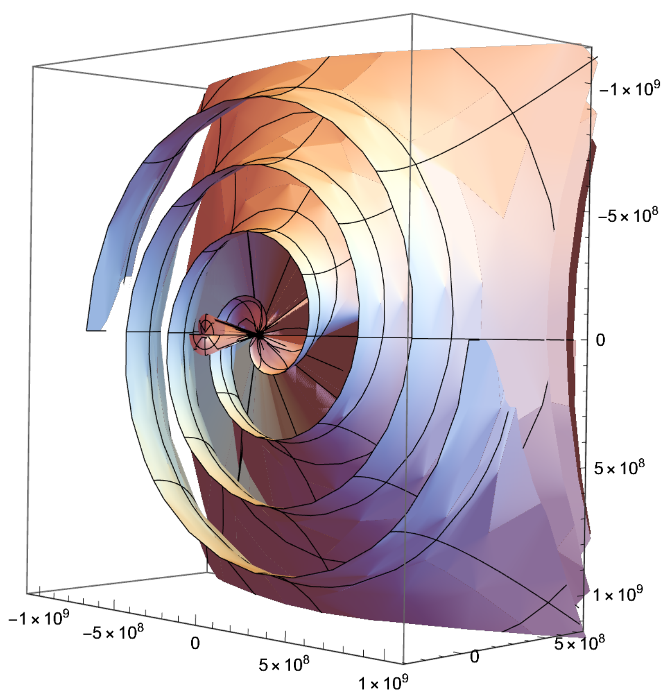


$$\texttt{Solve}\left[1 - r\,\mathrm{Sin}[\beta] \Big/ \frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \theta\,r - \left(2\,\pi\,r - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\right),\ v\right]$$

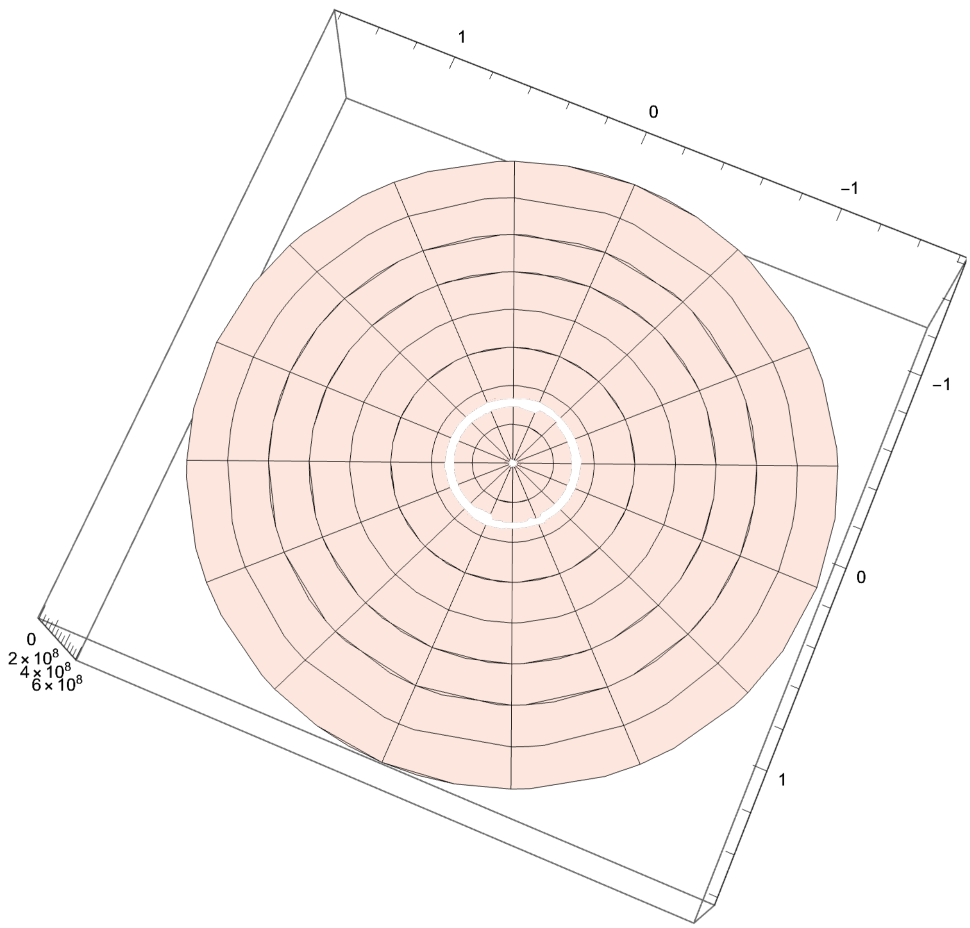
$$\left\{\left\{v \to -\frac{1.\ \sqrt{-6.91664\times10^{33}\,\theta + 5.50409\times10^{32}\,\theta^2 + 2.17293\times10^{34}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2 + 2.41771\times10^{17}\,\mathrm{Sin}[\beta]^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{-6.91664\times10^{33}\,\theta + 5.50409\times10^{32}\,\theta^2 + 2.17293\times10^{34}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2 + 2.41771\times10^{17}\,\mathrm{Sin}[\beta]^2}}\right\}\right\}$$

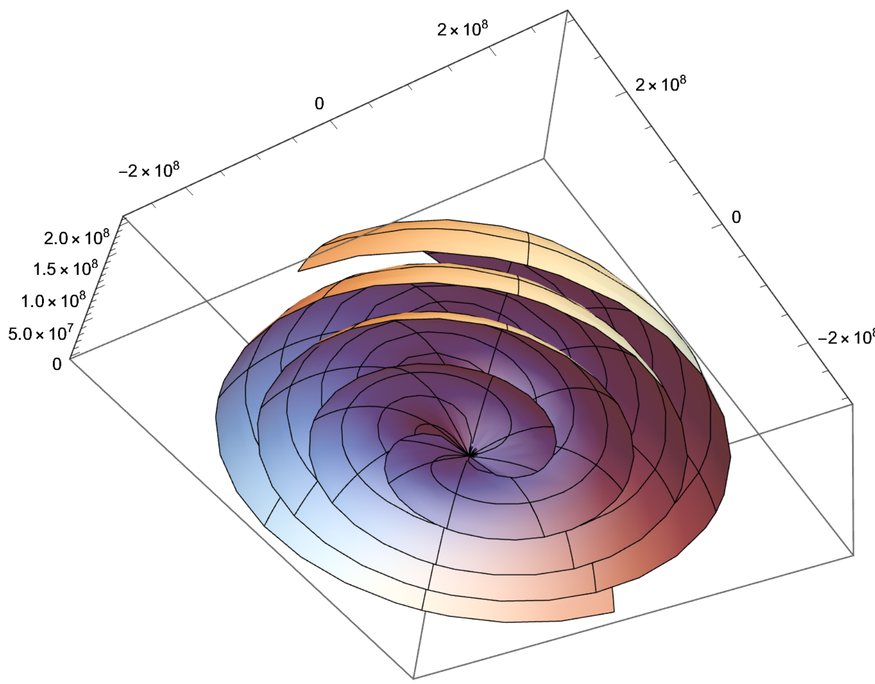
$$\text{SphericalPlot3D}\Bigg[\Bigg(\sqrt{\left(-6.916640561054567`*^{\wedge}33\,\theta + 5.504087674408673`*^{\wedge}32\,\theta^2 + 2.1729267174130213`*^{\wedge}34\,\text{Sin}[\beta]^2\right)}\Bigg/\Bigg(\sqrt{\Bigg(-7.695800507960096`*^{\wedge}16\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + 6.124123459454841`*^{\wedge}15\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2 + 2.4177070339300032`*^{\wedge}17\,\text{Sin}[\beta]^2\Bigg)}\Bigg)\Bigg), \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Bigg]$$



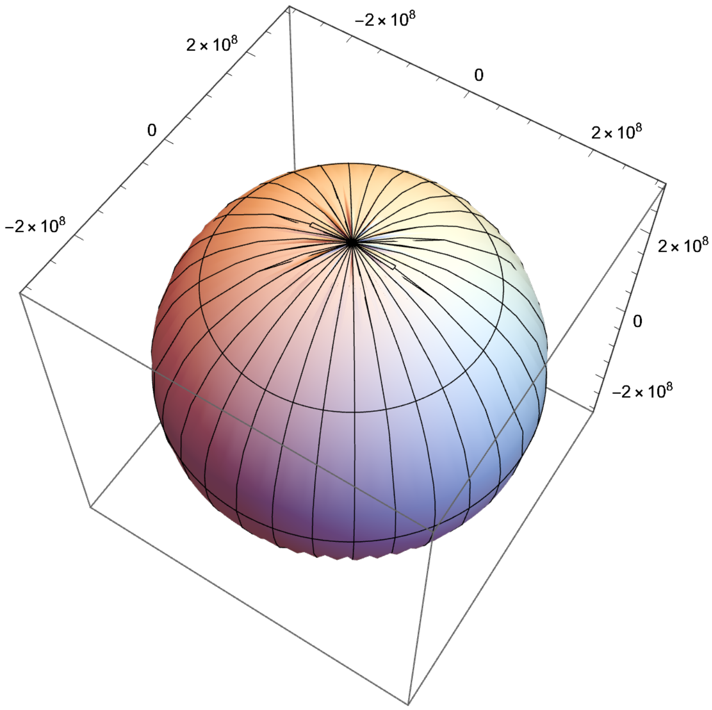
```
RevolutionPlot3D[(√(-6.916640561054567`*^33 (4π/3 - (-4π^2 + 12π^2 Sin[β]^2)/
      (6 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
      2/3 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
    5.504087674408673`*^32 (4π/3 - (-4π^2 + 12π^2 Sin[β]^2)/
       (6 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
       2/3 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
    2.1729267174130213`*^34 Sin[β]^2))/
  (√(-7.695800507960096`*^16 (4π/3 - (-4π^2 + 12π^2 Sin[β]^2)/
      (6 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
      2/3 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
    6.124123459454841`*^15 (4π/3 - (-4π^2 + 12π^2 Sin[β]^2)/
       (6 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
       2/3 (-π^3 + 18π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
    2.4177070339300032`*^17 Sin[β]^2)), {β, -π / 2, π / 2}]
```


1
0
−1
−1
0
1
0
2 × 10^8
4 × 10^8
6 × 10^8

```
SphericalPlot3D[(√(-6.916640561054567`*^33 θ +
      5.504087674408673`*^32 θ^2 + 2.1729267174130213`*^34 Sin[β]^2)) /
   (√(-7.695800507960096`*^16 θ + 6.124123459454841`*^15 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      2.4177070339300032`*^17 Sin[β]^2)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



```
SphericalPlot3D[(√(-6.916640561054567`*^33 θ +
      5.504087674408673`*^32 θ^2 + 2.1729267174130213`*^34 Sin[β]^2)) /
  (√(-7.695800507960096`*^16 θ + 6.124123459454841`*^15 θ^2 +
      2.4177070339300032`*^17 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



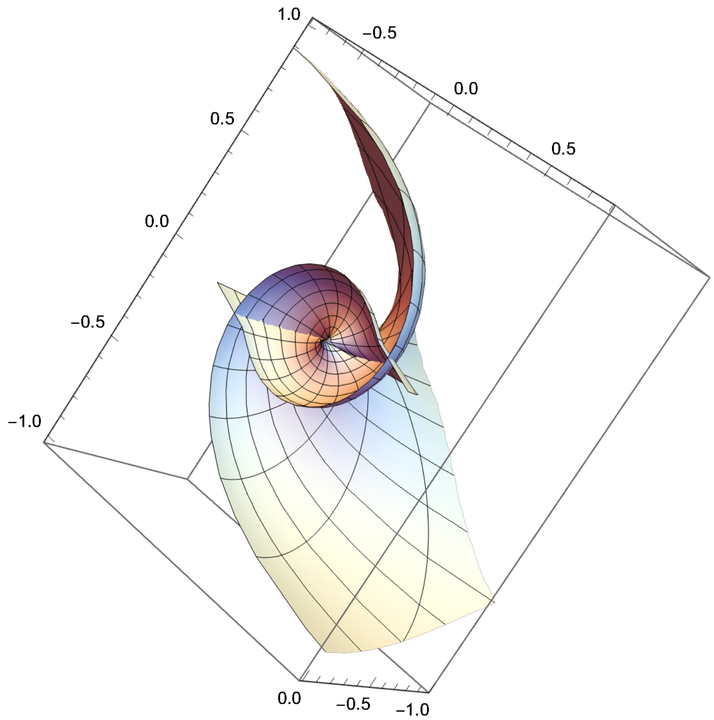
$$\text{Solve}\left[1 - r\,\text{Sin}[\beta] \Big/ \frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \theta r - \left(2\pi r - 2\pi\sqrt{\left(r\verb|^|2 - \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\verb|^|2\right)}\right), r\right]$$

Solve::verif : Potential solution {r → 0} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

Solve::verif : Potential solution {r → ComplexInfinity} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\left\{\left\{r \to \left(8\pi^2\theta - 6\pi\theta^2 + \theta^3 - 2\sqrt{16\pi^5\theta\,\text{Sin}[\beta]^2 - 20\pi^4\theta^2\,\text{Sin}[\beta]^2 + 8\pi^3\theta^3\,\text{Sin}[\beta]^2 - \pi^2\theta^4\,\text{Sin}[\beta]^2}\right) \Big/ \left(2\left(-16\pi^3\theta + 20\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)\right)\right\}, \left\{r \to \left(8\pi^2\theta - 6\pi\theta^2 + \theta^3 + 2\sqrt{16\pi^5\theta\,\text{Sin}[\beta]^2 - 20\pi^4\theta^2\,\text{Sin}[\beta]^2 + 8\pi^3\theta^3\,\text{Sin}[\beta]^2 - \pi^2\theta^4\,\text{Sin}[\beta]^2}\right) \Big/ \left(2\left(-16\pi^3\theta + 20\pi^2\theta^2 - 8\pi\theta^3 + \theta^4\right)\right)\right\}\right\}$$

```
SphericalPlot3D[
 (8 π^2 θ - 6 π θ^2 + θ^3 + 2 Sqrt[16 π^5 θ Sin[β]^2 - 20 π^4 θ^2 Sin[β]^2 + 8 π^3 θ^3 Sin[β]^2 - π^2 θ^4 Sin[β]^2]) /
  (2 (-16 π^3 θ + 20 π^2 θ^2 - 8 π θ^3 + θ^4)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

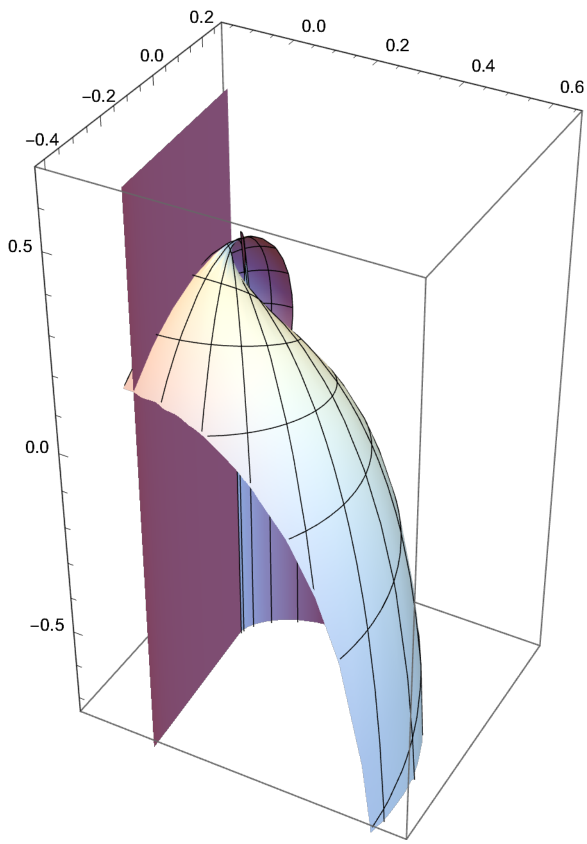



```
c := 2.99792458 * (10 ^ 8)
```

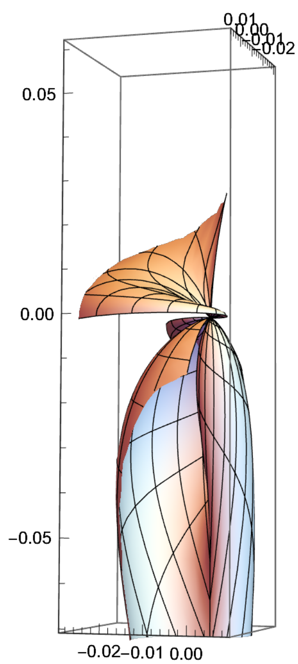
$$\text{Solve}\left[1 - \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} == \theta\, r - \left(2\pi r - 2\pi\sqrt{\left(r\,{}^\wedge 2 - \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\,{}^\wedge 2\right)}\right), r\right]$$

$$\left\{\left\{r \to \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi - \theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right\}\right\}$$

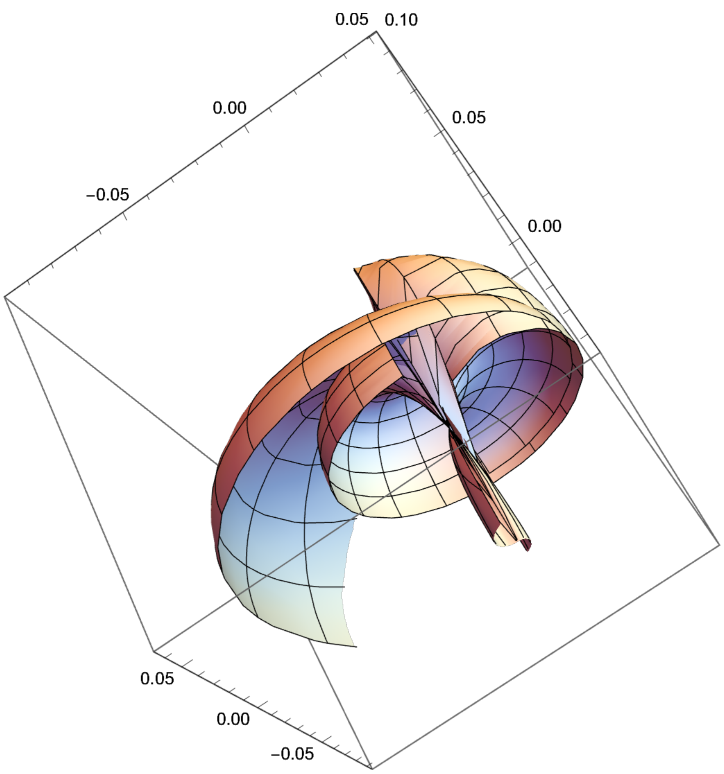
```
SphericalPlot3D[(-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)/
  (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



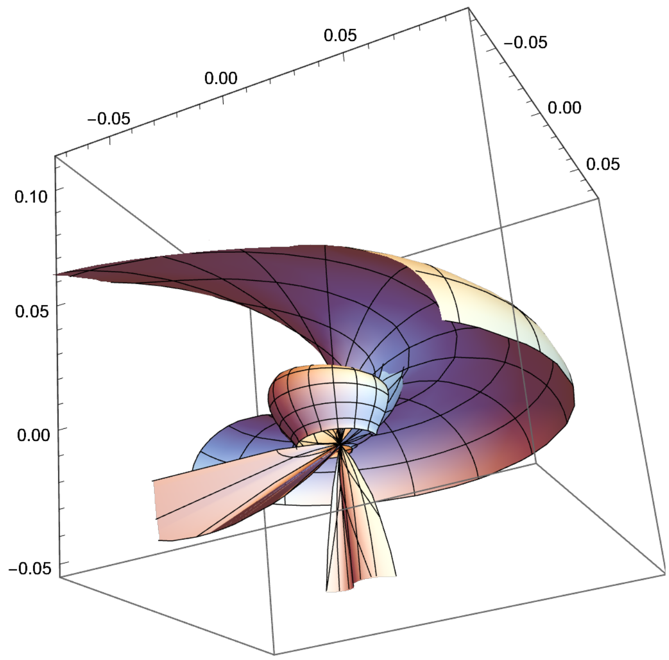
$$\text{SphericalPlot3D}\Big[\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)\Big/\Big(16\pi^2\theta-12\pi\theta^2+2\Big(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Big(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\Big),\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\Big]$$



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\Bigg(-4\,\pi\,\theta + \Bigg(\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/ \\
&\qquad\qquad \left(6\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \\
&\qquad\qquad \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2 + \\
&\quad 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta] + 4\,\pi^2\,\texttt{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{4\,\pi-\theta} - \\
&\quad \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{\theta}\Bigg)\Big/ \\
&\ \Bigg(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\Bigg(\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/ \\
&\qquad\qquad \left(6\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right) + \\
&\qquad\qquad \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\texttt{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2 + 11\,\pi^6\,\texttt{Sin}[\beta]^4 + \pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)^3 - \\
&\quad 16\,\pi^3\,\texttt{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\texttt{Sin}[\beta]^2\Bigg),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Bigg]
\end{aligned}
$$

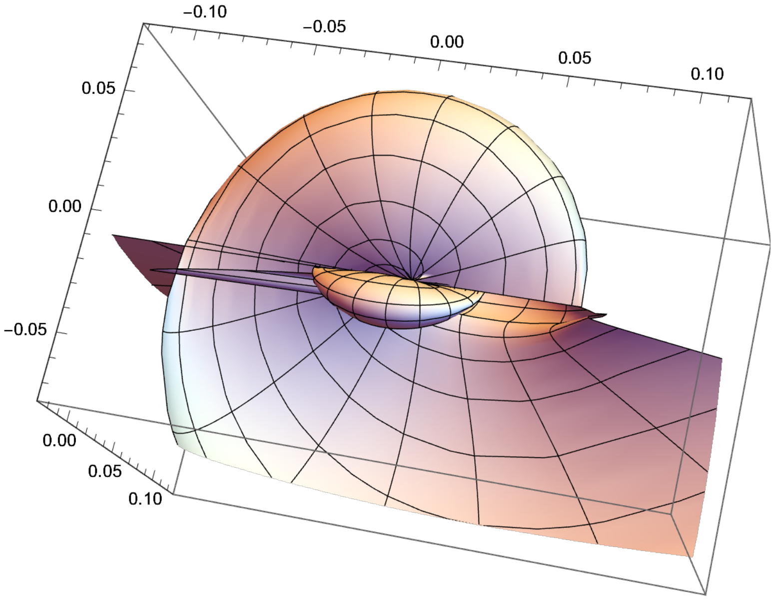


$$
\begin{aligned}
&\text{SphericalPlot3D}\Bigg[\Bigg(-4\pi\theta+\Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2+\\
&\quad 2\pi\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\\
&\quad\Bigg(2\pi^2\sqrt{\Bigg((4\pi-\theta)\Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Bigg(6\Bigg(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+}\\
&\qquad 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\Bigg)^{1/3}\Bigg)+\\
&\qquad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg)\\
&\quad\text{Sin}[\beta]^3\Bigg)\Big/\Bigg(4\pi-\Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg)-\\
&\quad\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\Bigg(16\pi^2\theta-12\pi\theta^2+\\
&\quad 2\Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)^3-\\
&\quad 16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\Bigg),\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\Bigg]
\end{aligned}
$$



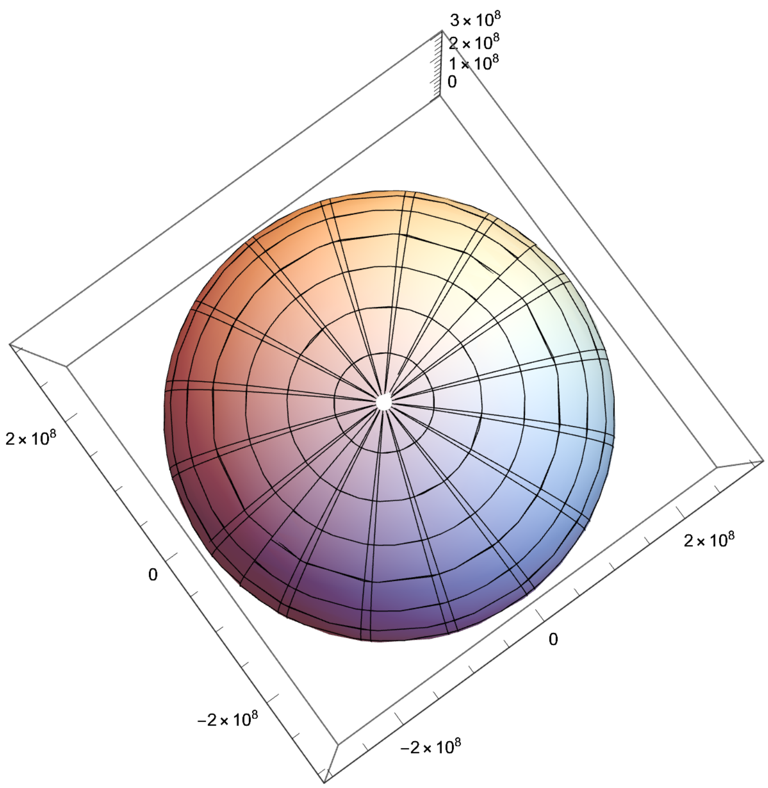
0.05
0.00
−0.05
−0.05
0.00
0.05
0.10
0.05
0.00
−0.05

$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\Bigg(-4\,\pi\,\theta+\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\right.\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)^2+\\
&\quad 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\\
&\quad\Bigg(2\,\pi^2\sqrt{\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+\right.\right.\right.\right.}\\
&\qquad\overline{\left.\left.\left.3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\right.}\\
&\qquad\overline{\left.\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)}\\
&\quad\mathrm{Sin}[\beta]^3\Bigg)\Big/\left(4\,\pi-\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\right.\right.\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\left.\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)-\\
&\quad\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.\\
&\quad 2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\right.\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)^3-\\
&\quad\left.16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\Bigg]
\end{aligned}
$$

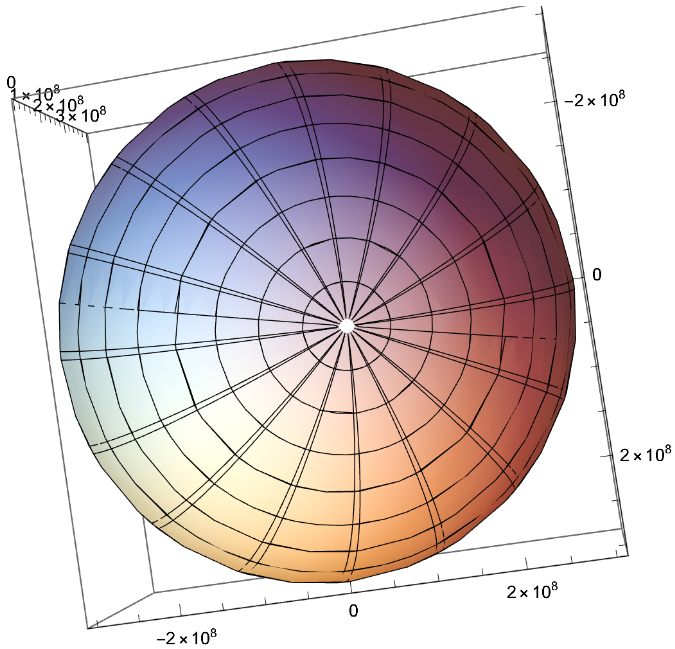



```
SphericalPlot3D[
 (√(-6.916640561054567`*^33 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
            3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
      5.504087674408673`*^32 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
               18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
      2.1729267174130213`*^34 Sin[β]^2)) /
  (√(-7.695800507960096`*^16 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
           (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
      6.124123459454841`*^15 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
               18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
```

```
      2.4177070339300032`*^17 Sin[β]^2)) +
  (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
     (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
     (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ) /
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2),
 {β, -π / 2, π /
   2}, {θ,
  -2
   π, 2
   π}]
```



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\\
&\Bigg(\sqrt{\Bigg(-6.916640561054567\texttt{`*\^{}33}\ \Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Bigg(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+}\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+\\
&\quad 5.504087674408673\texttt{`*\^{}32}\ \Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Bigg(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2+\\
&\quad 2.1729267174130213\texttt{`*\^{}34}\,\text{Sin}[\beta]^2\Bigg)\Bigg)\Big/\\
&\Bigg(\sqrt{\Bigg(-7.695800507960096\texttt{`*\^{}16}\ \Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/}\\
&\quad\Bigg(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+\\
&\quad 6.124123459454841\texttt{`*\^{}15}\ \Bigg(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Bigg(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2+\\
&\quad 2.4177070339300032\texttt{`*\^{}17}\,\text{Sin}[\beta]^2\Bigg)\Bigg)+\\
&\Bigg(\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-\\
&\quad\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\\
&\quad\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\Bigg)\Big/\\
&\quad(\theta/(2\pi))\,,\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Bigg]
\end{aligned}
$$

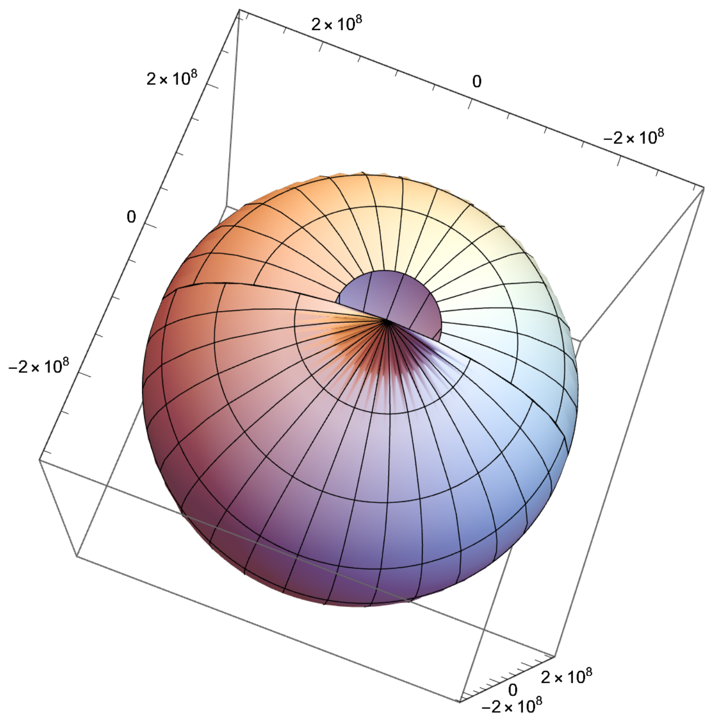


TotalVelocity = PhenomenalVelocity + InstantaneousVelocity + AverageVelocity

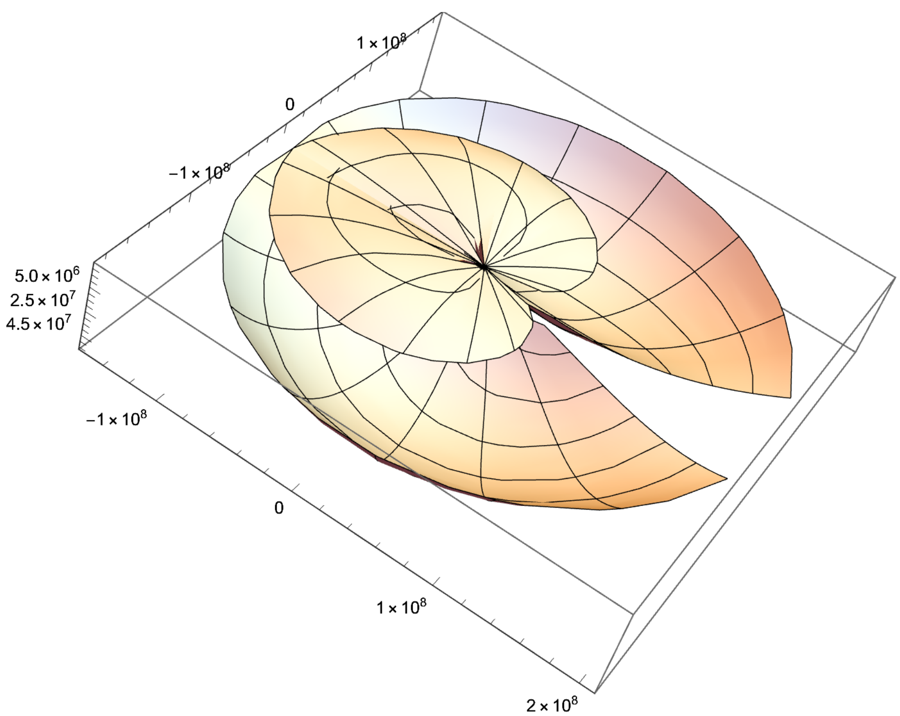
$$\Big(\sqrt{}\,\big(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right) + \frac{4\pi r^2 - 2 r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} + \left(\left(\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\ (\theta/(2\pi))\right)$$

$$r := \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

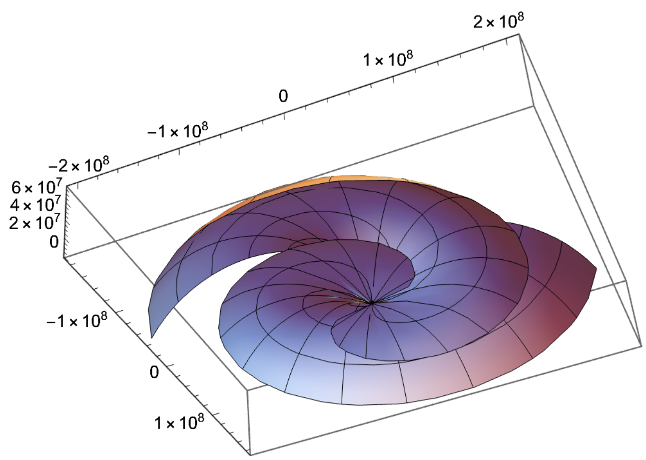
$$\text{SphericalPlot3D}\Big[\left(\sqrt{\left(-1.1294090667581471\text{`*^18}\,\theta + 8.987551787368176\text{`*^16}\,\theta^2 + 3.5481432270250993\text{`*^18}\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right) + \frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} + \left(\left(\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\pi^2\,\text{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right) \Big/ (\theta/(2\pi))\right), \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$



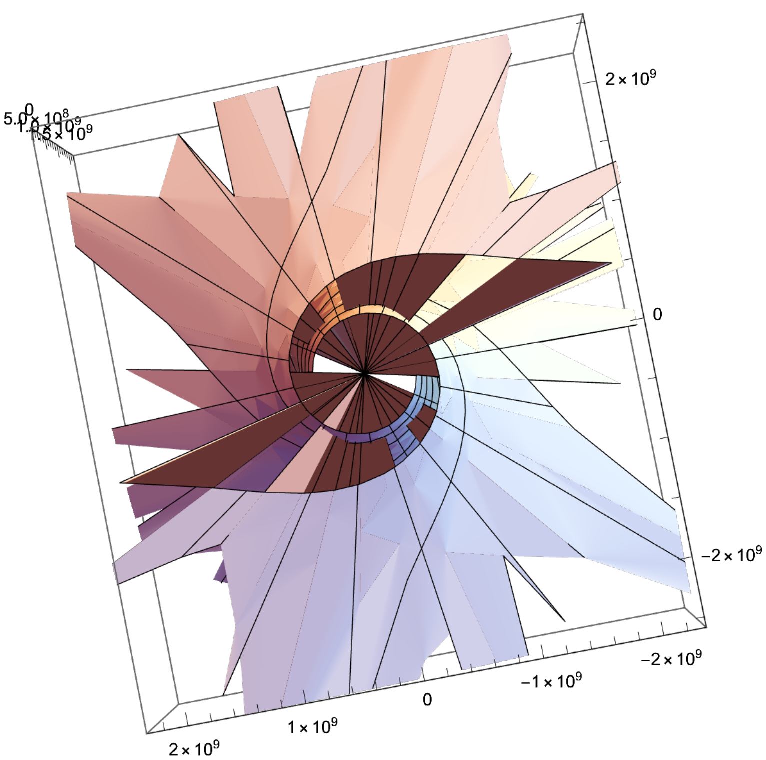
$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\\
&\Big(\sqrt{\big(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\big)}\Big) \Big/ \\
&\quad\Big(\sqrt{\Big(-12.566370614359172\grave{}\,\theta + \Big(2\Big(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)^2 + 39.47841760435743\grave{}\,\mathrm{Sin}[\beta]^2\Big)} + \\
&\quad\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} + \Bigg(\Bigg(\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \\
&\qquad\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg) \Big/ \\
&\qquad\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)\Bigg) \Big/ \\
&\quad(\theta\,/\,(2\,\pi))\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\}\Big]
\end{aligned}
$$



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\\
&\Big(\sqrt{\big(-1.1294090667581471\text{`}{*}\text{^}18\,\theta + 8.987551787368176\text{`}{*}\text{^}16\,\theta^2 + 3.5481432270250993\text{`}{*}\text{^}18\;\texttt{Sin}[\beta]^2\big)}\Big) \Big/ \Bigg(\sqrt{\Big(-12.566370614359172\text{`}\,\theta +}\\
&\qquad \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2 + 39.47841760435743\text{`}\;\texttt{Sin}[\beta]^2\Big)\Bigg) +\\
&\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} + \Bigg(\Bigg(\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta] + 4\,\pi^2\,\texttt{Sin}[\beta]^2 -\\
&\qquad \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{\theta}\Bigg) \Bigg/\\
&\qquad \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\texttt{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\texttt{Sin}[\beta]^2\right)\Bigg) \Bigg/\\
&\quad (\theta\,/\,(2\,\pi))\Bigg),\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]
\end{aligned}
$$



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\\
&\Big(\sqrt{\Big(-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2+}\\
&\qquad\qquad 3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/\\
&\quad\left(\sqrt{\left(-12.566370614359172\grave{}\ \theta+(\theta)^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)}\right)+\\
&\quad\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\Bigg(\Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\\
&\qquad\qquad\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg/\\
&\qquad\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)\Bigg)\Bigg/\\
&\quad(\theta\,/\,(2\,\pi))\Bigg),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Big]
\end{aligned}
$$



$$\text{SphericalPlot3D}\Big[\Bigg(\sqrt{\left(-1.1294090667581471\text{`*\^{}18}\,\theta + 8.987551787368176\text{`*\^{}16}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 3.5481432270250993\text{`*\^{}18}\,\text{Sin}[\beta]^2\right)}\Big/$$

$$\left(\sqrt{\left(-12.566370614359172\text{`}\,\theta+(\theta)^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}\right)+$$

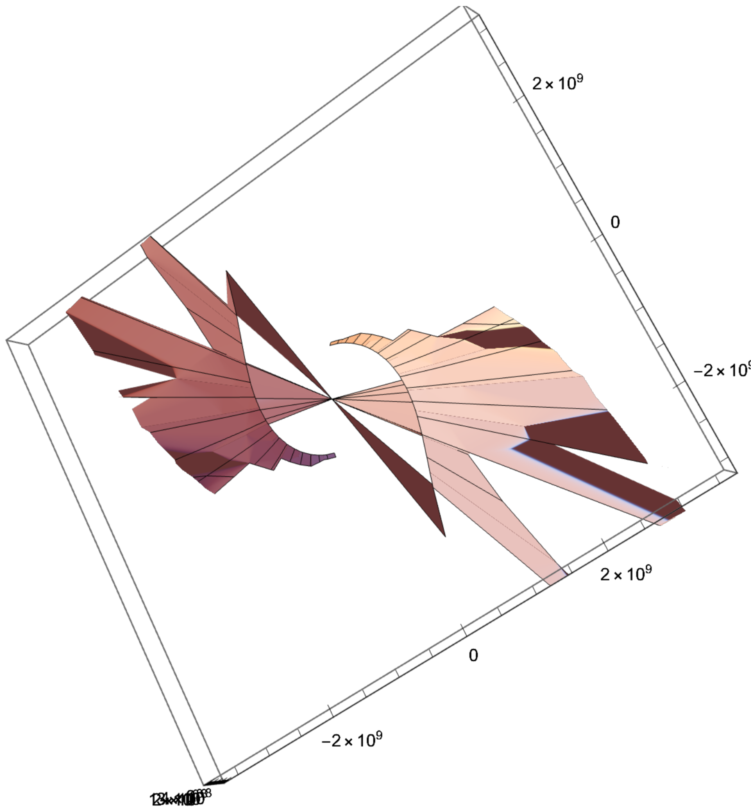
$$\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}+$$

$$\Bigg(\Bigg(\Bigg(-4\,\pi\,\theta+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

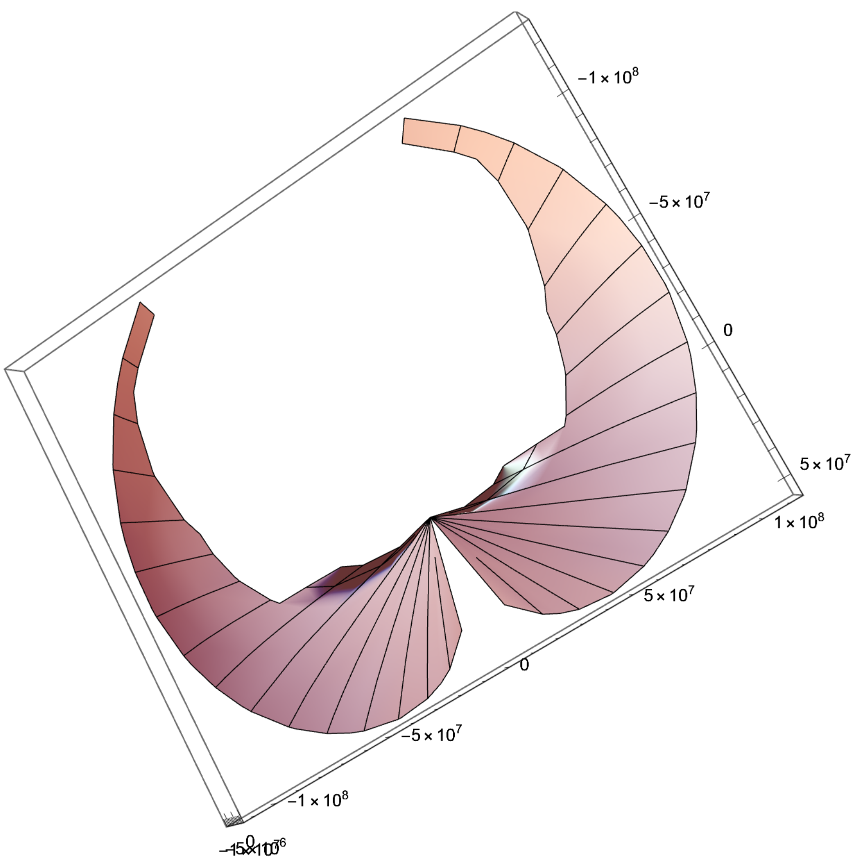
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\Bigg)\Big/$$

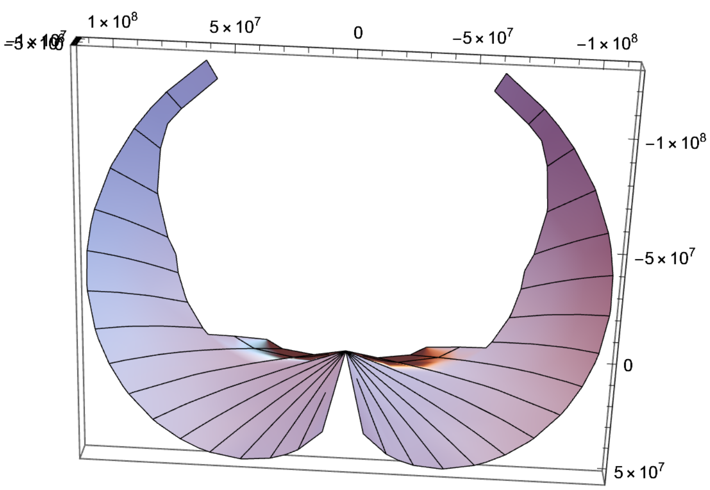
$$(\theta\,/\,(2\,\pi))\Bigg),\ \{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$


2 × 10^9
0
−2 × 10^9
2 × 10^9
0
−2 × 10^9

```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
       Sin[β]^2)) / (√(-12.566370614359172` θ +
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)) +
   (4 π r^2 - 2 r^2 θ) / (2 √(4 π r^2 θ - r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) + ((((-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] +
       4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) /
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
   (θ / (2 π))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
      Sin[β]^2)) / (√(-12.566370614359172` θ +
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)) +
 (4 π r^2 - 2 r^2 θ) / (2 √(4 π r^2 θ - r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) + (((-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] +
      4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3) / (4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3) / θ) /
     (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)) /
   (θ / (2 π))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

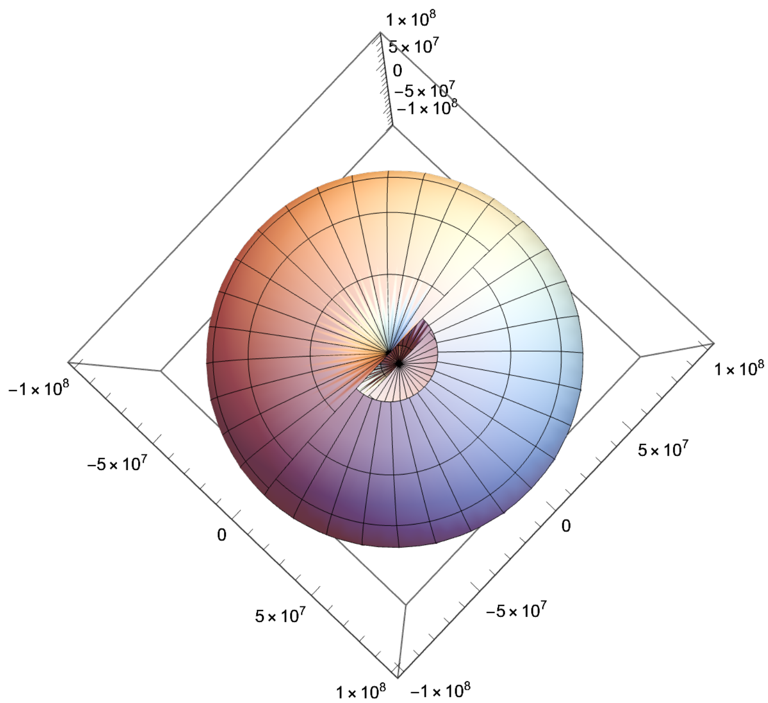



```
r := (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3) / (4 π - θ) -
    (2 π^2 √((4 π - θ) θ) Sin[β]^3) / θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)
```

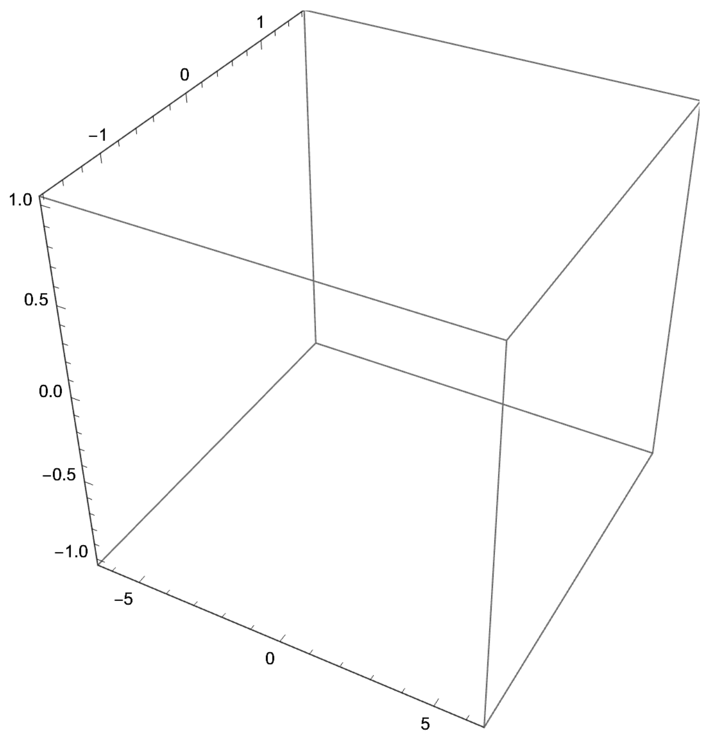
$$D\left[k\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{k\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

```
SphericalPlot3D[((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
    (2 π (4 π r^2 - 2 r^2 θ))/(4 π √(4 π r^2 θ - r^2 θ^2)) + r / (θ / (2 π))) / 3, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



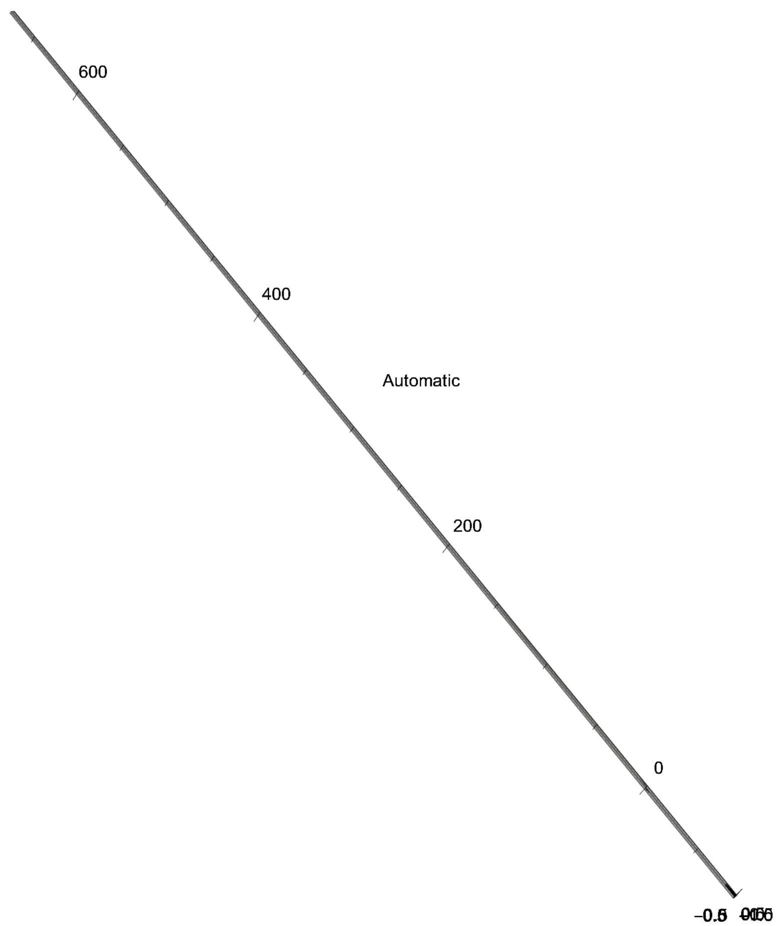
```
ContourPlot3D[((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
   (k (4 π r^2 - 2 r^2 θ))/(4 π √(4 π r^2 θ - r^2 θ^2)) + r / (θ / (k))) / 3,
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}, {k, -2 π, 2 π}]
```



$$\text{SphericalPlot3D}\Big[2\pi\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right)-$$

$$2\pi\sqrt{\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\text{^}2-\left(\frac{1}{2\pi}\sqrt{4\pi-\theta}\,\sqrt{\theta}\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right)\right)\text{^}2},$$

$$\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\},\text{AxesLabel}\to\text{Automatic}\Big]$$

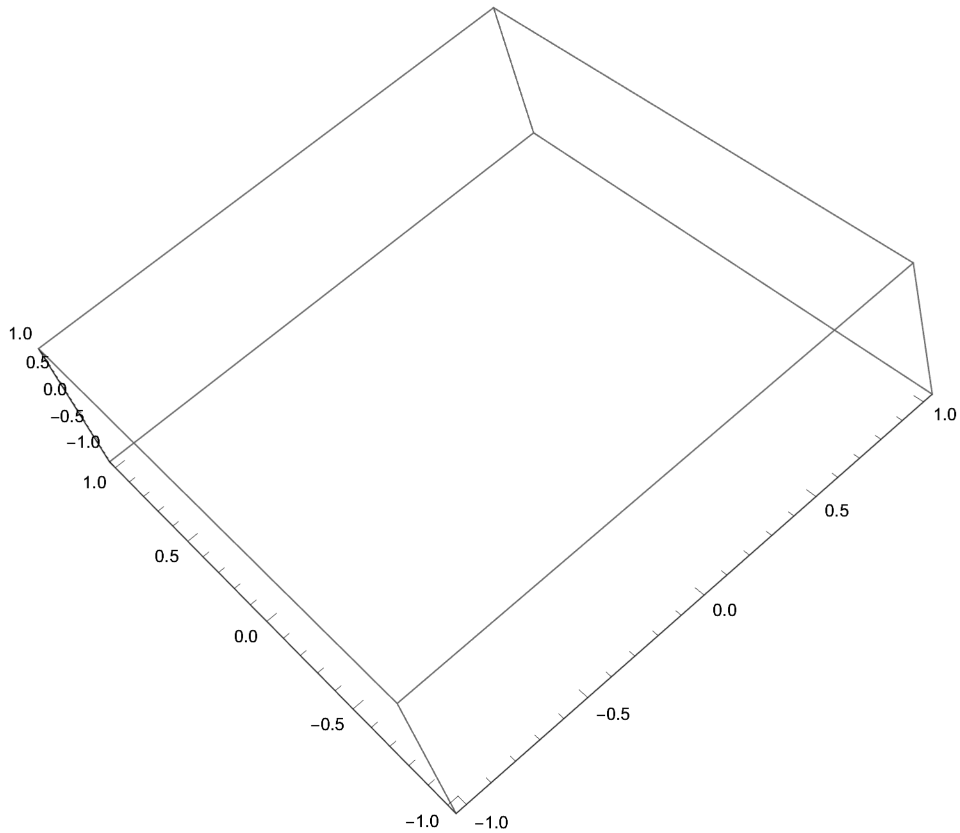


Solve[y == Abs[x + ⅈ y] Sin[β], x]

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

{{x → - ⅈ y - y Csc[β]}, {x → - ⅈ y + y Csc[β]}}

```
RevolutionPlot3D[-ⅈ y + y Csc[β], {y, -10, 10}, {β, -8 π, 8 π}]
```



ContourPlot3D$\Bigg[\frac{1}{2\pi}\sqrt{4\pi-\theta}$

$$\sqrt{\left(1\Bigg/\left(\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Bigg/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)\right)^2\times\right.\right.}$$

$$2\pi\left(\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Bigg/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)\right)^2+\right.$$

$$\sqrt{\Bigg(-y^2\,\Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-}$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)\Bigg)^2+$$

$$\Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

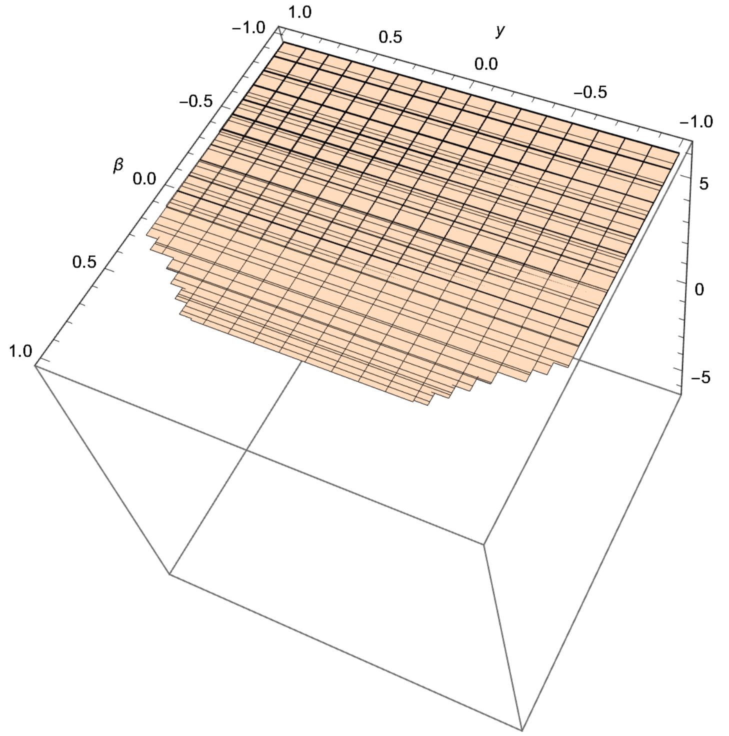
$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)\Bigg)^4\Bigg)\Bigg)\Bigg)$$

$$\Bigg(\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

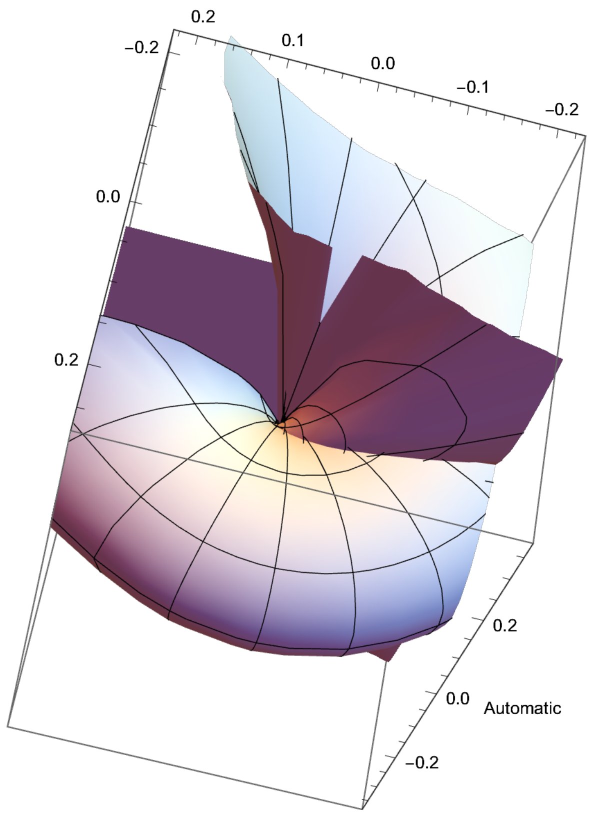
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)\Bigg),\ \{\beta,$$

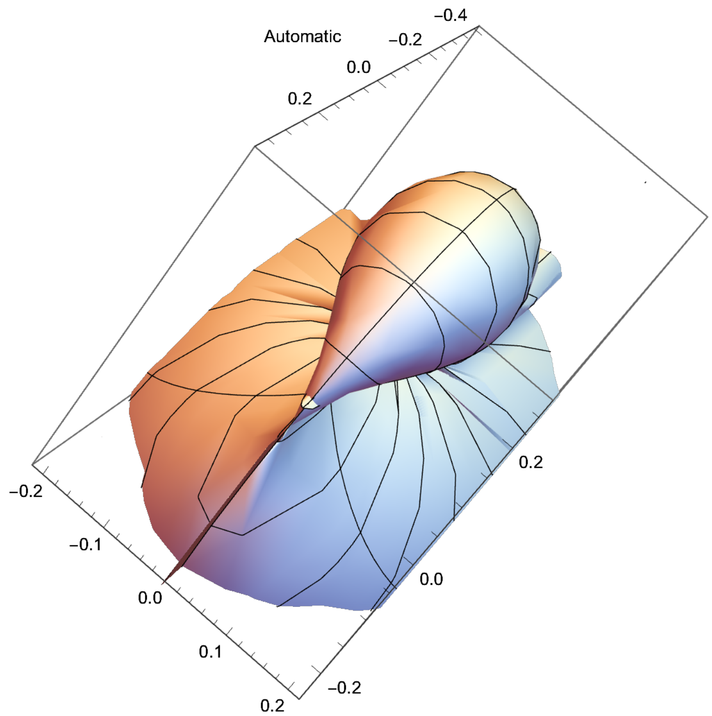
```
-1, 1}, {θ, -2
 π,
2
 π}, {y,
-1,
1},
AxesLabel →
 Automatic]
```


1.0
−1.0
0.5
y
0.0
−0.5
−1.0
−0.5
β
0.0
0.5
1.0
5
0
−5

$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}$$
$$\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta}-$$
$$\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\Bigg),$$
$$\{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$

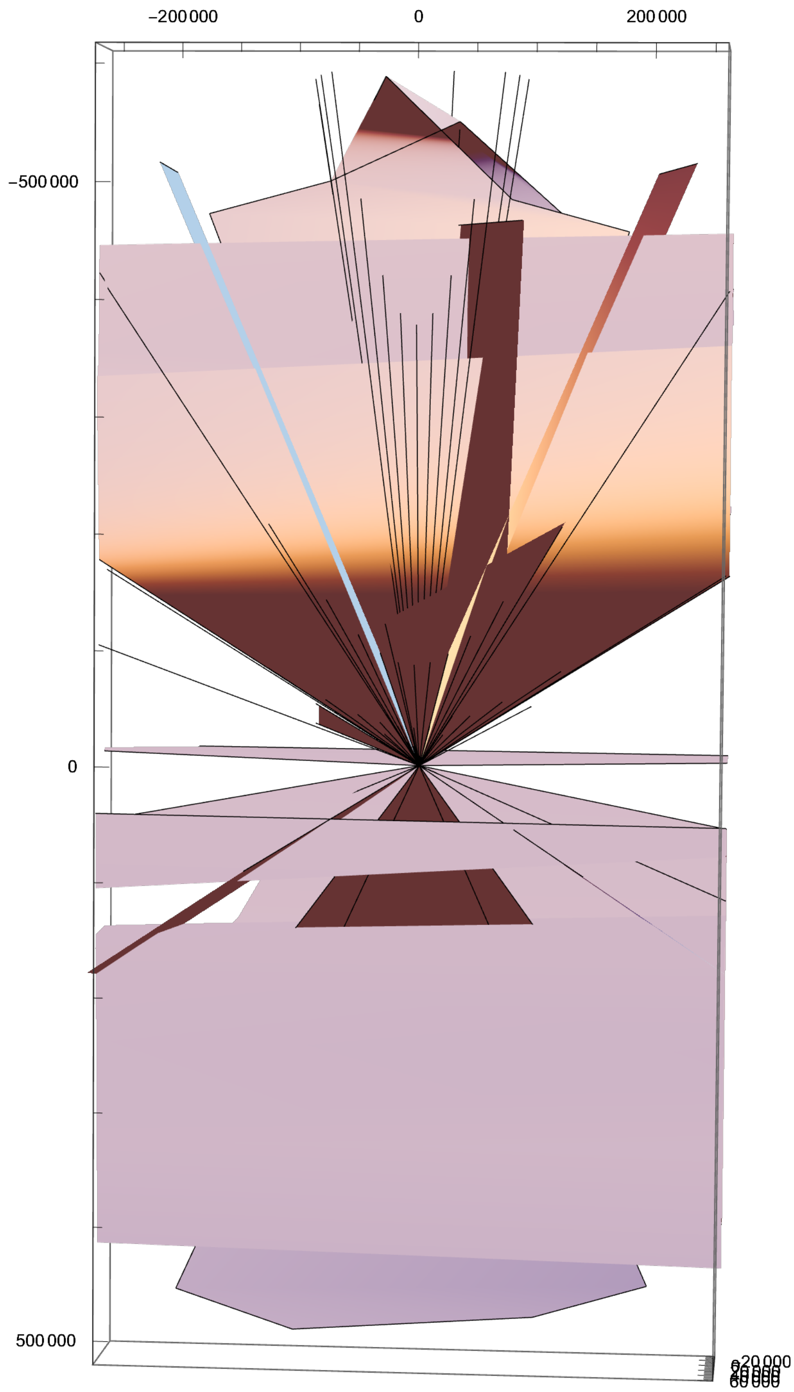


$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}$$
$$\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\right.\right.$$
$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right),$$
$$\{\theta,-2\pi,2\pi\},\ \{\beta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$



$$\text{ContourPlot3D}\Big[$$
$$\frac{1}{2\pi}\sqrt{4\pi-\theta}\sqrt{\frac{2\pi\left(\text{Abs}[x+i\,y]^2+\sqrt{-y^2\,\text{Abs}[x+i\,y]^2+\text{Abs}[x+i\,y]^4}\right)}{\text{Abs}[x+i\,y]^2}}\ \text{Abs}[x+i\,y],$$
$$\{x,-1,1\},\{y,-1,1\},\{\theta,-2\pi,2\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$

```
SphericalPlot3D[(((6.283185307179586` θ Csc[β]
      √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743`
          Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2))) ^ (-13.16979643063896` /
     (-1.8378770664093453` - 1.` Log[(θ Csc[β] √(-1.1294090667581471`*^18 θ +
              8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
          (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))]))) -
   1, {θ, -1.9 π, 1.9 π}, {β, -85 π, 85
    π}]
```



$$\texttt{Solve}\left[1 == \frac{\sqrt{(4\,\pi - \theta)\,\theta}}{\pi\,\theta^2},\ \theta\right]$$

$$\left\{\left\{\theta \to -\left(\frac{2}{108\,\pi^5 + \sqrt{108\,\pi^6 + 11\,664\,\pi^{10}}}\right)^{1/3} + \frac{\left(\frac{1}{2}\left(108\,\pi^5 + \sqrt{108\,\pi^6 + 11\,664\,\pi^{10}}\right)\right)^{1/3}}{3\,\pi^2}\right\}\right\}$$

$$\text{Solve}\left[2 == \frac{\sqrt{(4\,\pi - \theta)\,\theta}}{\pi\,\theta^2}, \theta\right]$$

$$\left\{\left\{\theta \to -\left(\frac{2}{1728\,\pi^5 + \sqrt{6912\,\pi^6 + 2\,985\,984\,\pi^{10}}}\right)^{1/3} + \frac{\left(\frac{1}{2}\left(1728\,\pi^5 + \sqrt{6912\,\pi^6 + 2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{12\,\pi^2}\right\}\right\}$$

$$\text{Solve}\left[3 == \frac{\sqrt{(4\,\pi - \theta)\,\theta}}{\pi\,\theta^2}, \theta\right]$$

$$\left\{\left\{\theta \to -\left(\frac{2}{8748\,\pi^5 + \sqrt{78\,732\,\pi^6 + 76\,527\,504\,\pi^{10}}}\right)^{1/3} + \frac{\left(\frac{1}{2}\left(8748\,\pi^5 + \sqrt{78\,732\,\pi^6 + 76\,527\,504\,\pi^{10}}\right)\right)^{1/3}}{27\,\pi^2}\right\}\right\}$$

$(F_{dm}) = m\,a$

$$\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}-$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

$$\left.\left.\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)+$$

$$\left(\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$

$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\right)\Big/$$

$$\left(\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)-$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

$$-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}+$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)-$$

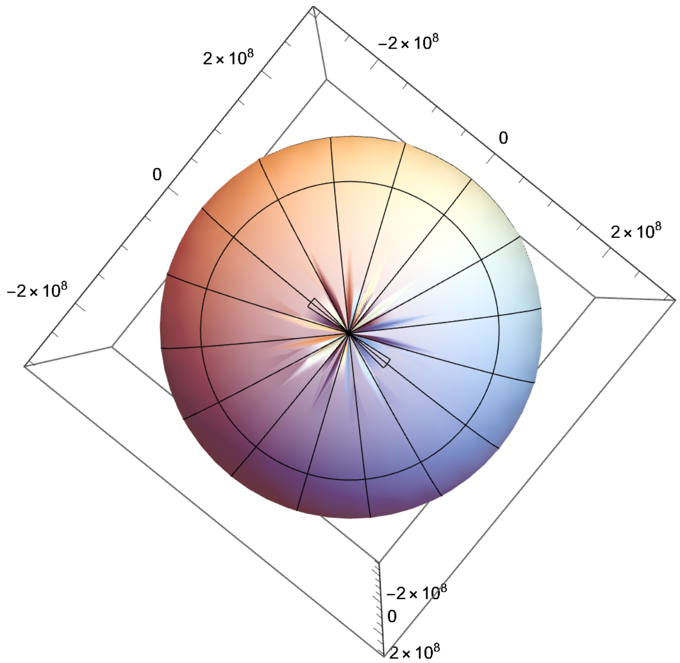
$$\left(\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\right)\Big/$$

$$\left(\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)+$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

```
SphericalPlot3D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), {θ,
  -2 π, 2 π}, {β, -π, π}]
```



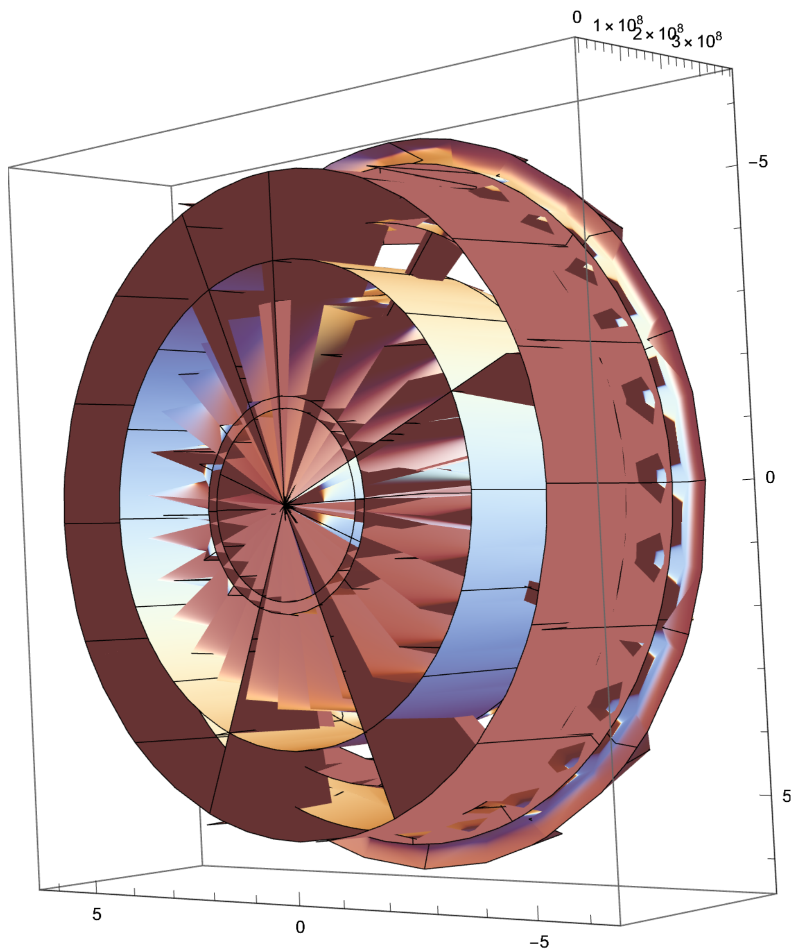
$$\text{Solve}\left[1 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \beta\right]$$

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right\}\right\}$$

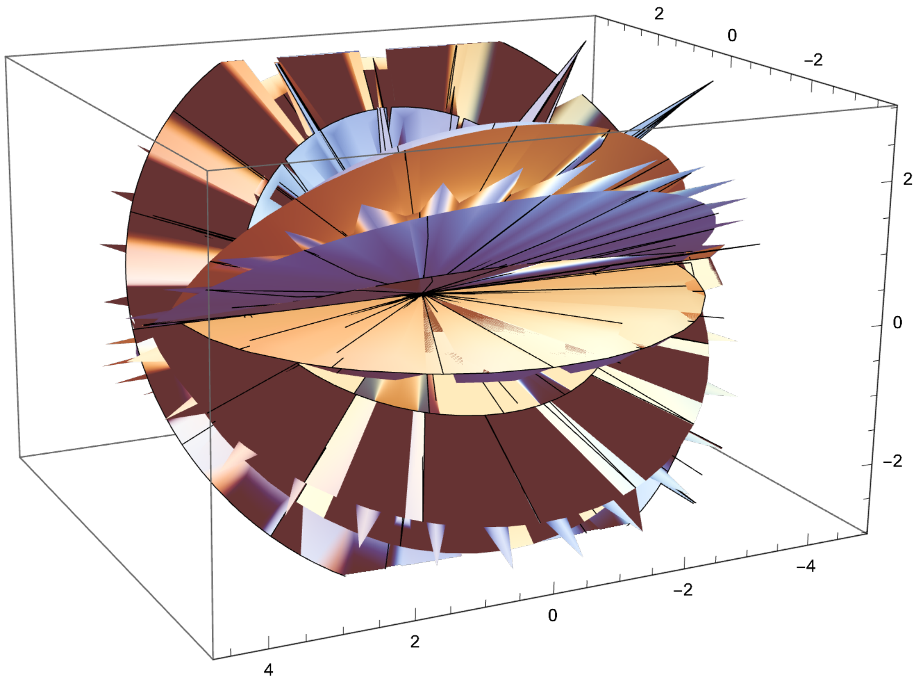
$$\text{Solve}\left[1 == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \theta\right]$$

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

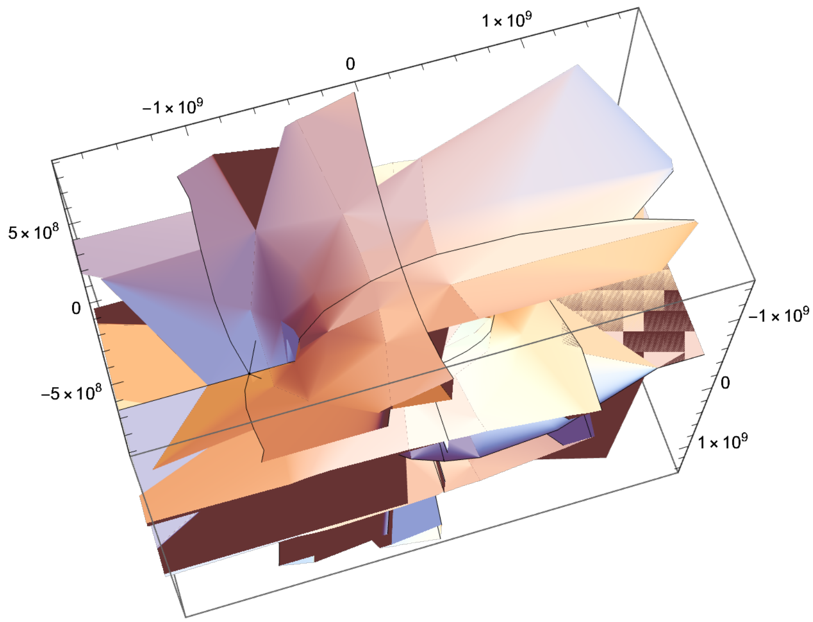
```
RevolutionPlot3D[(√(-1.1294090667581471`*^18 (θ) + 8.987551787368176`*^16 θ^2 +
    3.5481432270250993`*^18 Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2))/
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)),
 {θ, -2 π, 2 π}]
```



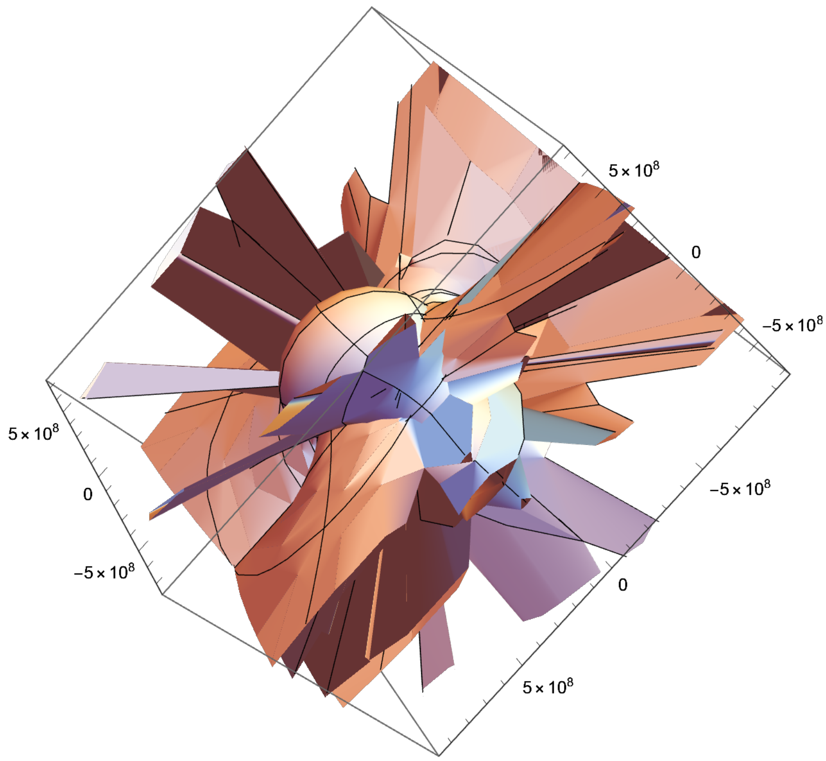
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) + 8.987551787368176`*^16
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 3.5481432270250993`*^18 Sin[β]^2))/
  (√(-12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + θ^2 +
      39.47841760435743` Sin[β]^2)), {θ, -π, π}, {β, -.5 π, .5 π}]
```



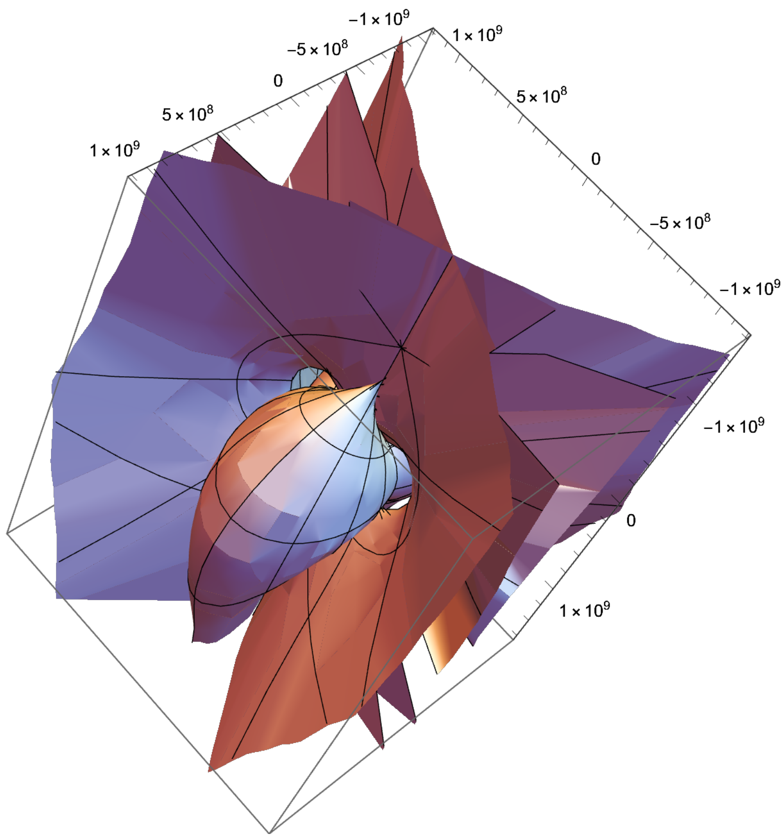
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {θ, -4 π, 4 π}, {β, -2 π, 2 π}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[θ]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), {θ,
  -2 π, 2 π}, {β, -π, π}]
```



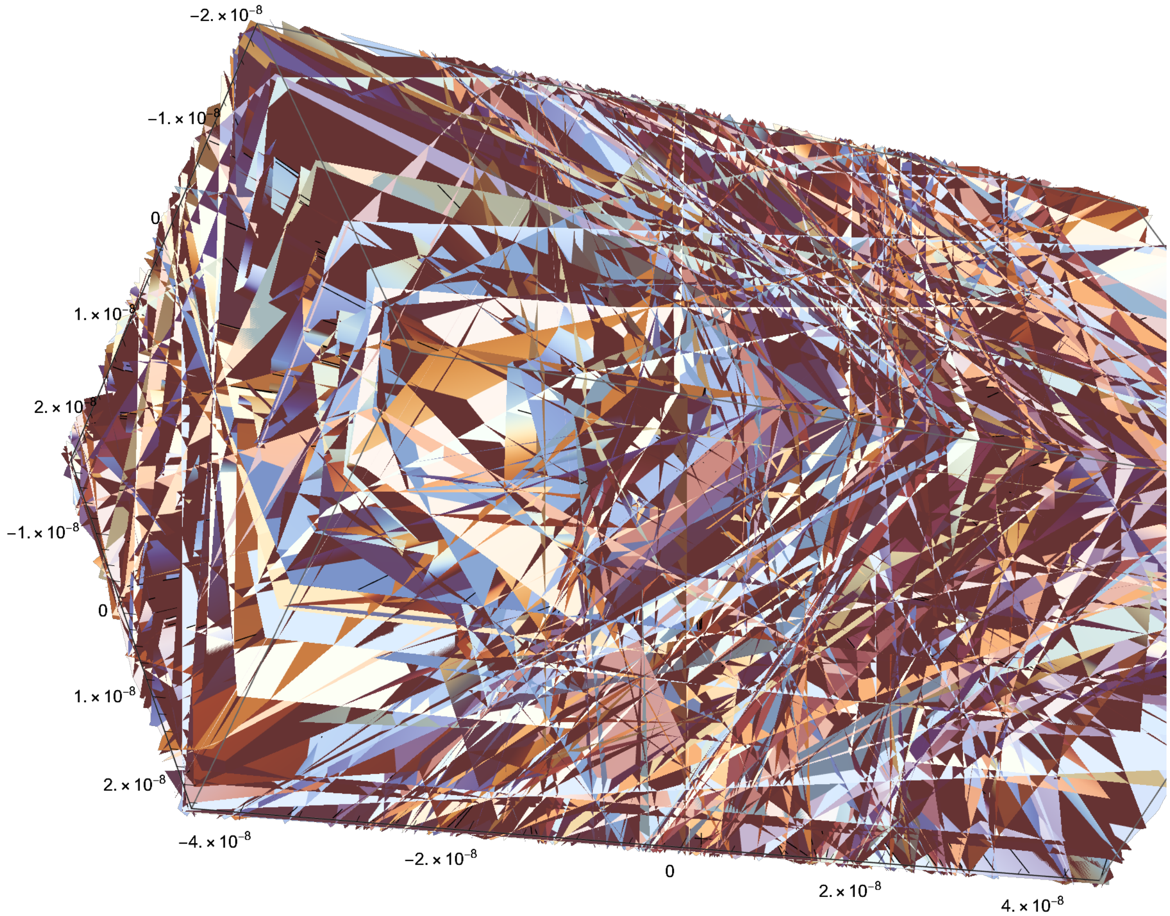
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + √(π² - π² Sin[β]²))² +
      3.5481432270250993`*^18 Sin[θ]²)) /
  (√(-12.566370614359172` θ + θ² + 39.47841760435743` Sin[β]²)), {θ,
  -2 π, 2 π}, {β, -π, π}]
```



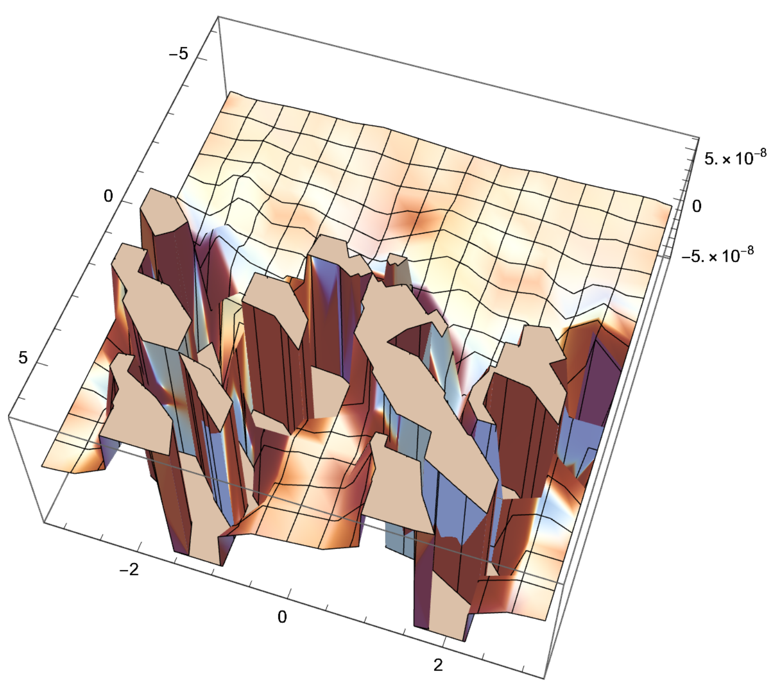
```
D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]), θ, β]
```

$$-\left(1.77407\times10^{18}\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2}\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)^{3/2}\right)-\left(1.77407\times10^{18}\left(-12.5664+2\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{3/2}\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)-\left(19.7392\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{3/2}\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)+\left(59.2176\left(-12.5664+2\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)\Big/\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{5/2}$$

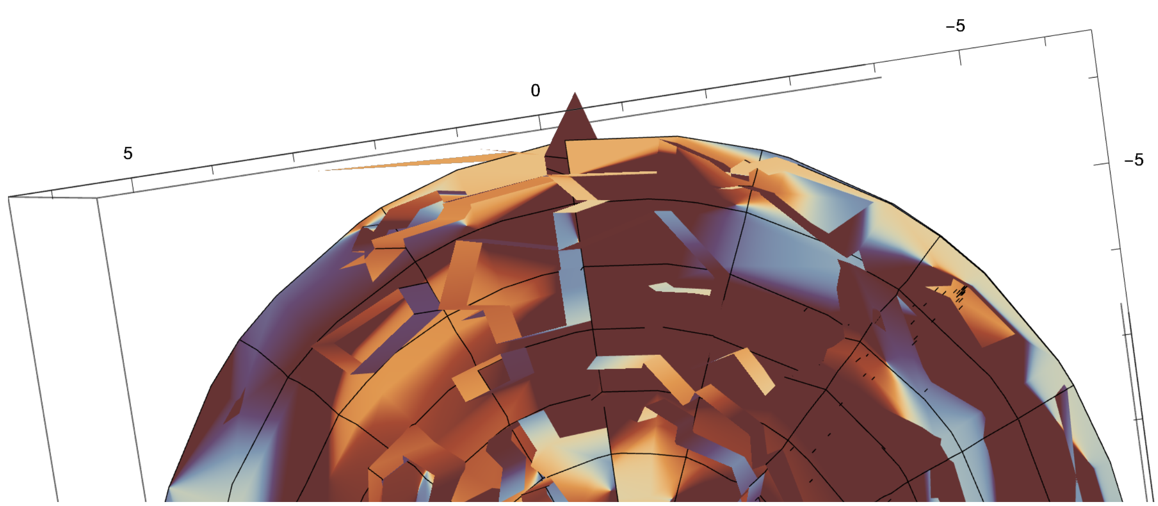
```
SphericalPlot3D[
 -(1.7740716135125496`*^18 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
      Cos[β] Sin[β]) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]
      (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)^(3/2)) -
   (1.7740716135125496`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β]) /
    ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
      Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) -
   (19.739208802178716` (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
      Cos[β] Sin[β]) / ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
      Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) +
   (59.21762640653615` (-12.566370614359172` + 2 θ) Cos[β] Sin[β]
      Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) /
    (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(5/2),
 {β, -π, π}, {θ, -2 π, 2 π}]
```

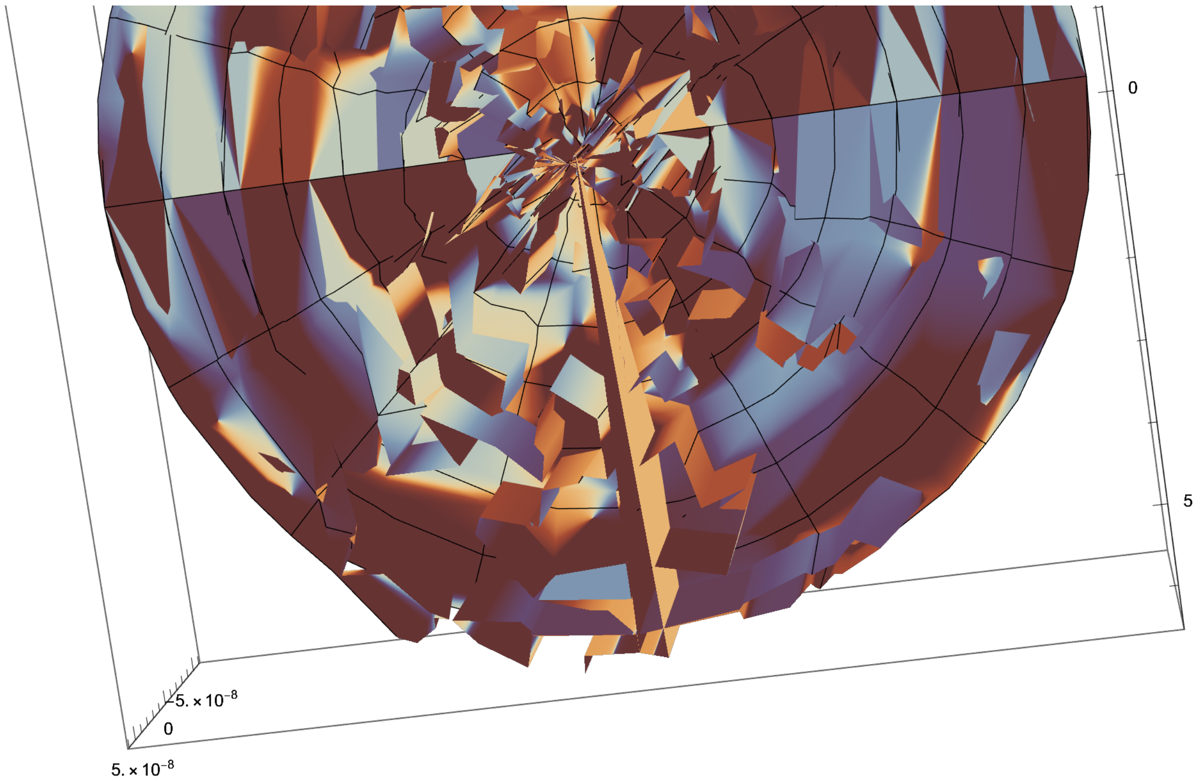

−2. × 10^−8
−1. × 10^−8
0
1. × 10^−8
2. × 10^−8
−1. × 10^−8
0
1. × 10^−8
2. × 10^−8
−4. × 10^−8
−2. × 10^−8
0
2. × 10^−8
4. × 10^−8

```
Plot3D[
 -(1.7740716135125496`*^18 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
      Cos[β] Sin[β]) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]
     (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)^(3/2)) -
  (1.7740716135125496`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β]) /
   ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) -
  (19.739208802178716` (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
     Cos[β] Sin[β]) / ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) +
  (59.21762640653615` (-12.566370614359172` + 2 θ) Cos[β] Sin[β]
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) /
   (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(5/2), {θ, -2
  π, 2 π}, {β, -π, π}]
```



```
RevolutionPlot3D[
 -(1.7740716135125496`*^18 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
      Cos[β] Sin[β]) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]
     (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)^(3/2)) -
  (1.7740716135125496`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β]) /
   ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) -
  (19.739208802178716` (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
     Cos[β] Sin[β]) / ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) +
  (59.21762640653615` (-12.566370614359172` + 2 θ) Cos[β] Sin[β]
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) /
   (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(5/2), {θ, -2
  π, 2 π}, {β, -π, π}]
```




0
5
-5. × 10^-8
0
5. × 10^-8

Force =

$$
\begin{aligned}
&\mathrm{m}\Big(-(1.7740716135125496\text{`}{*}\text{^}18\,(-1.1294090667581471\text{`}{*}\text{^}18+1.7975103574736352\text{`}{*}\text{^}17\,\theta)\\
&\quad \mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta])\Big/\Big(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2}\\
&\quad (-1.1294090667581471\text{`}{*}\text{^}18\,\theta+8.987551787368176\text{`}{*}\text{^}16\,\theta^2+\\
&\qquad 3.5481432270250993\text{`}{*}\text{^}18\,\mathrm{Sin}[\beta]^2)^{3/2}\Big)-\\
&(1.7740716135125496\text{`}{*}\text{^}18\,(-12.566370614359172\text{`}+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta])\Big/\\
&\Big((-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2)^{3/2}\\
&\quad \sqrt{}(-1.1294090667581471\text{`}{*}\text{^}18\,\theta+8.987551787368176\text{`}{*}\text{^}16\,\theta^2+\\
&\qquad 3.5481432270250993\text{`}{*}\text{^}18\,\mathrm{Sin}[\beta]^2)\Big)-\\
&(19.739208802178716\text{`}\,(-1.1294090667581471\text{`}{*}\text{^}18+1.7975103574736352\text{`}{*}\text{^}17\,\theta)\\
&\quad \mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta])\Big/\Big((-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2)^{3/2}\\
&\quad \sqrt{}(-1.1294090667581471\text{`}{*}\text{^}18\,\theta+8.987551787368176\text{`}{*}\text{^}16\,\theta^2+\\
&\qquad 3.5481432270250993\text{`}{*}\text{^}18\,\mathrm{Sin}[\beta]^2)\Big)+\\
&\Big(59.21762640653615\text{`}\,(-12.566370614359172\text{`}+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\\
&\quad \sqrt{}(-1.1294090667581471\text{`}{*}\text{^}18\,\theta+8.987551787368176\text{`}{*}\text{^}16\,\theta^2+\\
&\qquad 3.5481432270250993\text{`}{*}\text{^}18\,\mathrm{Sin}[\beta]^2)\Big)\Big/\\
&\quad (-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2)^{5/2}\Big)
\end{aligned}
$$

```
ContourPlot3D[
 m (- (1.7740716135125496`*^18 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
        Cos[β] Sin[β]) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]
        (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)^(3/2)) -
    (1.7740716135125496`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β]) /
     ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
       Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) -
    (19.739208802178716` (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
       Cos[β] Sin[β]) / ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
       Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) +
    (59.21762640653615` (-12.566370614359172` + 2 θ) Cos[β] Sin[β]
       Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)]) /
     (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(5/2)),
 {m, -5, 5}, {β, -π, π},
 {θ,
  -2
   π, 2
   π}]

Solve[(Sqrt[(3.5481432270250993`*^18 η^2 -
        1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)]) /
    (Sqrt[39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2]) == c, η]

{{}}
```

```
Solve[c == (√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), β]
```

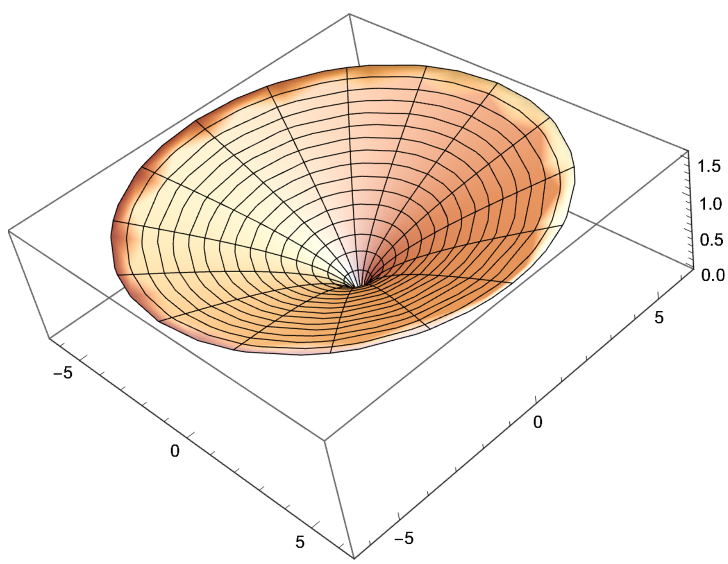
$$\left\{\left\{\beta \to -1.\ \mathrm{ArcSin}\left[\left(\sqrt{\theta}\sqrt{\left(-1.34523\times10^{24} + 4.48719\times10^{15}\,c + 1.0705\times10^{23}\,\theta - 3.57079\times10^{14}\,c\,\theta\right)}\right) \Big/ \left(\sqrt{-4.22615\times10^{24} + 1.40969\times10^{16}\,c}\right)\right]\right\}, \left\{\beta \to \mathrm{ArcSin}\left[\left(\sqrt{\theta}\sqrt{\left(-1.34523\times10^{24} + 4.48719\times10^{15}\,c + 1.0705\times10^{23}\,\theta - 3.57079\times10^{14}\,c\,\theta\right)}\right) \Big/ \left(\sqrt{-4.22615\times10^{24} + 1.40969\times10^{16}\,c}\right)\right]\right\}\right\}$$

```
Solve[c == (√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ]
```

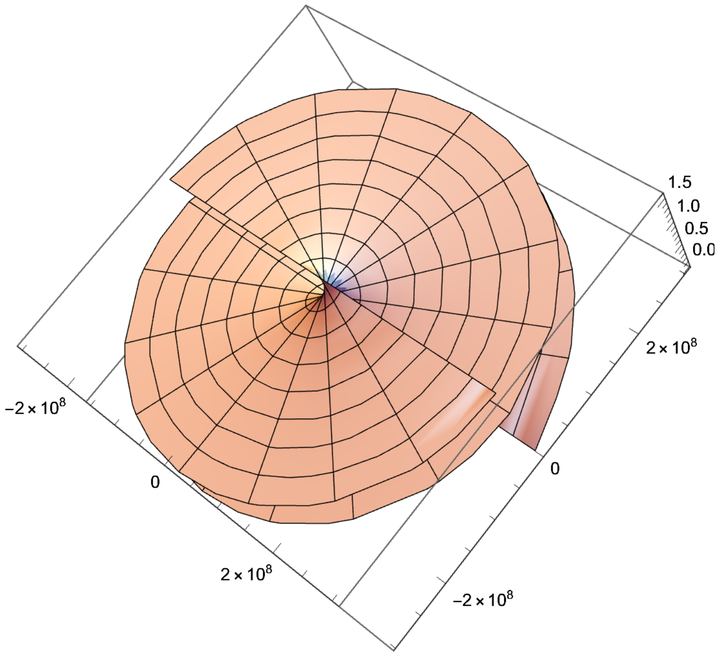
{}

```
c := (2.99 * 10^8)
```

```
RevolutionPlot3D[ArcSin[(√θ √(-1.3452259606784795`*^24 + 4.487190804107819`*^15 c +
      1.0704968060876181`*^23 θ - 3.57079298535128`*^14 c θ)) /
  (√(-4.226151995485783`*^24 + 1.40969256654408`*^16 c))], {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[ArcSin[(√θ √(-1.3452259606784795`*^24 + 4.487190804107819`*^15 c +
      1.0704968060876181`*^23 θ - 3.57079298535128`*^14 c θ)) /
   (√(-4.226151995485783`*^24 + 1.40969256654408`*^16 c))],
 {c, -(2.99*10^8), (2.99*10^8)}, {θ, -2 π, 2 π}]
```




```
Solve[θ Energy == 2 π Energy - 2 π √((Energy^2 - (m c^2)^2)), Energy]
```

$$\left\{\left\{\text{Energy} \to -\frac{2\,c^2\,m\,\pi}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}, \left\{\text{Energy} \to \frac{2\,c^2\,m\,\pi}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\}$$

```
Solve[Energy^2 == (p v)^2 + (m c^2)^2, m]
```

$$\left\{\left\{m \to -\frac{i\,\sqrt{-\text{Energy}^2 + p^2\,v^2}}{c^2}\right\}, \left\{m \to \frac{i\,\sqrt{-\text{Energy}^2 + p^2\,v^2}}{c^2}\right\}\right\}$$

```
Solve[Energy^2 == (p v)^2 + (m c^2)^2, Energy]
```

$$\left\{\left\{\text{Energy} \to -\sqrt{c^4\,m^2 + p^2\,v^2}\right\}, \left\{\text{Energy} \to \sqrt{c^4\,m^2 + p^2\,v^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{2\,\pi\,m\,c\,^\wedge 2}{\sqrt{4\,\pi\,\theta-\theta^2}} == \sqrt{c^4\,m^2+(m\,v)^2\,v^2}\,,\,\theta\right]$$

$$\left\{\left\{\theta\to 1.52668\times 10^{-8}\left(4.11558\times 10^{8}+\frac{8.8193\times 10^{25}}{8.07761\times 10^{33}+v^4}-1.\sqrt{1.6938\times 10^{17}+\frac{7.77801\times 10^{51}}{\left(8.07761\times 10^{33}+v^4\right)^2}-\frac{1.36819\times 10^{51}}{8.07761\times 10^{33}+v^4}}\right)\right\},\right.$$

$$\left.\left\{\theta\to 1.52668\times 10^{-8}\left(4.11558\times 10^{8}+\frac{8.8193\times 10^{25}}{8.07761\times 10^{33}+v^4}+\sqrt{1.6938\times 10^{17}+\frac{7.77801\times 10^{51}}{\left(8.07761\times 10^{33}+v^4\right)^2}-\frac{1.36819\times 10^{51}}{8.07761\times 10^{33}+v^4}}\right)\right\}\right\}$$

$$\theta := 1.526682874746296\grave{}*^\wedge{-8}\left(4.11557987\grave{}*^\wedge 8+\frac{8.819302218404142\grave{}*^\wedge 25}{8.07760871306249\grave{}*^\wedge 33+v^4}+\sqrt{\left(1.6937997666349216\grave{}*^\wedge 17+\frac{7.778009161954823\grave{}*^\wedge 51}{\left(8.07760871306249\grave{}*^\wedge 33+v^4\right)^2}-\frac{1.3681851753153453\grave{}*^\wedge 51}{8.07760871306249\grave{}*^\wedge 33+v^4}\right)}\right)$$

$$\left(m\,\sqrt{2.86605126458116\grave{}*^\wedge 52-3.1889121001887717\grave{}*^\wedge 35\,v^2}\right)\Big/\left(\sqrt{\theta}\,\sqrt{\left(1.1294090667581471\grave{}*^\wedge 18-12.566370614359172\grave{}\,v^2-8.987551787368176\grave{}*^\wedge 16\,\theta+v^2\,\theta\right)}\right)$$

Energy ==

$$\left(8093.298956544235\text{`}\ m\ \sqrt{2.86605126458116\text{`*^}52-3.1889121001887717\text{`*^}35\ v^{2}}\right)\Bigg/$$

$$\left(\sqrt{\left(4.11557987\text{`*^}8+\frac{8.819302218404142\text{`*^}25}{8.07760871306249\text{`*^}33+v^{4}}+\sqrt{\left(1.6937997666349216\text{`*^}17+\frac{7.778009161954823\text{`*^}51}{\left(8.07760871306249\text{`*^}33+v^{4}\right)^{2}}-\frac{1.3681851753153453\text{`*^}51}{8.07760871306249\text{`*^}33+v^{4}}\right)}\right)}\right.$$

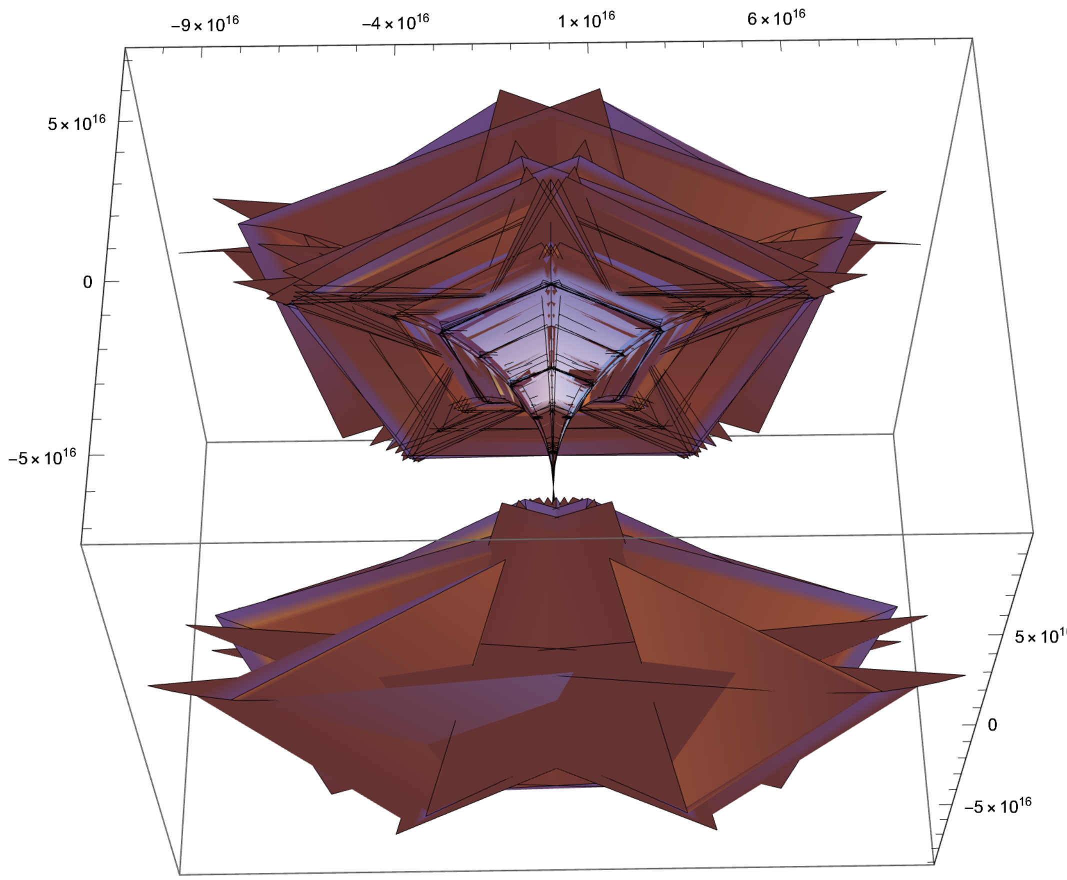
$$\sqrt{\left(1.1294090667581471\text{`*^}18-12.566370614359172\text{`}\ v^{2}-1.3721141399670458\text{`*^}9\right.}$$

$$\left(4.11557987\text{`*^}8+\frac{8.819302218404142\text{`*^}25}{8.07760871306249\text{`*^}33+v^{4}}+\sqrt{\left(1.6937997666349216\text{`*^}17+\frac{7.778009161954823\text{`*^}51}{\left(8.07760871306249\text{`*^}33+v^{4}\right)^{2}}-\frac{1.3681851753153453\text{`*^}51}{8.07760871306249\text{`*^}33+v^{4}}\right)}\right)+$$

$$1.526682874746296\text{`*^-}8\ v^{2}\left(4.11557987\text{`*^}8+\frac{8.819302218404142\text{`*^}25}{8.07760871306249\text{`*^}33+v^{4}}+\right.$$

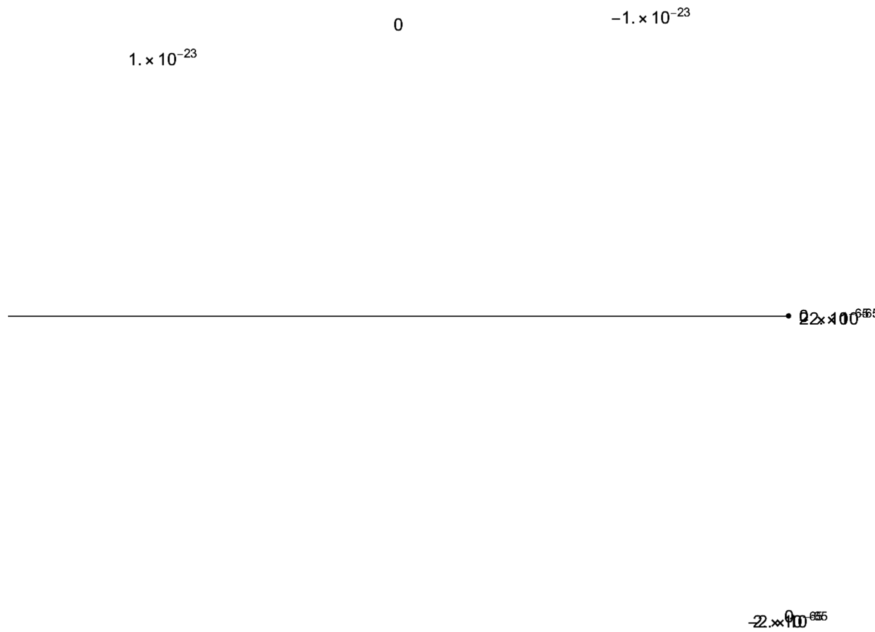
$$\left.\left.\left.\sqrt{\left(1.6937997666349216\text{`*^}17+\frac{7.778009161954823\text{`*^}51}{\left(8.07760871306249\text{`*^}33+v^{4}\right)^{2}}-\frac{1.3681851753153453\text{`*^}51}{8.07760871306249\text{`*^}33+v^{4}}\right)}\right)\right)\right)$$

$$
\begin{aligned}
&\mathtt{SphericalPlot3D}\Big[\\
&\left(8093.298956544235\texttt{`}\ m\ \sqrt{2.86605126458116\texttt{`*\textasciicircum 52}-3.1889121001887717\texttt{`*\textasciicircum 35}\ v^{2}}\right)\Big/\\
&\left(\sqrt{\left(4.11557987\texttt{`*\textasciicircum 8}+\frac{8.819302218404142\texttt{`*\textasciicircum 25}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}+\sqrt{\left(1.6937997666349216\texttt{`*\textasciicircum 17}+\right.}\right.}\right.\\
&\qquad\left.\left.\left.\frac{7.778009161954823\texttt{`*\textasciicircum 51}}{\left(8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}\right)^{2}}-\frac{1.3681851753153453\texttt{`*\textasciicircum 51}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}\right)\right)\right.\\
&\quad\sqrt{\left(1.1294090667581471\texttt{`*\textasciicircum 18}-12.566370614359172\texttt{`}\ v^{2}-1.3721141399670458\texttt{`*\textasciicircum 9}\right.}\\
&\qquad\left(4.11557987\texttt{`*\textasciicircum 8}+\frac{8.819302218404142\texttt{`*\textasciicircum 25}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}+\sqrt{\left(1.6937997666349216\texttt{`*\textasciicircum 17}+\right.}\right.\\
&\qquad\quad\left.\left.\frac{7.778009161954823\texttt{`*\textasciicircum 51}}{\left(8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}\right)^{2}}-\frac{1.3681851753153453\texttt{`*\textasciicircum 51}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}\right)\right)+\\
&\qquad 1.526682874746296\texttt{`*\textasciicircum -8}\ v^{2}\left(4.11557987\texttt{`*\textasciicircum 8}+\frac{8.819302218404142\texttt{`*\textasciicircum 25}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}+\right.\\
&\qquad\quad\sqrt{\left(1.6937997666349216\texttt{`*\textasciicircum 17}+\frac{7.778009161954823\texttt{`*\textasciicircum 51}}{\left(8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}\right)^{2}}-\right.}\\
&\qquad\quad\left.\left.\left.\left.\frac{1.3681851753153453\texttt{`*\textasciicircum 51}}{8.07760871306249\texttt{`*\textasciicircum 33}+v^{4}}\right)\right)\right)\right),\ \{m,-1,1\},\ \{v,-c,c\}\Big]
\end{aligned}
$$



-9×10^{16}
-4×10^{16}
1×10^{16}
6×10^{16}
5×10^{16}
0
-5×10^{16}
5×10^{16}
0
-5×10^{16}

```
SphericalPlot3D[
 (8093.298956544235` m Sqrt[2.86605126458116`*^52 - 3.1889121001887717`*^35 v^2]) /
  (Sqrt[(4.11557987`*^8 + 8.819302218404142`*^25/(8.07760871306249`*^33 + v^4) + Sqrt[(1.6937997666349216`*^17 +
         7.778009161954823`*^51/(8.07760871306249`*^33 + v^4)^2 - 1.3681851753153453`*^51/(8.07760871306249`*^33 + v^4))])]
   Sqrt[(1.1294090667581471`*^18 - 12.566370614359172` v^2 - 1.3721141399670458`*^9
       (4.11557987`*^8 + 8.819302218404142`*^25/(8.07760871306249`*^33 + v^4) + Sqrt[(1.6937997666349216`*^17 +
            7.778009161954823`*^51/(8.07760871306249`*^33 + v^4)^2 - 1.3681851753153453`*^51/(8.07760871306249`*^33 + v^4))]) +
      1.526682874746296`*^-8 v^2 (4.11557987`*^8 + 8.819302218404142`*^25/(8.07760871306249`*^33 + v^4) +
         Sqrt[(1.6937997666349216`*^17 + 7.778009161954823`*^51/(8.07760871306249`*^33 + v^4)^2 -
             1.3681851753153453`*^51/(8.07760871306249`*^33 + v^4))]))]), {m, -10^-41, 10^-41}, {v, -4 c, 4 c}]
```

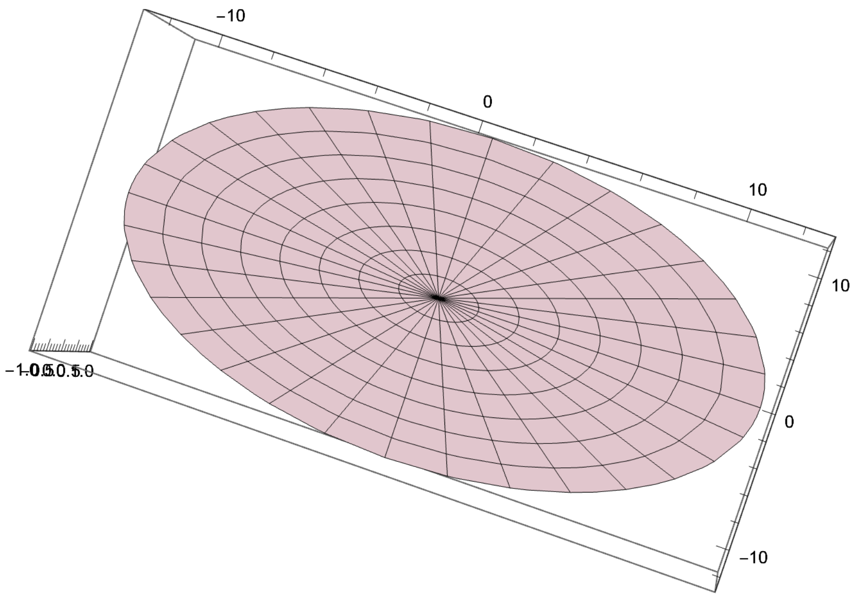


$$\text{Solve}\left[\frac{2\,\pi\,m\,c\wedge 2}{\sqrt{4\,\pi\,\theta-\theta^2}} == \left(m\,\sqrt{2.86605126458116\grave{}*\wedge 52-3.1889121001887717\grave{}*\wedge 35\,v^2}\right)\Big/\left(\sqrt{\theta}\,\sqrt{}\left(1.1294090667581471\grave{}*\wedge 18-12.566370614359172\grave{}\,v^2-8.987551787368176\grave{}*\wedge 16\,\theta+v^2\,\theta\right)\right),\,v\right]$$

$$\Big\{\Big\{v\to-\Big(\Big(1.\,\sqrt{}\left(1.55683\times10^{74}-1.92734\times10^{40}\,c^4-1.23889\times10^{73}\,\theta+1.53373\times10^{39}\,c^4\,\theta\right)\Big)\Big/\Big(\sqrt{}\left(1.73221\times10^{57}-2.14445\times10^{23}\,c^4-1.37845\times10^{56}\,\theta+1.7065\times10^{22}\,c^4\,\theta\right)\Big)\Big)\Big\},$$

$$\left\{v\to\frac{\sqrt{1.55683\times10^{74}-1.92734\times10^{40}\,c^4-1.23889\times10^{73}\,\theta+1.53373\times10^{39}\,c^4\,\theta}}{\sqrt{1.73221\times10^{57}-2.14445\times10^{23}\,c^4-1.37845\times10^{56}\,\theta+1.7065\times10^{22}\,c^4\,\theta}}\right\}\Big\}$$

$$\text{RevolutionPlot3D}\Big[\left(\sqrt{\left(1.5568291164930838\text{`*^}74 - 1.9273391071487519\text{`*^}40\, c^4 - 1.2388852471963122\text{`*^}73\, \theta + 1.5337277295852198\text{`*^}39\, c^4\, \theta\right)}\right) \Big/ \left(\sqrt{\left(1.732206003731935\text{`*^}57 - 2.14445396560339\text{`*^}23\, c^4 - 1.3784457397369778\text{`*^}56\, \theta + 1.706502244293984\text{`*^}22\, c^4 \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\, \text{Sin}[\beta]^2}\right)\right)\right)}\right),\ \{\theta, -4\pi, 4\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$



$$\text{Energy} \to \left(m\sqrt{2.86605126458116\text{`*^}52 - 3.1889121001887717\text{`*^}35\, v^2}\right) \Big/ \left(\sqrt{\theta}\sqrt{\left(1.1294090667581471\text{`*^}18 - 12.566370614359172\text{`}\, v^2 - 8.987551787368176\text{`*^}16\, \theta + v^2\, \theta\right)}\right)$$

$$\text{Solve}\left[\text{Energy} == \frac{2\,\pi\, m\, c\text{^}2}{\sqrt{4\,\pi\,\theta - \theta^2}}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\left(\text{Energy}^2 - \sqrt{\text{Energy}^4 - c^4\,\text{Energy}^2\, m^2}\right)\pi}{\text{Energy}^2}\right\}, \left\{\theta \to \frac{2\left(\text{Energy}^2 + \sqrt{\text{Energy}^4 - c^4\,\text{Energy}^2\, m^2}\right)\pi}{\text{Energy}^2}\right\}\right\}$$

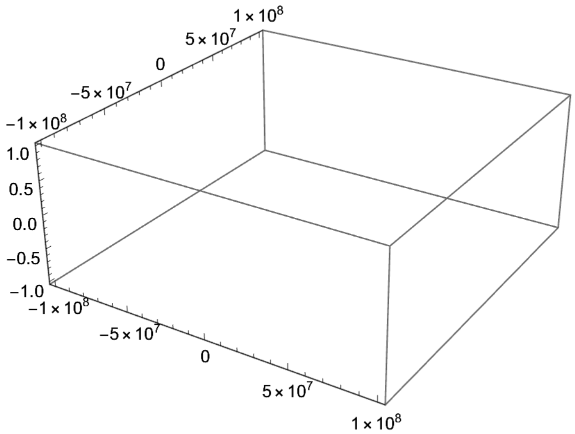
$$\sqrt{c^4\, m^2 + p^2\, v^2}$$

$$\frac{2\, c^2\, m\,\pi}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Solve}\left[\theta\,\text{Energy} == 2\,\pi\,\text{Energy} - 2\,\pi\,\sqrt{(\text{Energy}^\wedge 2 - (\text{m}\,\text{c}^\wedge 2)^\wedge 2)}\,,\,\theta\right]$$

$$\left\{\left\{\theta \to -\frac{2\left(-\text{Energy}\,\pi + \sqrt{\text{Energy}^2 - \text{c}^4\,\text{m}^2}\,\pi\right)}{\text{Energy}}\right\}\right\}$$

$$\text{Plot3D}\left[-\frac{2\left(-\text{Energy}\,\pi + \sqrt{\text{Energy}^2 - \text{c}^4\,\text{m}^2}\,\pi\right)}{\text{Energy}},\,\{\text{m},\,-10^\wedge 8,\,10^\wedge 8\},\,\{\text{Energy},\,-10^\wedge 8,\,10^\wedge 8\}\right]$$



$$\text{c} := 2.99792458\,\left(10^8\right)$$

$$\text{Solve}\left[\theta\,\text{Energy} == 2\,\pi\,\text{Energy} - 2\,\pi\,\sqrt{(\text{Energy}^\wedge 2 - (\text{m}\,\text{c}^\wedge 2)^\wedge 2)}\,,\,\text{m}\right]$$

$$\left\{\left\{\text{m} \to -3.09434\times 10^{-22}\,\text{Energy}\,\sqrt{4.11558\times 10^{8} - 3.27507\times 10^{7}\,\theta}\,\sqrt{\theta}\right\},\right.$$
$$\left.\left\{\text{m} \to 3.09434\times 10^{-22}\,\text{Energy}\,\sqrt{4.11558\times 10^{8} - 3.27507\times 10^{7}\,\theta}\,\sqrt{\theta}\right\}\right\}$$

$$\text{Solve}\left[\theta\,\text{Energy} == 2\,\pi\,\text{Energy} - 2\,\pi\,\sqrt{(\text{Energy}^\wedge 2 - (\text{h})^\wedge 2)}\,,\,\text{h}\right]$$

$$\left\{\left\{\text{h} \to -\frac{\sqrt{4\,\text{Energy}^2\,\pi\,\theta - \text{Energy}^2\,\theta^2}}{2\,\pi}\right\},\,\left\{\text{h} \to \frac{\sqrt{4\,\text{Energy}^2\,\pi\,\theta - \text{Energy}^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

$$\frac{\sqrt{4\,\text{Energy}^2\,\pi\,\theta - \text{Energy}^2\,\theta^2}}{2\,\pi}$$

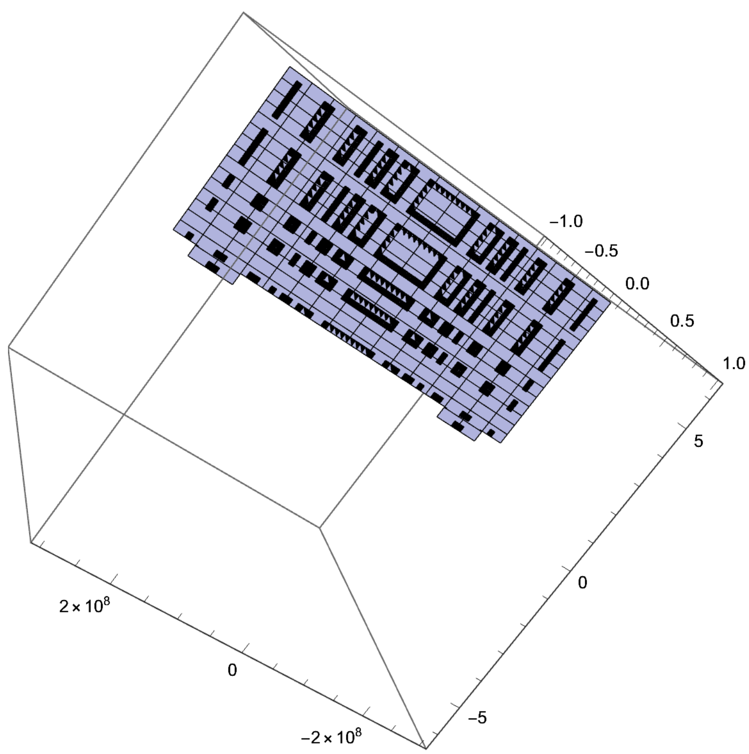
$$\text{Solve}\left[\frac{\sqrt{\text{r}\,\sqrt{1-\frac{(\text{v})^2}{\text{c}^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(\text{v})^2}{\text{c}^2}}}}\,\sqrt{4\,\pi\,\text{r} - \text{r}\,\theta}}{2\,\pi} == \frac{\sqrt{4\,\text{Energy}^2\,\pi\,\theta - \text{Energy}^2\,\theta^2}}{2\,\pi},\,\text{Energy}\right]$$

$$\{\{\text{Energy} \to -1.\,\text{r}\},\,\{\text{Energy} \to \text{r}\}\}$$

$$\text{Solve}\left[\frac{\sqrt{\text{Energy}\ \sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\,\pi\,\text{Energy}-\text{Energy}\,\theta}}{2\,\pi} == m\,c\,\hat{}\,2,\ \text{Energy}\right]$$

$$\left\{\left\{\text{Energy}\to-\frac{1.\ m\ \sqrt{2.86605\times10^{52}-3.18891\times10^{35}\ v^2}}{\sqrt{\theta}\ \sqrt{1.12941\times10^{18}-12.5664\ v^2-8.98755\times10^{16}\ \theta+v^2\ \theta}}\right\},\right.$$
$$\left.\left\{\text{Energy}\to\frac{m\ \sqrt{2.86605\times10^{52}-3.18891\times10^{35}\ v^2}}{\sqrt{\theta}\ \sqrt{1.12941\times10^{18}-12.5664\ v^2-8.98755\times10^{16}\ \theta+v^2\ \theta}}\right\}\right\}$$

```
ContourPlot3D[(m √(2.86605126458116`*^52 - 3.1889121001887717`*^35 v^2)) /
  (√θ √(1.1294090667581471`*^18 - 12.566370614359172` v^2 -
      8.987551787368176`*^16 θ + v^2 θ)), {m, -1, 1}, {θ, -2 π, 2 π}, {v, -c, c}]
```




```
(m √(2.86605126458116`*^52 - 3.1889121001887717`*^35 v^2)) /
  (√θ √(1.1294090667581471`*^18 -
      12.566370614359172` v^2 - 8.987551787368176`*^16 θ + v^2 θ))
```

$$\text{Solve}\left[\frac{\sqrt{\text{Energy}\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi\,\text{Energy}-\text{Energy}\,\theta}}{2\pi} == m\,c\,\hat{}\,2,\ v\right]$$

$$\left\{\left\{v\to-\left(\left(1.\sqrt{\left(2.86605\times10^{52}\,m^2-1.12941\times10^{18}\,\text{Energy}^2\,\theta+8.98755\times10^{16}\,\text{Energy}^2\,\theta^2\right)}\right)\Big/\left(\sqrt{3.18891\times10^{35}\,m^2-12.5664\,\text{Energy}^2\,\theta+\text{Energy}^2\,\theta^2}\right)\right)\right\},\left\{v\to\frac{\sqrt{2.86605\times10^{52}\,m^2-1.12941\times10^{18}\,\text{Energy}^2\,\theta+8.98755\times10^{16}\,\text{Energy}^2\,\theta^2}}{\sqrt{3.18891\times10^{35}\,m^2-12.5664\,\text{Energy}^2\,\theta+\text{Energy}^2\,\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{\text{Energy}\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi\,\text{Energy}-\text{Energy}\,\theta}}{2\pi} == \text{Energy}\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v\to-\frac{1.\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\text{Sin}[\beta]^2}}\right\},\left\{v\to\frac{\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\text{Sin}[\beta]^2}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{\text{Energy}\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi\,\text{Energy}-\text{Energy}\,\theta}}{2\pi} == m\,c\,\hat{}\,2,\ v\right]$$

$$\left\{\left\{v\to-\left(\left(1.\sqrt{\left(2.86605\times10^{52}\,m^2-1.12941\times10^{18}\,\text{Energy}^2\,\theta+8.98755\times10^{16}\,\text{Energy}^2\,\theta^2\right)}\right)\Big/\left(\sqrt{3.18891\times10^{35}\,m^2-12.5664\,\text{Energy}^2\,\theta+\text{Energy}^2\,\theta^2}\right)\right)\right\},\left\{v\to\frac{\sqrt{2.86605\times10^{52}\,m^2-1.12941\times10^{18}\,\text{Energy}^2\,\theta+8.98755\times10^{16}\,\text{Energy}^2\,\theta^2}}{\sqrt{3.18891\times10^{35}\,m^2-12.5664\,\text{Energy}^2\,\theta+\text{Energy}^2\,\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}} == \left(\sqrt{\left(2.86605126458116\grave{}*\hat{}52\,m^2-1.1294090667581471\grave{}*\hat{}18\,r^2\theta+8.987551787368176\grave{}*\hat{}16\,r^2\theta^2\right)}\right)\Big/\left(\sqrt{3.1889121001887717\grave{}*\hat{}35\,m^2-12.566370614359172\grave{}\,r^2\theta+r^2\theta^2}\right),\ m\right]$$

{}

$$p\,c=\frac{2\pi\,\text{Energy}-\text{Energy}\,\theta}{2\pi} == m\left(\left(\sqrt{\left(2.86605126458116\grave{}*\hat{}52\,m^2-1.1294090667581471\grave{}*\hat{}18\,\text{Energy}^2\theta+8.987551787368176\grave{}*\hat{}16\,\text{Energy}^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(3.1889121001887717\grave{}*\hat{}35\,m^2-12.566370614359172\grave{}\,\text{Energy}^2\theta+\text{Energy}^2\theta^2\right)}\right)\right)$$

$$\text{Solve}\left[\frac{2\,\pi\,\text{Energy} - \text{Energy}\,\theta}{2\,\pi} == \text{m}\left(\left(\sqrt{}\left(2.86605126458116\text{`*^52 m}^2 - 1.1294090667581471\text{`*^18 Energy}^2\,\theta + 8.987551787368176\text{`*^16 Energy}^2\,\theta^2\right)\right) \Big/ \left(\sqrt{}\left(3.1889121001887717\text{`*^35 m}^2 - 12.566370614359172\text{` Energy}^2\,\theta + \text{Energy}^2\,\theta^2\right)\right)\right), \text{Energy}\right]$$

$$\left\{\left\{\text{Energy} \to -\frac{2.07755\times10^{24}\,\text{m}}{-6.92997\times10^{15} + 1.10294\times10^{15}\,\theta}\right\}\right\}$$

$$\text{Energy} == -\frac{2.077551912824036\text{`*^24 m}}{-6.929967240283397\text{`*^15} + 1.102938541756003\text{`*^15}\ \frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}}$$

$$\text{Solve}\left[\text{Energy} == -\frac{2.077551912824036\text{`*^24 m}}{-6.929967240283397\text{`*^15} + 1.102938541756003\text{`*^15}\ \frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}}, \text{m}\right]$$

$$\left\{\left\{\text{m} \to -4.81336\times10^{-25}\,\text{Energy}\left(-6.92997\times10^{15} + \frac{6.92997\times10^{15}\left(r^2 + \sqrt{r^4 - 1.\,r^2\,\eta^2}\right)}{r^2}\right)\right\}\right\}$$

$$\frac{2\,\pi\left(\text{Energy}^2 + \sqrt{\text{Energy}^4 - \text{Energy}^2\ (\text{m c\^{}2})^2}\right)}{\text{Energy}^2}$$

$$\frac{2\left(\text{Energy}^2 + \sqrt{\text{Energy}^4 - 8.07761\times10^{33}\,\text{Energy}^2\,\text{m}^2}\right)\pi}{\text{Energy}^2}$$

$$\text{x} == \frac{2\left(\text{Energy}^2 + \sqrt{\text{Energy}^4 - 8.07760871306249\text{`*^33 Energy}^2\,\text{m}^2}\right)\pi}{\text{Energy}^2}$$

$$\text{Energy} == \frac{2\,\pi\,\text{m c\^{}2}}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Energy} == \frac{2\,\pi\,\text{m c\^{}2}}{\sqrt{4\,\pi\,\theta - \theta^2}} == \frac{2\,\pi\,\text{r Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Solve}\left[\frac{2\,\pi\,\text{m c\^{}2}}{\sqrt{4\,\pi\,\theta - \theta^2}} == \frac{2\,\pi\,\text{Energy Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \text{Energy}\right]$$

$$\{\{\text{Energy} \to 8.98755\times10^{16}\,\text{m Csc}[\beta]\}\}$$

$$8.987551787368176\text{`*^16 m Csc}[\beta]$$

$$\text{Solve}\left[\frac{2\,\pi\,\text{m c\^{}2}}{\sqrt{4\,\pi\,\theta - \theta^2}} == \frac{2\,\pi\,\text{Energy Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \text{m}\right]$$

$$\{\{\text{m} \to 1.11265\times10^{-17}\,\text{Energy Sin}[\beta]\}\}$$

m == 1.1126500560536183`*^-17 Energy (m c^2) / Energy

m == 1. m

$$\left\{\left\{r \to \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)\right\}\right\}$$

β := ArcSin[(m c^2) / r]

$$\theta := \frac{2\pi\left(r^2+\sqrt{r^4-r^2\,(m\,c\,\hat{}\,2)^2}\right)}{r^2}$$

$$\mathrm{Solve}\left[r == \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right),\ m\right]$$

{}

$$\mathrm{Solve}\left[m == -4.813357460900654\grave{}*\hat{}-25\ r\left(-6.929967240283397\grave{}*\hat{}15+\frac{6.929967240283397\grave{}*\hat{}15\left(r^2+\sqrt{r^4-1.\grave{}\ r^2\eta^2}\right)}{r^2}\right),\ \eta\right]$$

{}

$$\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}$$

$$-(2.077551912824036\grave{}*\hat{}24\ m)\Big/\left(-6.929967240283397\grave{}*\hat{}15+1.102938541756003\grave{}*\hat{}15\ \frac{2\pi\left(\mathrm{Energy}^2+\sqrt{\mathrm{Energy}^4-\mathrm{Energy}^2\,(m\,c\,\hat{}\,2)^2}\right)}{r^2}\right)$$

$$-\frac{2.07755\times10^{24}\,m}{-6.92997\times10^{15}+\frac{6.92997\times10^{15}\left(\mathrm{Energy}^2+\sqrt{\mathrm{Energy}^4-8.07761\times10^{33}\,\mathrm{Energy}^2\,m^2}\right)}{r^2}}$$

```
Solve[(√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (√(2.86605126458116`*^52 m^2 - 1.1294090667581471`*^18 Energy^2 θ +
        8.987551787368176`*^16 Energy^2 θ^2)) /
   (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` Energy^2 θ + Energy^2 θ^2)), m]
```

```
{{}}
```

```
(√(2.86605126458116`*^52 m^2 -
      1.1294090667581471`*^18 Energy^2 θ + 8.987551787368176`*^16 Energy^2 θ^2)) /
 (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` Energy^2 θ + Energy^2 θ^2))
```

```
Solve[(√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (√(2.86605126458116`*^52 m^2 - 1.1294090667581471`*^18 Energy^2 θ +
        8.987551787368176`*^16 Energy^2 θ^2)) / (√(3.1889121001887717`*^35 m^2 -
        12.566370614359172` Energy^2 θ + Energy^2 θ^2)), Energy]
```

```
{{}}
```

```
Solve[(√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (√(2.86605126458116`*^52 m^2 - 1.1294090667581471`*^18 r^2 θ +
        8.987551787368176`*^16 r^2 θ^2)) /
   (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` r^2 θ + r^2 θ^2)), Energy]
```

```
{{}}
```

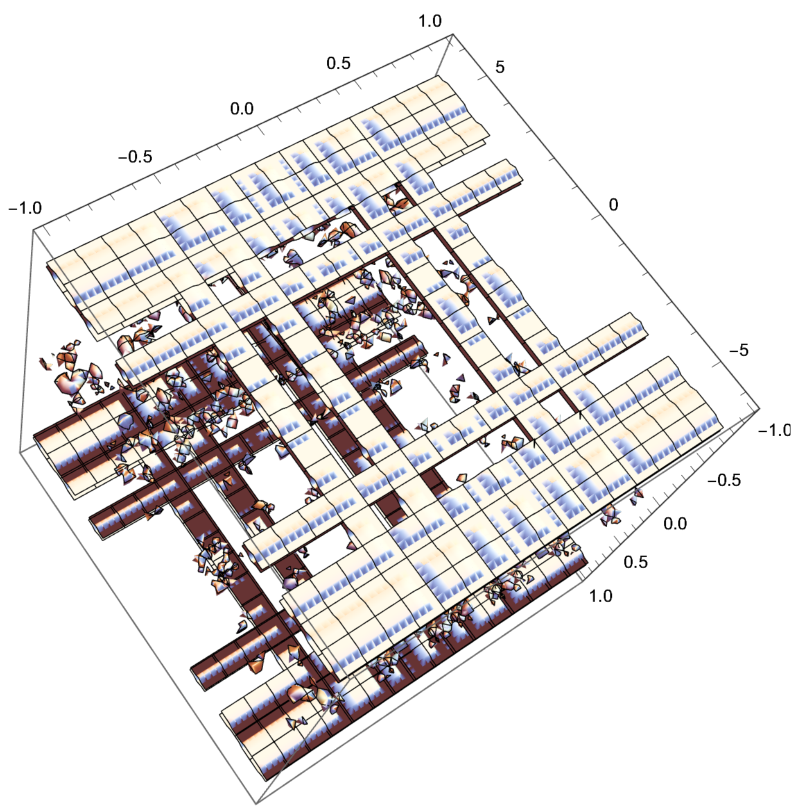
```
Export["davincisprize.dae",
 ContourPlot3D[(√(2.86605126458116`*^52 m^2 - 1.1294090667581471`*^18 Energy^2 θ +
        8.987551787368176`*^16 Energy^2 θ^2)) /
   (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` Energy^2 θ + Energy^2 θ^2)),
  {m, -1, 1}, {θ, -2 π, 2 π}, {Energy, -1, 1}]]
```

```
$Failed
```

```
Export["davincisprize.obj",
 ContourPlot3D[(√(2.86605126458116`*^52 m^2 - 1.1294090667581471`*^18 Energy^2 θ +
       8.987551787368176`*^16 Energy^2 θ^2)) /
    (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` Energy^2 θ + Energy^2 θ^2)),
  {m, -1, 1}, {θ, -2 π, 2 π}, {Energy, -1, 1}]]
```

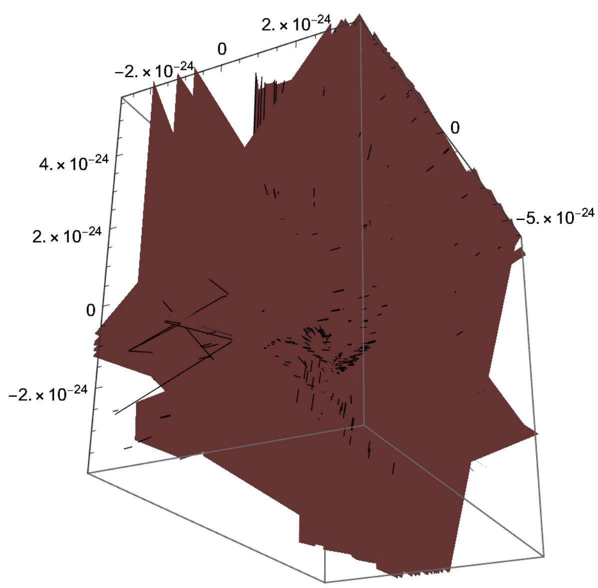
davincisprize.obj

```
ContourPlot3D[(√(2.86605126458116`*^52 m^2 -
      1.1294090667581471`*^18 Energy^2 θ + 8.987551787368176`*^16 Energy^2 θ^2)) /
   (√(3.1889121001887717`*^35 m^2 - 12.566370614359172` Energy^2 θ + Energy^2 θ^2)),
 {m, -1, 1}, {θ, -2 π, 2 π}, {Energy, -1, 1}]
```




```
v := (√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))
```

```
SphericalPlot3D[
 ((7.372495999759142`*^-51 (1.6880179234807384`*^10 θ √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) -
       4.029845948245144`*^9 θ^2 √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) +
       2.1378996752068695`*^8 θ^3 √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2))) /
     (-12.566370614359172` θ √(-4.487190804107819`*^15 θ +
          3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16 Sin[β]^2) +
       1.` θ^2 √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14 θ^2 +
          1.40969256654408`*^16 Sin[β]^2) + 6.283185307179586`
        √(12.566370614359172` θ - 1.` θ^2) Sin[β] √(-4.487190804107819`*^15 θ +
          3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16 Sin[β]^2))
    √(2.86605126458116`*^52 - 3.1889121001887717`*^35 v^2)) /
  (√θ √(1.1294090667581471`*^18 - 12.566370614359172` v^2 -
      8.987551787368176`*^16 θ + v^2 θ)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



r == m c^2

$$\texttt{Solve}\left[e^\wedge\left(i\,2\left(\pi+\sqrt{\pi^2-\pi^2\left(\frac{r}{c^2\,m}\right)^2}\right)\right)==\right.$$
$$\left.i\,\texttt{Sin}\left[-\frac{2\left(-r\,\pi+\sqrt{r^2-c^4\,m^2}\,\pi\right)}{r}\right]+\texttt{Cos}\left[-\frac{2\left(-r\,\pi+\sqrt{r^2-c^4\,m^2}\,\pi\right)}{r}\right],\,c\right]$$

$$\texttt{Solve}\left[e^{2\,i\left(\pi+\sqrt{\pi^2-\frac{\pi^2\,r^2}{c^4\,m^2}}\right)}==\texttt{Cos}\left[\frac{2\left(-\pi\,r+\pi\,\sqrt{-c^4\,m^2+r^2}\right)}{r}\right]-i\,\texttt{Sin}\left[\frac{2\left(-\pi\,r+\pi\,\sqrt{-c^4\,m^2+r^2}\right)}{r}\right],\,c\right]$$

$$\texttt{Solve}\left[\frac{r\,\sqrt{\pi^2-\texttt{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\,\sqrt{1-\texttt{Sin}\left[-\frac{2\left(-r\,\pi+\sqrt{r^2-c^4\,m^2}\,\pi\right)}{r}\right]^2}}\,\right]^2}}{\pi}==m\,c^\wedge 2,\,r\right]$$

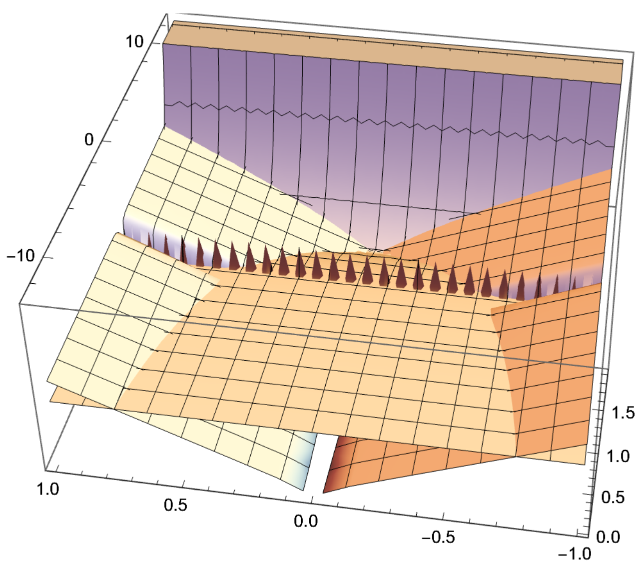
$$\texttt{Solve}\left[\frac{r\,\sqrt{\pi^2-\texttt{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\,\sqrt{1-\texttt{Sin}\left[\frac{2\left(-\pi\,r+\pi\,\sqrt{-c^4\,m^2+r^2}\right)}{r}\right]^2}}\,\right]^2}}{\pi}==c^2\,m,\,r\right]$$

$$\text{Plot3D}\Big[\Big\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\frac{1080\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\ \text{Csc}[\beta]}{\pi\sqrt{4\pi-\theta}}\Big\},\ \{\theta,-13,13\},\ \{r,-1,1\}\Big]$$



Plot3D[

$$\left\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^2-\left(\frac{r\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}\right)^2},\ \sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}\right)^2},\right.$$

$$\left(\frac{\sqrt{1+\frac{4\pi^2}{\theta^2}-\frac{4\pi}{\theta}}}{\pi\ \sqrt{16\pi^2-16\pi\theta+4\theta^2}}-\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}\right)^2}\right),$$

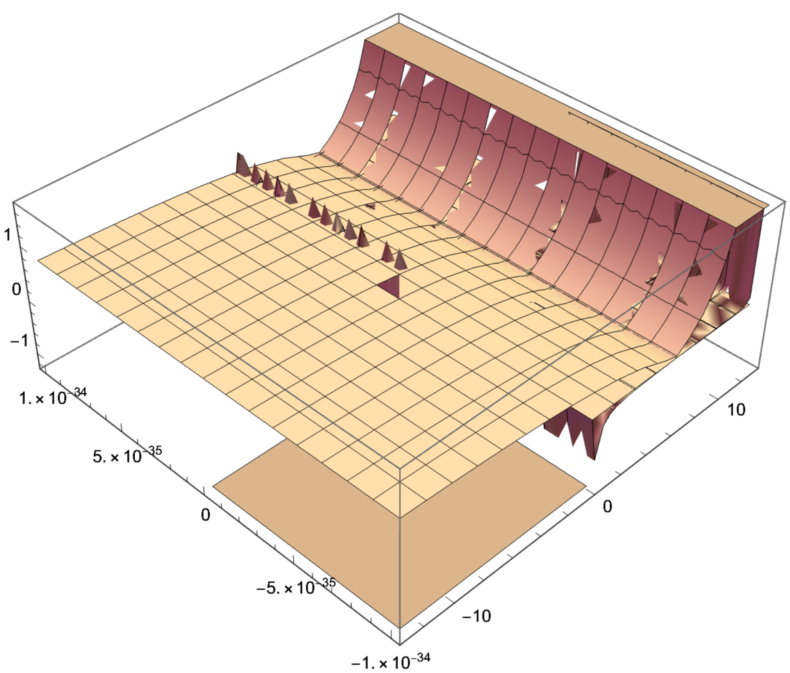
$$2.144571844054625`*^{\wedge}-53\,\theta\ \frac{r\ (2\pi-\theta)}{2\pi\theta\ \sqrt{r^2\ (4\pi-\theta)\ \theta}},\ \frac{4\pi r^2-2r^2\theta}{4320\ \sqrt{4\pi r^2\theta-r^2\theta^2}},$$

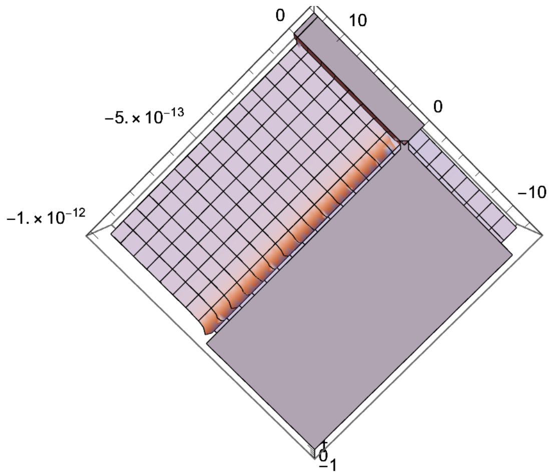
$$\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-(r\,\theta)}\ (r\,\theta)^{3/2}}+\frac{1080\,c}{(4\pi-(r\,\theta))^{3/2}\ \sqrt{(r\,\theta)}}+\frac{1620\,c\ \sqrt{r\,\theta}}{(4\pi-(r\,\theta))^{5/2}}\right)}{1\,166\,400},$$

$$r\left(\frac{4\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]}{3}+\frac{2\left(1-i\ \sqrt{3}\right)\left(\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]\right)}{3\left(17+3\ \sqrt{33}\right)^{1/3}}-\right.$$

$$\left.\frac{1}{3}\left(1+i\ \sqrt{3}\right)\left(17+3\ \sqrt{33}\right)^{1/3}\left(\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]\right)\right),$$

$$\left.\frac{r\ (2\pi-\theta)}{2\pi\theta\ \sqrt{r^2\ (4\pi-\theta)\ \theta}}\right\},\ \{\theta,\ -13,\ 13\},\ \{r,\ -10^{\wedge}-34,\ 10^{\wedge}-34\}]$$





$$\texttt{Solve}\left[\theta == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right), \beta\right]$$

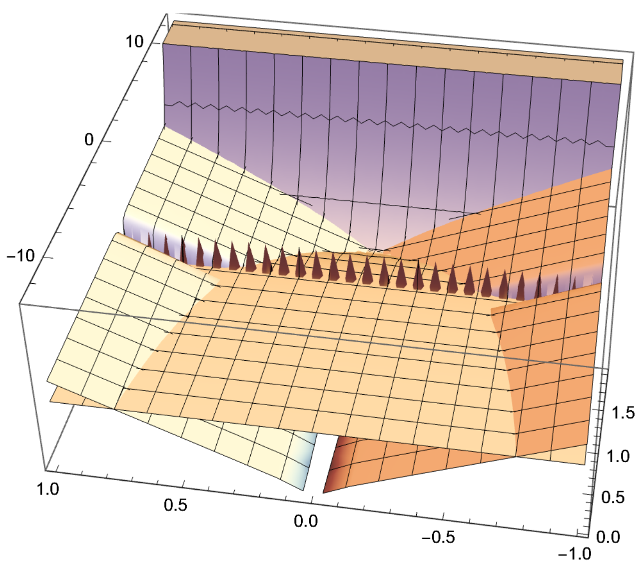
$$\left\{\left\{\beta \to -\texttt{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]\right\}, \left\{\beta \to \texttt{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]\right\}\right\}$$

$$\text{Plot3D}\left[\left\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\right.\right.$$

$$\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\left.\left.\frac{1080\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\beta]}{\pi\sqrt{4\pi-\theta}}\right\},\ \{\theta,-13,13\},\ \{r,-1,1\}\right]$$



$$\texttt{Plot3D}\Big[$$

$$\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{r\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\ \sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.$$

$$\left(\frac{\sqrt{1+\frac{4\,\pi^2}{\theta^2}-\frac{4\,\pi}{\theta}}}{\pi\,\sqrt{16\,\pi^2-16\,\pi\,\theta+4\,\theta^2}}-\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right),$$

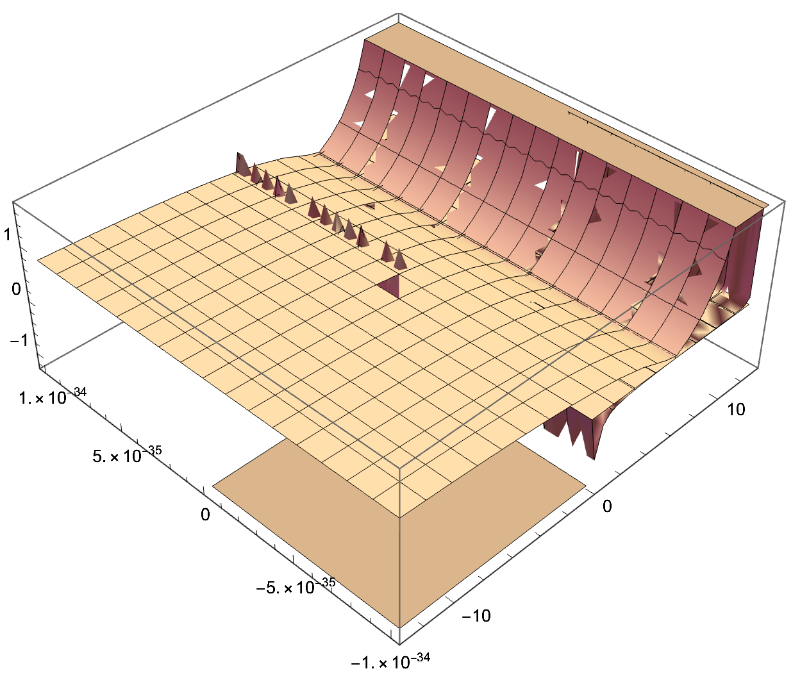
$$\texttt{2.144571844054625`*^-53}\,\theta\,\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},$$

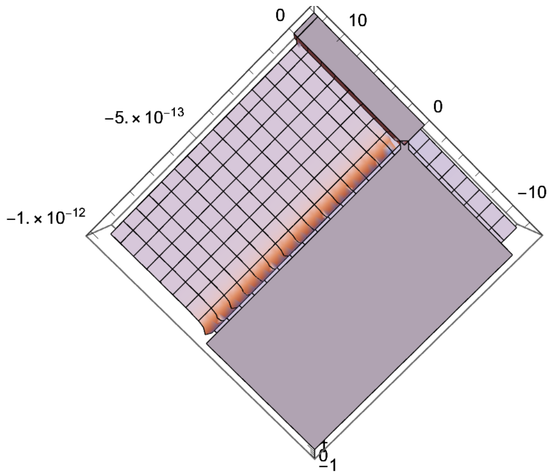
$$\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-(r\,\theta)}\,(r\,\theta)^{3/2}}+\frac{1080\,c}{(4\,\pi-(r\,\theta))^{3/2}\,\sqrt{(r\,\theta)}}+\frac{1620\,c\,\sqrt{r\,\theta}}{(4\,\pi-(r\,\theta))^{5/2}}\right)}{1\,166\,400},$$

$$r\left(\frac{4\,\texttt{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]}{3}+\frac{2\left(1-i\,\sqrt{3}\right)\left(\texttt{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\right.$$

$$\left.\frac{1}{3}\left(1+i\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\left(\texttt{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right),$$

$$\left.\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right\},\ \{\theta,\ -13,\ 13\},\ \{r,\ -10\texttt{^}-34,\ 10\texttt{^}-34\}\Big]$$





$$\text{Solve}\left[\theta == 2\left(\pi + \sqrt{\pi^2 - \pi^2 \,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]\right\}\right\}$$

$$\text{Solve}\left[(r/t) == \frac{(r/t)\,6\,(\theta)\,\pi}{\sqrt{4\pi\theta - \theta^2}} * \nu, \nu\right]$$

$$\left\{\left\{\nu \to \frac{\sqrt{(4\pi - \theta)\,\theta}}{6\pi\theta}\right\}\right\} \quad (49)$$

$$\text{Solve}\left[n\,(1/6\,\theta) == \frac{\sqrt{(4\pi - \theta)\,\theta}}{6\pi\theta}, n\right]$$

$$\left\{\left\{n \to \frac{\sqrt{(4\pi - \theta)\,\theta}}{\pi\theta^2}\right\}\right\} \quad (50)$$

$$D[\text{hnf}, \theta] = (F_{dm}) = \text{ma}$$

$$D\left[h\,\frac{\sqrt{(4\pi - \theta)\,\theta}}{\pi\theta^2}\,(1/6\,\theta), \theta\right]$$

$$\frac{h\,(4\pi - 2\theta)}{12\pi\theta\sqrt{(4\pi - \theta)\,\theta}} - \frac{h\sqrt{(4\pi - \theta)\,\theta}}{6\pi\theta^2}$$

$$\text{Solve}\left[\frac{h\,(4\pi-2\theta)}{12\pi\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{h\,\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta^2}==\right.$$
$$\left.m\,\frac{\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\theta^2\,\sqrt{(-2\pi+\theta)^4}\,\left(8\pi^2-6\pi\theta+\theta^2\right)^2},\ h\right]$$

$$\left\{\left\{h\to\frac{m\,\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\theta^2\,\sqrt{(-2\pi+\theta)^4}\,\left(8\pi^2-6\pi\theta+\theta^2\right)^2\left(\frac{4\pi-2\theta}{12\pi\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta^2}\right)}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\,(4\pi-2\theta)}{12\pi\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{h\,\sqrt{(4\pi-\theta)\,\theta}}{6\pi\theta^2}==\right.$$
$$\left.m\,\frac{\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\theta^2\,\sqrt{(-2\pi+\theta)^4}\,\left(8\pi^2-6\pi\theta+\theta^2\right)^2},\ \theta\right]$$

$$\begin{aligned}
&\text{Solve}\Big[2\,m==\text{Root}\Big[3\,317\,760\,000\,m^4\pi^{16}-37\,158\,912\,000\,m^4\pi^{15}\,\#1+\\
&\quad 230\,385\,254\,400\,m^4\pi^{14}\,\#1^2+\left(-942\,137\,671\,680\,m^4\pi^{13}-67\,108\,864\,h^4\pi^{19}\right)\#1^3+\\
&\quad \left(2\,801\,594\,843\,136\,m^4\pi^{12}+587\,202\,560\,h^4\pi^{18}\right)\#1^4+\\
&\quad \left(-6\,218\,413\,867\,008\,m^4\pi^{11}-2\,428\,502\,016\,h^4\pi^{17}\right)\#1^5+\\
&\quad \left(10\,484\,567\,506\,944\,m^4\pi^{10}+6\,309\,281\,792\,h^4\pi^{16}\right)\#1^6+\\
&\quad \left(-13\,268\,250\,427\,392\,m^4\pi^{9}-11\,542\,724\,608\,h^4\pi^{15}\right)\#1^7+\\
&\quad \left(12\,416\,904\,377\,856\,m^4\pi^{8}+15\,797\,846\,016\,h^4\pi^{14}\right)\#1^8+\\
&\quad \left(-8\,208\,129\,116\,160\,m^4\pi^{7}-16\,771\,973\,120\,h^4\pi^{13}\right)\#1^9+\\
&\quad \left(3\,742\,726\,072\,320\,m^4\pi^{6}+14\,132\,445\,184\,h^4\pi^{12}\right)\#1^{10}+\\
&\quad \left(-1\,171\,098\,777\,600\,m^4\pi^{5}-9\,589\,751\,808\,h^4\pi^{11}\right)\#1^{11}+\\
&\quad \left(250\,171\,934\,400\,m^4\pi^{4}+5\,285\,609\,472\,h^4\pi^{10}\right)\#1^{12}+\\
&\quad \left(-35\,827\,920\,000\,m^4\pi^{3}-2\,375\,712\,768\,h^4\pi^{9}\right)\#1^{13}+\\
&\quad \left(3\,289\,248\,000\,m^4\pi^{2}+870\,604\,800\,h^4\pi^{8}\right)\#1^{14}+\left(-174\,960\,000\,m^4\pi-258\,998\,272\,h^4\pi^{7}\right)\#1^{15}+\\
&\quad \left(4\,100\,625\,m^4+61\,988\,864\,h^4\pi^{6}\right)\#1^{16}-11\,759\,616\,h^4\pi^5\,\#1^{17}+1\,727\,488\,h^4\pi^4\,\#1^{18}-\\
&\quad 189\,440\,h^4\pi^3\,\#1^{19}+14\,592\,h^4\pi^2\,\#1^{20}-704\,h^4\pi\,\#1^{21}+16\,h^4\,\#1^{22}\,\&,\ 1\Big],\ m\Big]
\end{aligned}$$

$$\begin{aligned}
&\{\{m\to 0\},\ \{m\to 0\},\ \{m\to 0\},\\
&\ \{m\to\text{Root}\big[-8192\,h^4\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\pi^{18}\right)\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\pi^{17}\right)\\
&\qquad \#1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\pi^{16}\right)\#1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\pi^{15}\right)\#1^4+\\
&\qquad \left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\pi^{14}\right)\#1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\pi^{13}\right)\#1^6+\\
&\qquad \left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\pi^{12}\right)\#1^7+\\
&\qquad \left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^4\pi^{11}\right)\#1^8+\\
&\qquad \left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^4\pi^{10}\right)\#1^9+\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^4\pi^{9}\right)\#1^{10}+\\
&\qquad \left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^4\pi^{8}\right)\#1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^4\pi^{7}\right)\#1^{12}+
\end{aligned}$$

$(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6)\,\#1^{13}+(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5)\,\#1^{14}+$

$(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4)\,\#1^{15}+(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3)\,\#1^{16}+$

$(4\,100\,625+233\,472\,h^4\,\pi^2)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,1]\},$

$\{m\to \text{Root}[-8192\,h^4\,\pi^{19}+(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18})\,\#1+(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17})$

$\#1^2+(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16})\,\#1^3+(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15})\,\#1^4+$

$(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14})\,\#1^5+(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13})\,\#1^6+$

$(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12})\,\#1^7+$

$(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11})\,\#1^8+(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10})\,\#1^9+$

$(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9)\,\#1^{10}+$

$(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8)\,\#1^{11}+(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7)\,\#1^{12}+$

$(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6)\,\#1^{13}+(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5)\,\#1^{14}+$

$(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4)\,\#1^{15}+(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3)\,\#1^{16}+$

$(4\,100\,625+233\,472\,h^4\,\pi^2)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,2]\},$

$\{m\to \text{Root}[-8192\,h^4\,\pi^{19}+(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18})\,\#1+(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17})$

$\#1^2+(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16})\,\#1^3+(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15})\,\#1^4+$

$(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14})\,\#1^5+(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13})\,\#1^6+$

$(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12})\,\#1^7+$

$(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11})\,\#1^8+(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10})\,\#1^9+$

$(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9)\,\#1^{10}+$

$(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8)\,\#1^{11}+(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7)\,\#1^{12}+$

$(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6)\,\#1^{13}+(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5)\,\#1^{14}+$

$(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4)\,\#1^{15}+(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3)\,\#1^{16}+$

$(4\,100\,625+233\,472\,h^4\,\pi^2)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,3]\},$

$\{m\to \text{Root}[-8192\,h^4\,\pi^{19}+(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18})\,\#1+(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17})$

$\#1^2+(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16})\,\#1^3+(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15})\,\#1^4+$

$(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14})\,\#1^5+(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13})\,\#1^6+$

$(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12})\,\#1^7+$

$(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11})\,\#1^8+(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10})\,\#1^9+$

$(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9)\,\#1^{10}+$

$(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8)\,\#1^{11}+(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7)\,\#1^{12}+$

$(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6)\,\#1^{13}+(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5)\,\#1^{14}+$

$(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4)\,\#1^{15}+(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3)\,\#1^{16}+$

$(4\,100\,625+233\,472\,h^4\,\pi^2)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,4]\},$

$\{m\to \text{Root}[-8192\,h^4\,\pi^{19}+(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18})\,\#1+(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17})$

$\#1^2+(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16})\,\#1^3+(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15})\,\#1^4+$

$(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14})\,\#1^5+(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13})\,\#1^6+$

$(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12})\,\#1^7+$

$(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11})\,\#1^8+(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10})\,\#1^9+$

$(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9)\,\#1^{10}+$

$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,5\right]\Big\},$
$\Big\{m\to\text{Root}\left[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)\right.$
$\#1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\,\#1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\,\#1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\,\#1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\,\#1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\,\#1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\,\#1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\,\#1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,6\right]\Big\},$
$\Big\{m\to\text{Root}\left[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)\right.$
$\#1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\,\#1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\,\#1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\,\#1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\,\#1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\,\#1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\,\#1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\,\#1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,7\right]\Big\},$
$\Big\{m\to\text{Root}\left[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)\right.$
$\#1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\,\#1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\,\#1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\,\#1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\,\#1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\,\#1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\,\#1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\,\#1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\,\#1^{17}-22\,528\,h^4\,\pi\,\#1^{18}+1024\,h^4\,\#1^{19}\,\&,\,8\right]\Big\},$
$\Big\{m\to\text{Root}\left[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)\right.$
$\#1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\,\#1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\,\#1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\,\#1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\,\#1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\,\#1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\,\#1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\,\#1^9+$

$$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\sharp 1^{10}+$$
$$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\sharp 1^{12}+$$
$$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\sharp 1^{14}+$$
$$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\sharp 1^{16}+$$
$$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\sharp 1^{17}-22\,528\,h^{4}\,\pi\,\sharp 1^{18}+1024\,h^{4}\,\sharp 1^{19}\,\&,\,9\Big]\Big\},$$

$$\Big\{m\to\mathrm{Root}\Big[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)$$
$$\sharp 1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\sharp 1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\sharp 1^{4}+$$
$$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\sharp 1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\sharp 1^{6}+$$
$$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\sharp 1^{7}+$$
$$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\sharp 1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\sharp 1^{9}+$$
$$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\sharp 1^{10}+$$
$$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\sharp 1^{12}+$$
$$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\sharp 1^{14}+$$
$$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\sharp 1^{16}+$$
$$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\sharp 1^{17}-22\,528\,h^{4}\,\pi\,\sharp 1^{18}+1024\,h^{4}\,\sharp 1^{19}\,\&,\,10\Big]\Big\},$$

$$\Big\{m\to\mathrm{Root}\Big[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)$$
$$\sharp 1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\sharp 1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\sharp 1^{4}+$$
$$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\sharp 1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\sharp 1^{6}+$$
$$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\sharp 1^{7}+$$
$$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\sharp 1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\sharp 1^{9}+$$
$$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\sharp 1^{10}+$$
$$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\sharp 1^{12}+$$
$$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\sharp 1^{14}+$$
$$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\sharp 1^{16}+$$
$$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\sharp 1^{17}-22\,528\,h^{4}\,\pi\,\sharp 1^{18}+1024\,h^{4}\,\sharp 1^{19}\,\&,\,11\Big]\Big\},$$

$$\Big\{m\to\mathrm{Root}\Big[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)$$
$$\sharp 1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\sharp 1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\sharp 1^{4}+$$
$$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\sharp 1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\sharp 1^{6}+$$
$$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\sharp 1^{7}+$$
$$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\sharp 1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\sharp 1^{9}+$$
$$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\sharp 1^{10}+$$
$$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\sharp 1^{12}+$$
$$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\sharp 1^{14}+$$
$$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\sharp 1^{16}+$$
$$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\sharp 1^{17}-22\,528\,h^{4}\,\pi\,\sharp 1^{18}+1024\,h^{4}\,\sharp 1^{19}\,\&,\,12\Big]\Big\},$$

$$\Big\{m\to\mathrm{Root}\Big[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)$$
$$\sharp 1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\sharp 1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\sharp 1^{4}+$$
$$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\sharp 1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\sharp 1^{6}+$$
$$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\sharp 1^{7}+$$

$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\#1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\#1^{9}+$
$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\#1^{17}-22\,528\,h^{4}\,\pi\,\#1^{18}+1024\,h^{4}\,\#1^{19}\,\&,\,13\right]\big\},$

$\big\{m\to\mathrm{Root}\left[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)\right.$
$\#1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\#1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\#1^{4}+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\#1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\#1^{6}+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\#1^{7}+$
$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\#1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\#1^{9}+$
$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\#1^{17}-22\,528\,h^{4}\,\pi\,\#1^{18}+1024\,h^{4}\,\#1^{19}\,\&,\,14\right]\big\},$

$\big\{m\to\mathrm{Root}\left[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)\right.$
$\#1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\#1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\#1^{4}+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\#1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\#1^{6}+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\#1^{7}+$
$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\#1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\#1^{9}+$
$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\#1^{17}-22\,528\,h^{4}\,\pi\,\#1^{18}+1024\,h^{4}\,\#1^{19}\,\&,\,15\right]\big\},$

$\big\{m\to\mathrm{Root}\left[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)\right.$
$\#1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\#1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\#1^{4}+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\#1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\#1^{6}+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^{4}\,\pi^{12}\right)\,\#1^{7}+$
$\left(-25\,914\,551\,616\,\pi^{9}-299\,679\,744\,h^{4}\,\pi^{11}\right)\,\#1^{8}+\left(48\,503\,532\,726\,\pi^{8}+330\,350\,592\,h^{4}\,\pi^{10}\right)\,\#1^{9}+$
$\left(-64\,126\,008\,720\,\pi^{7}-296\,964\,096\,h^{4}\,\pi^{9}\right)\,\#1^{10}+$
$\left(58\,480\,094\,880\,\pi^{6}+217\,651\,200\,h^{4}\,\pi^{8}\right)\,\#1^{11}+\left(-36\,596\,836\,800\,\pi^{5}-129\,499\,136\,h^{4}\,\pi^{7}\right)\,\#1^{12}+$
$\left(15\,635\,745\,900\,\pi^{4}+61\,988\,864\,h^{4}\,\pi^{6}\right)\,\#1^{13}+\left(-4\,478\,490\,000\,\pi^{3}-23\,519\,232\,h^{4}\,\pi^{5}\right)\,\#1^{14}+$
$\left(822\,312\,000\,\pi^{2}+6\,909\,952\,h^{4}\,\pi^{4}\right)\,\#1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^{4}\,\pi^{3}\right)\,\#1^{16}+$
$\left(4\,100\,625+233\,472\,h^{4}\,\pi^{2}\right)\,\#1^{17}-22\,528\,h^{4}\,\pi\,\#1^{18}+1024\,h^{4}\,\#1^{19}\,\&,\,16\right]\big\},$

$\big\{m\to\mathrm{Root}\left[-8192\,h^{4}\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^{4}\,\pi^{18}\right)\,\#1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^{4}\,\pi^{17}\right)\right.$
$\#1^{2}+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^{4}\,\pi^{16}\right)\,\#1^{3}+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^{4}\,\pi^{15}\right)\,\#1^{4}+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^{4}\,\pi^{14}\right)\,\#1^{5}+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^{4}\,\pi^{13}\right)\,\#1^{6}+$

$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\sharp 1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\sharp 1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\sharp 1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\sharp 1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\sharp 1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\sharp 1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\sharp 1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\sharp 1^{17}-22\,528\,h^4\,\pi\,\sharp 1^{18}+1024\,h^4\,\sharp 1^{19}\,\&,\,17\big]\big\},$
$\big\{m\to\mathrm{Root}\big[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)$
$\sharp 1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\sharp 1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\sharp 1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\sharp 1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\sharp 1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\sharp 1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\sharp 1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\sharp 1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\sharp 1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\sharp 1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\sharp 1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\sharp 1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\sharp 1^{17}-22\,528\,h^4\,\pi\,\sharp 1^{18}+1024\,h^4\,\sharp 1^{19}\,\&,\,18\big]\big\},$
$\big\{m\to\mathrm{Root}\big[-8192\,h^4\,\pi^{19}+\left(50\,625\,\pi^{16}+143\,360\,h^4\,\pi^{18}\right)\sharp 1+\left(-1\,134\,000\,\pi^{15}-1\,185\,792\,h^4\,\pi^{17}\right)$
$\sharp 1^2+\left(14\,061\,600\,\pi^{14}+6\,161\,408\,h^4\,\pi^{16}\right)\sharp 1^3+\left(-115\,007\,040\,\pi^{13}-22\,544\,384\,h^4\,\pi^{15}\right)\sharp 1^4+$
$\left(683\,983\,116\,\pi^{12}+61\,710\,336\,h^4\,\pi^{14}\right)\sharp 1^5+\left(-3\,036\,334\,896\,\pi^{11}-131\,031\,040\,h^4\,\pi^{13}\right)\sharp 1^6+$
$\left(10\,238\,835\,456\,\pi^{10}+220\,819\,456\,h^4\,\pi^{12}\right)\sharp 1^7+$
$\left(-25\,914\,551\,616\,\pi^9-299\,679\,744\,h^4\,\pi^{11}\right)\sharp 1^8+\left(48\,503\,532\,726\,\pi^8+330\,350\,592\,h^4\,\pi^{10}\right)\sharp 1^9+$
$\left(-64\,126\,008\,720\,\pi^7-296\,964\,096\,h^4\,\pi^9\right)\sharp 1^{10}+$
$\left(58\,480\,094\,880\,\pi^6+217\,651\,200\,h^4\,\pi^8\right)\sharp 1^{11}+\left(-36\,596\,836\,800\,\pi^5-129\,499\,136\,h^4\,\pi^7\right)\sharp 1^{12}+$
$\left(15\,635\,745\,900\,\pi^4+61\,988\,864\,h^4\,\pi^6\right)\sharp 1^{13}+\left(-4\,478\,490\,000\,\pi^3-23\,519\,232\,h^4\,\pi^5\right)\sharp 1^{14}+$
$\left(822\,312\,000\,\pi^2+6\,909\,952\,h^4\,\pi^4\right)\sharp 1^{15}+\left(-87\,480\,000\,\pi-1\,515\,520\,h^4\,\pi^3\right)\sharp 1^{16}+$
$\left(4\,100\,625+233\,472\,h^4\,\pi^2\right)\sharp 1^{17}-22\,528\,h^4\,\pi\,\sharp 1^{18}+1024\,h^4\,\sharp 1^{19}\,\&,\,19\big]\big\}\big\}$

h := 6.626 * 10 ^ -34

$$\mathbf{Solve}\left[m==-\frac{2\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2\left(-\frac{h\,(4\,\pi-2\,\theta)}{12\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{h\,\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta^2}\right)}{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)},\,\theta\right]$$

$\big\{\big\{\theta\to\mathrm{Root}\big[3\,317\,760\,000\,m^4\,\pi^{16}-37\,158\,912\,000\,m^4\,\pi^{15}\,\sharp 1+$
$230\,385\,254\,400\,m^4\,\pi^{14}\,\sharp 1^2+\left(-942\,137\,671\,680\,m^4\,\pi^{13}-67\,108\,864\,h^4\,\pi^{19}\right)\sharp 1^3+$
$\left(2\,801\,594\,843\,136\,m^4\,\pi^{12}+587\,202\,560\,h^4\,\pi^{18}\right)\sharp 1^4+$
$\left(-6\,218\,413\,867\,008\,m^4\,\pi^{11}-2\,428\,502\,016\,h^4\,\pi^{17}\right)\sharp 1^5+$
$\left(10\,484\,567\,506\,944\,m^4\,\pi^{10}+6\,309\,281\,792\,h^4\,\pi^{16}\right)\sharp 1^6+$
$\left(-13\,268\,250\,427\,392\,m^4\,\pi^9-11\,542\,724\,608\,h^4\,\pi^{15}\right)\sharp 1^7+$
$\left(12\,416\,904\,377\,856\,m^4\,\pi^8+15\,797\,846\,016\,h^4\,\pi^{14}\right)\sharp 1^8+$

$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} +$
$\left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)\ \#1^{14} +$
$\left(-174\,960\,000\ m^4\ \pi - 258\,998\,272\ h^4\ \pi^7\right)\ \#1^{15} + \left(4\,100\,625\ m^4 + 61\,988\,864\ h^4\ \pi^6\right)\ \#1^{16} -$
$11\,759\,616\ h^4\ \pi^5\ \#1^{17} + 1\,727\,488\ h^4\ \pi^4\ \#1^{18} - 189\,440\ h^4\ \pi^3\ \#1^{19} +$
$14\,592\ h^4\ \pi^2\ \#1^{20} - 704\ h^4\ \pi\ \#1^{21} + 16\ h^4\ \#1^{22}\ \&,\ 1\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\ m^4\ \pi^{16} - 37\,158\,912\,000\ m^4\ \pi^{15}\ \#1 + 230\,385\,254\,400\ m^4\ \pi^{14}\ \#1^2 +$
$\left(-942\,137\,671\,680\ m^4\ \pi^{13} - 67\,108\,864\ h^4\ \pi^{19}\right)\ \#1^3 +$
$\left(2\,801\,594\,843\,136\ m^4\ \pi^{12} + 587\,202\,560\ h^4\ \pi^{18}\right)\ \#1^4 +$
$\left(-6\,218\,413\,867\,008\ m^4\ \pi^{11} - 2\,428\,502\,016\ h^4\ \pi^{17}\right)\ \#1^5 +$
$\left(10\,484\,567\,506\,944\ m^4\ \pi^{10} + 6\,309\,281\,792\ h^4\ \pi^{16}\right)\ \#1^6 +$
$\left(-13\,268\,250\,427\,392\ m^4\ \pi^9 - 11\,542\,724\,608\ h^4\ \pi^{15}\right)\ \#1^7 +$
$\left(12\,416\,904\,377\,856\ m^4\ \pi^8 + 15\,797\,846\,016\ h^4\ \pi^{14}\right)\ \#1^8 +$
$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} + \left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)$
$\#1^{14} + \left(-174\,960\,000\ m^4\ \pi - 258\,998\,272\ h^4\ \pi^7\right)\ \#1^{15} +$
$\left(4\,100\,625\ m^4 + 61\,988\,864\ h^4\ \pi^6\right)\ \#1^{16} - 11\,759\,616\ h^4\ \pi^5\ \#1^{17} + 1\,727\,488\ h^4\ \pi^4\ \#1^{18} -$
$189\,440\ h^4\ \pi^3\ \#1^{19} + 14\,592\ h^4\ \pi^2\ \#1^{20} - 704\ h^4\ \pi\ \#1^{21} + 16\ h^4\ \#1^{22}\ \&,\ 2\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\ m^4\ \pi^{16} - 37\,158\,912\,000\ m^4\ \pi^{15}\ \#1 + 230\,385\,254\,400\ m^4\ \pi^{14}\ \#1^2 +$
$\left(-942\,137\,671\,680\ m^4\ \pi^{13} - 67\,108\,864\ h^4\ \pi^{19}\right)\ \#1^3 +$
$\left(2\,801\,594\,843\,136\ m^4\ \pi^{12} + 587\,202\,560\ h^4\ \pi^{18}\right)\ \#1^4 +$
$\left(-6\,218\,413\,867\,008\ m^4\ \pi^{11} - 2\,428\,502\,016\ h^4\ \pi^{17}\right)\ \#1^5 +$
$\left(10\,484\,567\,506\,944\ m^4\ \pi^{10} + 6\,309\,281\,792\ h^4\ \pi^{16}\right)\ \#1^6 +$
$\left(-13\,268\,250\,427\,392\ m^4\ \pi^9 - 11\,542\,724\,608\ h^4\ \pi^{15}\right)\ \#1^7 +$
$\left(12\,416\,904\,377\,856\ m^4\ \pi^8 + 15\,797\,846\,016\ h^4\ \pi^{14}\right)\ \#1^8 +$
$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} + \left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)$
$\#1^{14} + \left(-174\,960\,000\ m^4\ \pi - 258\,998\,272\ h^4\ \pi^7\right)\ \#1^{15} +$
$\left(4\,100\,625\ m^4 + 61\,988\,864\ h^4\ \pi^6\right)\ \#1^{16} - 11\,759\,616\ h^4\ \pi^5\ \#1^{17} + 1\,727\,488\ h^4\ \pi^4\ \#1^{18} -$
$189\,440\ h^4\ \pi^3\ \#1^{19} + 14\,592\ h^4\ \pi^2\ \#1^{20} - 704\ h^4\ \pi\ \#1^{21} + 16\ h^4\ \#1^{22}\ \&,\ 3\big]\big\},$

$\{\theta \to \text{Root}[3\,317\,760\,000\, m^4 \pi^{16} - 37\,158\,912\,000\, m^4 \pi^{15} \#1 + 230\,385\,254\,400\, m^4 \pi^{14} \#1^2 +$
$(-942\,137\,671\,680\, m^4 \pi^{13} - 67\,108\,864\, h^4 \pi^{19}) \#1^3 +$
$(2\,801\,594\,843\,136\, m^4 \pi^{12} + 587\,202\,560\, h^4 \pi^{18}) \#1^4 +$
$(-6\,218\,413\,867\,008\, m^4 \pi^{11} - 2\,428\,502\,016\, h^4 \pi^{17}) \#1^5 +$
$(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}) \#1^6 +$
$(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}) \#1^7 +$
$(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}) \#1^8 +$
$(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}) \#1^9 +$
$(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}) \#1^{10} +$
$(-1\,171\,098\,777\,600\, m^4 \pi^5 - 9\,589\,751\,808\, h^4 \pi^{11}) \#1^{11} +$
$(250\,171\,934\,400\, m^4 \pi^4 + 5\,285\,609\,472\, h^4 \pi^{10}) \#1^{12} +$
$(-35\,827\,920\,000\, m^4 \pi^3 - 2\,375\,712\,768\, h^4 \pi^9) \#1^{13} + (3\,289\,248\,000\, m^4 \pi^2 + 870\,604\,800\, h^4 \pi^8)$
$\#1^{14} + (-174\,960\,000\, m^4 \pi - 258\,998\,272\, h^4 \pi^7) \#1^{15} +$
$(4\,100\,625\, m^4 + 61\,988\,864\, h^4 \pi^6) \#1^{16} - 11\,759\,616\, h^4 \pi^5 \#1^{17} + 1\,727\,488\, h^4 \pi^4 \#1^{18} -$
$189\,440\, h^4 \pi^3 \#1^{19} + 14\,592\, h^4 \pi^2 \#1^{20} - 704\, h^4 \pi \#1^{21} + 16\, h^4 \#1^{22}\ \&, 4]\},$

$\{\theta \to \text{Root}[3\,317\,760\,000\, m^4 \pi^{16} - 37\,158\,912\,000\, m^4 \pi^{15} \#1 + 230\,385\,254\,400\, m^4 \pi^{14} \#1^2 +$
$(-942\,137\,671\,680\, m^4 \pi^{13} - 67\,108\,864\, h^4 \pi^{19}) \#1^3 +$
$(2\,801\,594\,843\,136\, m^4 \pi^{12} + 587\,202\,560\, h^4 \pi^{18}) \#1^4 +$
$(-6\,218\,413\,867\,008\, m^4 \pi^{11} - 2\,428\,502\,016\, h^4 \pi^{17}) \#1^5 +$
$(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}) \#1^6 +$
$(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}) \#1^7 +$
$(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}) \#1^8 +$
$(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}) \#1^9 +$
$(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}) \#1^{10} +$
$(-1\,171\,098\,777\,600\, m^4 \pi^5 - 9\,589\,751\,808\, h^4 \pi^{11}) \#1^{11} +$
$(250\,171\,934\,400\, m^4 \pi^4 + 5\,285\,609\,472\, h^4 \pi^{10}) \#1^{12} +$
$(-35\,827\,920\,000\, m^4 \pi^3 - 2\,375\,712\,768\, h^4 \pi^9) \#1^{13} + (3\,289\,248\,000\, m^4 \pi^2 + 870\,604\,800\, h^4 \pi^8)$
$\#1^{14} + (-174\,960\,000\, m^4 \pi - 258\,998\,272\, h^4 \pi^7) \#1^{15} +$
$(4\,100\,625\, m^4 + 61\,988\,864\, h^4 \pi^6) \#1^{16} - 11\,759\,616\, h^4 \pi^5 \#1^{17} + 1\,727\,488\, h^4 \pi^4 \#1^{18} -$
$189\,440\, h^4 \pi^3 \#1^{19} + 14\,592\, h^4 \pi^2 \#1^{20} - 704\, h^4 \pi \#1^{21} + 16\, h^4 \#1^{22}\ \&, 5]\},$

$\{\theta \to \text{Root}[3\,317\,760\,000\, m^4 \pi^{16} - 37\,158\,912\,000\, m^4 \pi^{15} \#1 + 230\,385\,254\,400\, m^4 \pi^{14} \#1^2 +$
$(-942\,137\,671\,680\, m^4 \pi^{13} - 67\,108\,864\, h^4 \pi^{19}) \#1^3 +$
$(2\,801\,594\,843\,136\, m^4 \pi^{12} + 587\,202\,560\, h^4 \pi^{18}) \#1^4 +$
$(-6\,218\,413\,867\,008\, m^4 \pi^{11} - 2\,428\,502\,016\, h^4 \pi^{17}) \#1^5 +$
$(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}) \#1^6 +$
$(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}) \#1^7 +$
$(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}) \#1^8 +$
$(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}) \#1^9 +$
$(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}) \#1^{10} +$

$$\begin{aligned}
&\left(-1\,171\,098\,777\,600\,\mathrm{m}^4\,\pi^5-9\,589\,751\,808\,\mathrm{h}^4\,\pi^{11}\right)\#1^{11}+\\
&\left(250\,171\,934\,400\,\mathrm{m}^4\,\pi^4+5\,285\,609\,472\,\mathrm{h}^4\,\pi^{10}\right)\#1^{12}+\\
&\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\#1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\\
&\;\#1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\#1^{15}+\\
&\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\#1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\#1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\#1^{18}-\\
&189\,440\,\mathrm{h}^4\,\pi^3\,\#1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\#1^{20}-704\,\mathrm{h}^4\,\pi\,\#1^{21}+16\,\mathrm{h}^4\,\#1^{22}\;\&,\;6\big]\big\},
\end{aligned}$$

$$\begin{aligned}
\big\{\theta\to\mathrm{Root}\big[&3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\#1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\#1^2+\\
&\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\#1^3+\\
&\left(2\,801\,594\,843\,136\,\mathrm{m}^4\,\pi^{12}+587\,202\,560\,\mathrm{h}^4\,\pi^{18}\right)\#1^4+\\
&\left(-6\,218\,413\,867\,008\,\mathrm{m}^4\,\pi^{11}-2\,428\,502\,016\,\mathrm{h}^4\,\pi^{17}\right)\#1^5+\\
&\left(10\,484\,567\,506\,944\,\mathrm{m}^4\,\pi^{10}+6\,309\,281\,792\,\mathrm{h}^4\,\pi^{16}\right)\#1^6+\\
&\left(-13\,268\,250\,427\,392\,\mathrm{m}^4\,\pi^9-11\,542\,724\,608\,\mathrm{h}^4\,\pi^{15}\right)\#1^7+\\
&\left(12\,416\,904\,377\,856\,\mathrm{m}^4\,\pi^8+15\,797\,846\,016\,\mathrm{h}^4\,\pi^{14}\right)\#1^8+\\
&\left(-8\,208\,129\,116\,160\,\mathrm{m}^4\,\pi^7-16\,771\,973\,120\,\mathrm{h}^4\,\pi^{13}\right)\#1^9+\\
&\left(3\,742\,726\,072\,320\,\mathrm{m}^4\,\pi^6+14\,132\,445\,184\,\mathrm{h}^4\,\pi^{12}\right)\#1^{10}+\\
&\left(-1\,171\,098\,777\,600\,\mathrm{m}^4\,\pi^5-9\,589\,751\,808\,\mathrm{h}^4\,\pi^{11}\right)\#1^{11}+\\
&\left(250\,171\,934\,400\,\mathrm{m}^4\,\pi^4+5\,285\,609\,472\,\mathrm{h}^4\,\pi^{10}\right)\#1^{12}+\\
&\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\#1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\\
&\;\#1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\#1^{15}+\\
&\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\#1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\#1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\#1^{18}-\\
&189\,440\,\mathrm{h}^4\,\pi^3\,\#1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\#1^{20}-704\,\mathrm{h}^4\,\pi\,\#1^{21}+16\,\mathrm{h}^4\,\#1^{22}\;\&,\;7\big]\big\},
\end{aligned}$$

$$\begin{aligned}
\big\{\theta\to\mathrm{Root}\big[&3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\#1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\#1^2+\\
&\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\#1^3+\\
&\left(2\,801\,594\,843\,136\,\mathrm{m}^4\,\pi^{12}+587\,202\,560\,\mathrm{h}^4\,\pi^{18}\right)\#1^4+\\
&\left(-6\,218\,413\,867\,008\,\mathrm{m}^4\,\pi^{11}-2\,428\,502\,016\,\mathrm{h}^4\,\pi^{17}\right)\#1^5+\\
&\left(10\,484\,567\,506\,944\,\mathrm{m}^4\,\pi^{10}+6\,309\,281\,792\,\mathrm{h}^4\,\pi^{16}\right)\#1^6+\\
&\left(-13\,268\,250\,427\,392\,\mathrm{m}^4\,\pi^9-11\,542\,724\,608\,\mathrm{h}^4\,\pi^{15}\right)\#1^7+\\
&\left(12\,416\,904\,377\,856\,\mathrm{m}^4\,\pi^8+15\,797\,846\,016\,\mathrm{h}^4\,\pi^{14}\right)\#1^8+\\
&\left(-8\,208\,129\,116\,160\,\mathrm{m}^4\,\pi^7-16\,771\,973\,120\,\mathrm{h}^4\,\pi^{13}\right)\#1^9+\\
&\left(3\,742\,726\,072\,320\,\mathrm{m}^4\,\pi^6+14\,132\,445\,184\,\mathrm{h}^4\,\pi^{12}\right)\#1^{10}+\\
&\left(-1\,171\,098\,777\,600\,\mathrm{m}^4\,\pi^5-9\,589\,751\,808\,\mathrm{h}^4\,\pi^{11}\right)\#1^{11}+\\
&\left(250\,171\,934\,400\,\mathrm{m}^4\,\pi^4+5\,285\,609\,472\,\mathrm{h}^4\,\pi^{10}\right)\#1^{12}+\\
&\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\#1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\\
&\;\#1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\#1^{15}+\\
&\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\#1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\#1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\#1^{18}-\\
&189\,440\,\mathrm{h}^4\,\pi^3\,\#1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\#1^{20}-704\,\mathrm{h}^4\,\pi\,\#1^{21}+16\,\mathrm{h}^4\,\#1^{22}\;\&,\;8\big]\big\},
\end{aligned}$$

$$\begin{aligned}
\big\{\theta\to\mathrm{Root}\big[&3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\#1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\#1^2+\\
&\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\#1^3+\\
&\left(2\,801\,594\,843\,136\,\mathrm{m}^4\,\pi^{12}+587\,202\,560\,\mathrm{h}^4\,\pi^{18}\right)\#1^4+
\end{aligned}$$

$\left(-6\,218\,413\,867\,008\ m^4\ \pi^{11} - 2\,428\,502\,016\ h^4\ \pi^{17}\right)\ \#1^5 +$
$\left(10\,484\,567\,506\,944\ m^4\ \pi^{10} + 6\,309\,281\,792\ h^4\ \pi^{16}\right)\ \#1^6 +$
$\left(-13\,268\,250\,427\,392\ m^4\ \pi^9 - 11\,542\,724\,608\ h^4\ \pi^{15}\right)\ \#1^7 +$
$\left(12\,416\,904\,377\,856\ m^4\ \pi^8 + 15\,797\,846\,016\ h^4\ \pi^{14}\right)\ \#1^8 +$
$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} + \left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)$
$\#1^{14} + \left(-174\,960\,000\ m^4\ \pi - 258\,998\,272\ h^4\ \pi^7\right)\ \#1^{15} +$
$\left(4\,100\,625\ m^4 + 61\,988\,864\ h^4\ \pi^6\right)\ \#1^{16} - 11\,759\,616\ h^4\ \pi^5\ \#1^{17} + 1\,727\,488\ h^4\ \pi^4\ \#1^{18} -$
$189\,440\ h^4\ \pi^3\ \#1^{19} + 14\,592\ h^4\ \pi^2\ \#1^{20} - 704\ h^4\ \pi\ \#1^{21} + 16\ h^4\ \#1^{22}\ \&,\ 9\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\ m^4\ \pi^{16} - 37\,158\,912\,000\ m^4\ \pi^{15}\ \#1 + 230\,385\,254\,400\ m^4\ \pi^{14}\ \#1^2 +$
$\left(-942\,137\,671\,680\ m^4\ \pi^{13} - 67\,108\,864\ h^4\ \pi^{19}\right)\ \#1^3 +$
$\left(2\,801\,594\,843\,136\ m^4\ \pi^{12} + 587\,202\,560\ h^4\ \pi^{18}\right)\ \#1^4 +$
$\left(-6\,218\,413\,867\,008\ m^4\ \pi^{11} - 2\,428\,502\,016\ h^4\ \pi^{17}\right)\ \#1^5 +$
$\left(10\,484\,567\,506\,944\ m^4\ \pi^{10} + 6\,309\,281\,792\ h^4\ \pi^{16}\right)\ \#1^6 +$
$\left(-13\,268\,250\,427\,392\ m^4\ \pi^9 - 11\,542\,724\,608\ h^4\ \pi^{15}\right)\ \#1^7 +$
$\left(12\,416\,904\,377\,856\ m^4\ \pi^8 + 15\,797\,846\,016\ h^4\ \pi^{14}\right)\ \#1^8 +$
$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} + \left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)$
$\#1^{14} + \left(-174\,960\,000\ m^4\ \pi - 258\,998\,272\ h^4\ \pi^7\right)\ \#1^{15} +$
$\left(4\,100\,625\ m^4 + 61\,988\,864\ h^4\ \pi^6\right)\ \#1^{16} - 11\,759\,616\ h^4\ \pi^5\ \#1^{17} + 1\,727\,488\ h^4\ \pi^4\ \#1^{18} -$
$189\,440\ h^4\ \pi^3\ \#1^{19} + 14\,592\ h^4\ \pi^2\ \#1^{20} - 704\ h^4\ \pi\ \#1^{21} + 16\ h^4\ \#1^{22}\ \&,\ 10\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\ m^4\ \pi^{16} - 37\,158\,912\,000\ m^4\ \pi^{15}\ \#1 + 230\,385\,254\,400\ m^4\ \pi^{14}\ \#1^2 +$
$\left(-942\,137\,671\,680\ m^4\ \pi^{13} - 67\,108\,864\ h^4\ \pi^{19}\right)\ \#1^3 +$
$\left(2\,801\,594\,843\,136\ m^4\ \pi^{12} + 587\,202\,560\ h^4\ \pi^{18}\right)\ \#1^4 +$
$\left(-6\,218\,413\,867\,008\ m^4\ \pi^{11} - 2\,428\,502\,016\ h^4\ \pi^{17}\right)\ \#1^5 +$
$\left(10\,484\,567\,506\,944\ m^4\ \pi^{10} + 6\,309\,281\,792\ h^4\ \pi^{16}\right)\ \#1^6 +$
$\left(-13\,268\,250\,427\,392\ m^4\ \pi^9 - 11\,542\,724\,608\ h^4\ \pi^{15}\right)\ \#1^7 +$
$\left(12\,416\,904\,377\,856\ m^4\ \pi^8 + 15\,797\,846\,016\ h^4\ \pi^{14}\right)\ \#1^8 +$
$\left(-8\,208\,129\,116\,160\ m^4\ \pi^7 - 16\,771\,973\,120\ h^4\ \pi^{13}\right)\ \#1^9 +$
$\left(3\,742\,726\,072\,320\ m^4\ \pi^6 + 14\,132\,445\,184\ h^4\ \pi^{12}\right)\ \#1^{10} +$
$\left(-1\,171\,098\,777\,600\ m^4\ \pi^5 - 9\,589\,751\,808\ h^4\ \pi^{11}\right)\ \#1^{11} +$
$\left(250\,171\,934\,400\ m^4\ \pi^4 + 5\,285\,609\,472\ h^4\ \pi^{10}\right)\ \#1^{12} +$
$\left(-35\,827\,920\,000\ m^4\ \pi^3 - 2\,375\,712\,768\ h^4\ \pi^9\right)\ \#1^{13} + \left(3\,289\,248\,000\ m^4\ \pi^2 + 870\,604\,800\ h^4\ \pi^8\right)$

$\#1^{14} + \left(-174\,960\,000\, m^4\, \pi - 258\,998\,272\, h^4\, \pi^7\right) \#1^{15} +$
$\left(4\,100\,625\, m^4 + 61\,988\,864\, h^4\, \pi^6\right) \#1^{16} - 11\,759\,616\, h^4\, \pi^5\, \#1^{17} + 1\,727\,488\, h^4\, \pi^4\, \#1^{18} -$
$189\,440\, h^4\, \pi^3\, \#1^{19} + 14\,592\, h^4\, \pi^2\, \#1^{20} - 704\, h^4\, \pi\, \#1^{21} + 16\, h^4\, \#1^{22}\ \&,\ 11\right]\},$

$\{\theta \to \mathrm{Root}\left[3\,317\,760\,000\, m^4\, \pi^{16} - 37\,158\,912\,000\, m^4\, \pi^{15}\, \#1 + 230\,385\,254\,400\, m^4\, \pi^{14}\, \#1^2 +\right.$
$\left(-942\,137\,671\,680\, m^4\, \pi^{13} - 67\,108\,864\, h^4\, \pi^{19}\right) \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4\, \pi^{12} + 587\,202\,560\, h^4\, \pi^{18}\right) \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4\, \pi^{11} - 2\,428\,502\,016\, h^4\, \pi^{17}\right) \#1^5 +$
$\left(10\,484\,567\,506\,944\, m^4\, \pi^{10} + 6\,309\,281\,792\, h^4\, \pi^{16}\right) \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4\, \pi^9 - 11\,542\,724\,608\, h^4\, \pi^{15}\right) \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4\, \pi^8 + 15\,797\,846\,016\, h^4\, \pi^{14}\right) \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4\, \pi^7 - 16\,771\,973\,120\, h^4\, \pi^{13}\right) \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4\, \pi^6 + 14\,132\,445\,184\, h^4\, \pi^{12}\right) \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4\, \pi^5 - 9\,589\,751\,808\, h^4\, \pi^{11}\right) \#1^{11} +$
$\left(250\,171\,934\,400\, m^4\, \pi^4 + 5\,285\,609\,472\, h^4\, \pi^{10}\right) \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4\, \pi^3 - 2\,375\,712\,768\, h^4\, \pi^9\right) \#1^{13} +$
$\left(3\,289\,248\,000\, m^4\, \pi^2 + 870\,604\,800\, h^4\, \pi^8\right) \#1^{14} +$
$\left(-174\,960\,000\, m^4\, \pi - 258\,998\,272\, h^4\, \pi^7\right) \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4\, \pi^6\right) \#1^{16} -$
$11\,759\,616\, h^4\, \pi^5\, \#1^{17} + 1\,727\,488\, h^4\, \pi^4\, \#1^{18} - 189\,440\, h^4\, \pi^3\, \#1^{19} +$
$14\,592\, h^4\, \pi^2\, \#1^{20} - 704\, h^4\, \pi\, \#1^{21} + 16\, h^4\, \#1^{22}\ \&,\ 12\right]\},$

$\{\theta \to \mathrm{Root}\left[3\,317\,760\,000\, m^4\, \pi^{16} - 37\,158\,912\,000\, m^4\, \pi^{15}\, \#1 + 230\,385\,254\,400\, m^4\, \pi^{14}\, \#1^2 +\right.$
$\left(-942\,137\,671\,680\, m^4\, \pi^{13} - 67\,108\,864\, h^4\, \pi^{19}\right) \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4\, \pi^{12} + 587\,202\,560\, h^4\, \pi^{18}\right) \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4\, \pi^{11} - 2\,428\,502\,016\, h^4\, \pi^{17}\right) \#1^5 +$
$\left(10\,484\,567\,506\,944\, m^4\, \pi^{10} + 6\,309\,281\,792\, h^4\, \pi^{16}\right) \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4\, \pi^9 - 11\,542\,724\,608\, h^4\, \pi^{15}\right) \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4\, \pi^8 + 15\,797\,846\,016\, h^4\, \pi^{14}\right) \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4\, \pi^7 - 16\,771\,973\,120\, h^4\, \pi^{13}\right) \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4\, \pi^6 + 14\,132\,445\,184\, h^4\, \pi^{12}\right) \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4\, \pi^5 - 9\,589\,751\,808\, h^4\, \pi^{11}\right) \#1^{11} +$
$\left(250\,171\,934\,400\, m^4\, \pi^4 + 5\,285\,609\,472\, h^4\, \pi^{10}\right) \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4\, \pi^3 - 2\,375\,712\,768\, h^4\, \pi^9\right) \#1^{13} +$
$\left(3\,289\,248\,000\, m^4\, \pi^2 + 870\,604\,800\, h^4\, \pi^8\right) \#1^{14} +$
$\left(-174\,960\,000\, m^4\, \pi - 258\,998\,272\, h^4\, \pi^7\right) \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4\, \pi^6\right) \#1^{16} -$
$11\,759\,616\, h^4\, \pi^5\, \#1^{17} + 1\,727\,488\, h^4\, \pi^4\, \#1^{18} - 189\,440\, h^4\, \pi^3\, \#1^{19} +$
$14\,592\, h^4\, \pi^2\, \#1^{20} - 704\, h^4\, \pi\, \#1^{21} + 16\, h^4\, \#1^{22}\ \&,\ 13\right]\},$

$\{\theta \to \mathrm{Root}\left[3\,317\,760\,000\, m^4\, \pi^{16} - 37\,158\,912\,000\, m^4\, \pi^{15}\, \#1 + 230\,385\,254\,400\, m^4\, \pi^{14}\, \#1^2 +\right.$
$\left(-942\,137\,671\,680\, m^4\, \pi^{13} - 67\,108\,864\, h^4\, \pi^{19}\right) \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4\, \pi^{12} + 587\,202\,560\, h^4\, \pi^{18}\right) \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4\, \pi^{11} - 2\,428\,502\,016\, h^4\, \pi^{17}\right) \#1^5 +$

$\left(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}\right) \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}\right) \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}\right) \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}\right) \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}\right) \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4 \pi^5 - 9\,589\,751\,808\, h^4 \pi^{11}\right) \#1^{11} +$
$\left(250\,171\,934\,400\, m^4 \pi^4 + 5\,285\,609\,472\, h^4 \pi^{10}\right) \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4 \pi^3 - 2\,375\,712\,768\, h^4 \pi^9\right) \#1^{13} +$
$\left(3\,289\,248\,000\, m^4 \pi^2 + 870\,604\,800\, h^4 \pi^8\right) \#1^{14} +$
$\left(-174\,960\,000\, m^4 \pi - 258\,998\,272\, h^4 \pi^7\right) \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4 \pi^6\right) \#1^{16} -$
$11\,759\,616\, h^4 \pi^5 \#1^{17} + 1\,727\,488\, h^4 \pi^4 \#1^{18} - 189\,440\, h^4 \pi^3 \#1^{19} +$
$14\,592\, h^4 \pi^2 \#1^{20} - 704\, h^4 \pi \#1^{21} + 16\, h^4 \#1^{22}\ \&,\ 14\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\, m^4 \pi^{16} - 37\,158\,912\,000\, m^4 \pi^{15} \#1 + 230\,385\,254\,400\, m^4 \pi^{14} \#1^2 +$
$\left(-942\,137\,671\,680\, m^4 \pi^{13} - 67\,108\,864\, h^4 \pi^{19}\right) \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4 \pi^{12} + 587\,202\,560\, h^4 \pi^{18}\right) \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4 \pi^{11} - 2\,428\,502\,016\, h^4 \pi^{17}\right) \#1^5 +$
$\left(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}\right) \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}\right) \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}\right) \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}\right) \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}\right) \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4 \pi^5 - 9\,589\,751\,808\, h^4 \pi^{11}\right) \#1^{11} +$
$\left(250\,171\,934\,400\, m^4 \pi^4 + 5\,285\,609\,472\, h^4 \pi^{10}\right) \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4 \pi^3 - 2\,375\,712\,768\, h^4 \pi^9\right) \#1^{13} +$
$\left(3\,289\,248\,000\, m^4 \pi^2 + 870\,604\,800\, h^4 \pi^8\right) \#1^{14} +$
$\left(-174\,960\,000\, m^4 \pi - 258\,998\,272\, h^4 \pi^7\right) \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4 \pi^6\right) \#1^{16} -$
$11\,759\,616\, h^4 \pi^5 \#1^{17} + 1\,727\,488\, h^4 \pi^4 \#1^{18} - 189\,440\, h^4 \pi^3 \#1^{19} +$
$14\,592\, h^4 \pi^2 \#1^{20} - 704\, h^4 \pi \#1^{21} + 16\, h^4 \#1^{22}\ \&,\ 15\big]\big\},$

$\big\{\theta \to \mathrm{Root}\big[3\,317\,760\,000\, m^4 \pi^{16} - 37\,158\,912\,000\, m^4 \pi^{15} \#1 + 230\,385\,254\,400\, m^4 \pi^{14} \#1^2 +$
$\left(-942\,137\,671\,680\, m^4 \pi^{13} - 67\,108\,864\, h^4 \pi^{19}\right) \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4 \pi^{12} + 587\,202\,560\, h^4 \pi^{18}\right) \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4 \pi^{11} - 2\,428\,502\,016\, h^4 \pi^{17}\right) \#1^5 +$
$\left(10\,484\,567\,506\,944\, m^4 \pi^{10} + 6\,309\,281\,792\, h^4 \pi^{16}\right) \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4 \pi^9 - 11\,542\,724\,608\, h^4 \pi^{15}\right) \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4 \pi^8 + 15\,797\,846\,016\, h^4 \pi^{14}\right) \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4 \pi^7 - 16\,771\,973\,120\, h^4 \pi^{13}\right) \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4 \pi^6 + 14\,132\,445\,184\, h^4 \pi^{12}\right) \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4 \pi^5 - 9\,589\,751\,808\, h^4 \pi^{11}\right) \#1^{11} +$
$\left(250\,171\,934\,400\, m^4 \pi^4 + 5\,285\,609\,472\, h^4 \pi^{10}\right) \#1^{12} +$

$$\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\,\sharp1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\,\sharp1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\,\sharp1^{15}+\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\,\sharp1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\sharp1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\sharp1^{18}-189\,440\,\mathrm{h}^4\,\pi^3\,\sharp1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\sharp1^{20}-704\,\mathrm{h}^4\,\pi\,\sharp1^{21}+16\,\mathrm{h}^4\,\sharp1^{22}\,\&,\,16\right]\},$$

$$\{\theta\to\mathrm{Root}\left[3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\sharp1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\sharp1^2+\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\,\sharp1^3+\left(2\,801\,594\,843\,136\,\mathrm{m}^4\,\pi^{12}+587\,202\,560\,\mathrm{h}^4\,\pi^{18}\right)\,\sharp1^4+\left(-6\,218\,413\,867\,008\,\mathrm{m}^4\,\pi^{11}-2\,428\,502\,016\,\mathrm{h}^4\,\pi^{17}\right)\,\sharp1^5+\left(10\,484\,567\,506\,944\,\mathrm{m}^4\,\pi^{10}+6\,309\,281\,792\,\mathrm{h}^4\,\pi^{16}\right)\,\sharp1^6+\left(-13\,268\,250\,427\,392\,\mathrm{m}^4\,\pi^9-11\,542\,724\,608\,\mathrm{h}^4\,\pi^{15}\right)\,\sharp1^7+\left(12\,416\,904\,377\,856\,\mathrm{m}^4\,\pi^8+15\,797\,846\,016\,\mathrm{h}^4\,\pi^{14}\right)\,\sharp1^8+\left(-8\,208\,129\,116\,160\,\mathrm{m}^4\,\pi^7-16\,771\,973\,120\,\mathrm{h}^4\,\pi^{13}\right)\,\sharp1^9+\left(3\,742\,726\,072\,320\,\mathrm{m}^4\,\pi^6+14\,132\,445\,184\,\mathrm{h}^4\,\pi^{12}\right)\,\sharp1^{10}+\left(-1\,171\,098\,777\,600\,\mathrm{m}^4\,\pi^5-9\,589\,751\,808\,\mathrm{h}^4\,\pi^{11}\right)\,\sharp1^{11}+\left(250\,171\,934\,400\,\mathrm{m}^4\,\pi^4+5\,285\,609\,472\,\mathrm{h}^4\,\pi^{10}\right)\,\sharp1^{12}+\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\,\sharp1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\,\sharp1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\,\sharp1^{15}+\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\,\sharp1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\sharp1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\sharp1^{18}-189\,440\,\mathrm{h}^4\,\pi^3\,\sharp1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\sharp1^{20}-704\,\mathrm{h}^4\,\pi\,\sharp1^{21}+16\,\mathrm{h}^4\,\sharp1^{22}\,\&,\,17\right]\},$$

$$\{\theta\to\mathrm{Root}\left[3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\sharp1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\sharp1^2+\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\,\sharp1^3+\left(2\,801\,594\,843\,136\,\mathrm{m}^4\,\pi^{12}+587\,202\,560\,\mathrm{h}^4\,\pi^{18}\right)\,\sharp1^4+\left(-6\,218\,413\,867\,008\,\mathrm{m}^4\,\pi^{11}-2\,428\,502\,016\,\mathrm{h}^4\,\pi^{17}\right)\,\sharp1^5+\left(10\,484\,567\,506\,944\,\mathrm{m}^4\,\pi^{10}+6\,309\,281\,792\,\mathrm{h}^4\,\pi^{16}\right)\,\sharp1^6+\left(-13\,268\,250\,427\,392\,\mathrm{m}^4\,\pi^9-11\,542\,724\,608\,\mathrm{h}^4\,\pi^{15}\right)\,\sharp1^7+\left(12\,416\,904\,377\,856\,\mathrm{m}^4\,\pi^8+15\,797\,846\,016\,\mathrm{h}^4\,\pi^{14}\right)\,\sharp1^8+\left(-8\,208\,129\,116\,160\,\mathrm{m}^4\,\pi^7-16\,771\,973\,120\,\mathrm{h}^4\,\pi^{13}\right)\,\sharp1^9+\left(3\,742\,726\,072\,320\,\mathrm{m}^4\,\pi^6+14\,132\,445\,184\,\mathrm{h}^4\,\pi^{12}\right)\,\sharp1^{10}+\left(-1\,171\,098\,777\,600\,\mathrm{m}^4\,\pi^5-9\,589\,751\,808\,\mathrm{h}^4\,\pi^{11}\right)\,\sharp1^{11}+\left(250\,171\,934\,400\,\mathrm{m}^4\,\pi^4+5\,285\,609\,472\,\mathrm{h}^4\,\pi^{10}\right)\,\sharp1^{12}+\left(-35\,827\,920\,000\,\mathrm{m}^4\,\pi^3-2\,375\,712\,768\,\mathrm{h}^4\,\pi^9\right)\,\sharp1^{13}+\left(3\,289\,248\,000\,\mathrm{m}^4\,\pi^2+870\,604\,800\,\mathrm{h}^4\,\pi^8\right)\,\sharp1^{14}+\left(-174\,960\,000\,\mathrm{m}^4\,\pi-258\,998\,272\,\mathrm{h}^4\,\pi^7\right)\,\sharp1^{15}+\left(4\,100\,625\,\mathrm{m}^4+61\,988\,864\,\mathrm{h}^4\,\pi^6\right)\,\sharp1^{16}-11\,759\,616\,\mathrm{h}^4\,\pi^5\,\sharp1^{17}+1\,727\,488\,\mathrm{h}^4\,\pi^4\,\sharp1^{18}-189\,440\,\mathrm{h}^4\,\pi^3\,\sharp1^{19}+14\,592\,\mathrm{h}^4\,\pi^2\,\sharp1^{20}-704\,\mathrm{h}^4\,\pi\,\sharp1^{21}+16\,\mathrm{h}^4\,\sharp1^{22}\,\&,\,18\right]\},$$

$$\{\theta\to\mathrm{Root}\left[3\,317\,760\,000\,\mathrm{m}^4\,\pi^{16}-37\,158\,912\,000\,\mathrm{m}^4\,\pi^{15}\,\sharp1+230\,385\,254\,400\,\mathrm{m}^4\,\pi^{14}\,\sharp1^2+\left(-942\,137\,671\,680\,\mathrm{m}^4\,\pi^{13}-67\,108\,864\,\mathrm{h}^4\,\pi^{19}\right)\,\sharp1^3+\right.$$

$\left(2\,801\,594\,843\,136\,m^4\,\pi^{12} + 587\,202\,560\,h^4\,\pi^{18}\right)\,\sharp1^4 +$
$\left(-6\,218\,413\,867\,008\,m^4\,\pi^{11} - 2\,428\,502\,016\,h^4\,\pi^{17}\right)\,\sharp1^5 +$
$\left(10\,484\,567\,506\,944\,m^4\,\pi^{10} + 6\,309\,281\,792\,h^4\,\pi^{16}\right)\,\sharp1^6 +$
$\left(-13\,268\,250\,427\,392\,m^4\,\pi^9 - 11\,542\,724\,608\,h^4\,\pi^{15}\right)\,\sharp1^7 +$
$\left(12\,416\,904\,377\,856\,m^4\,\pi^8 + 15\,797\,846\,016\,h^4\,\pi^{14}\right)\,\sharp1^8 +$
$\left(-8\,208\,129\,116\,160\,m^4\,\pi^7 - 16\,771\,973\,120\,h^4\,\pi^{13}\right)\,\sharp1^9 +$
$\left(3\,742\,726\,072\,320\,m^4\,\pi^6 + 14\,132\,445\,184\,h^4\,\pi^{12}\right)\,\sharp1^{10} +$
$\left(-1\,171\,098\,777\,600\,m^4\,\pi^5 - 9\,589\,751\,808\,h^4\,\pi^{11}\right)\,\sharp1^{11} +$
$\left(250\,171\,934\,400\,m^4\,\pi^4 + 5\,285\,609\,472\,h^4\,\pi^{10}\right)\,\sharp1^{12} +$
$\left(-35\,827\,920\,000\,m^4\,\pi^3 - 2\,375\,712\,768\,h^4\,\pi^9\right)\,\sharp1^{13} +$
$\left(3\,289\,248\,000\,m^4\,\pi^2 + 870\,604\,800\,h^4\,\pi^8\right)\,\sharp1^{14} +$
$\left(-174\,960\,000\,m^4\,\pi - 258\,998\,272\,h^4\,\pi^7\right)\,\sharp1^{15} + \left(4\,100\,625\,m^4 + 61\,988\,864\,h^4\,\pi^6\right)\,\sharp1^{16} -$
$11\,759\,616\,h^4\,\pi^5\,\sharp1^{17} + 1\,727\,488\,h^4\,\pi^4\,\sharp1^{18} - 189\,440\,h^4\,\pi^3\,\sharp1^{19} +$
$14\,592\,h^4\,\pi^2\,\sharp1^{20} - 704\,h^4\,\pi\,\sharp1^{21} + 16\,h^4\,\sharp1^{22}\,\&,\,19\big]\big\},$

$\big\{\theta \to \text{Root}\big[3\,317\,760\,000\,m^4\,\pi^{16} - 37\,158\,912\,000\,m^4\,\pi^{15}\,\sharp1 + 230\,385\,254\,400\,m^4\,\pi^{14}\,\sharp1^2 +$
$\left(-942\,137\,671\,680\,m^4\,\pi^{13} - 67\,108\,864\,h^4\,\pi^{19}\right)\,\sharp1^3 +$
$\left(2\,801\,594\,843\,136\,m^4\,\pi^{12} + 587\,202\,560\,h^4\,\pi^{18}\right)\,\sharp1^4 +$
$\left(-6\,218\,413\,867\,008\,m^4\,\pi^{11} - 2\,428\,502\,016\,h^4\,\pi^{17}\right)\,\sharp1^5 +$
$\left(10\,484\,567\,506\,944\,m^4\,\pi^{10} + 6\,309\,281\,792\,h^4\,\pi^{16}\right)\,\sharp1^6 +$
$\left(-13\,268\,250\,427\,392\,m^4\,\pi^9 - 11\,542\,724\,608\,h^4\,\pi^{15}\right)\,\sharp1^7 +$
$\left(12\,416\,904\,377\,856\,m^4\,\pi^8 + 15\,797\,846\,016\,h^4\,\pi^{14}\right)\,\sharp1^8 +$
$\left(-8\,208\,129\,116\,160\,m^4\,\pi^7 - 16\,771\,973\,120\,h^4\,\pi^{13}\right)\,\sharp1^9 +$
$\left(3\,742\,726\,072\,320\,m^4\,\pi^6 + 14\,132\,445\,184\,h^4\,\pi^{12}\right)\,\sharp1^{10} +$
$\left(-1\,171\,098\,777\,600\,m^4\,\pi^5 - 9\,589\,751\,808\,h^4\,\pi^{11}\right)\,\sharp1^{11} +$
$\left(250\,171\,934\,400\,m^4\,\pi^4 + 5\,285\,609\,472\,h^4\,\pi^{10}\right)\,\sharp1^{12} +$
$\left(-35\,827\,920\,000\,m^4\,\pi^3 - 2\,375\,712\,768\,h^4\,\pi^9\right)\,\sharp1^{13} +$
$\left(3\,289\,248\,000\,m^4\,\pi^2 + 870\,604\,800\,h^4\,\pi^8\right)\,\sharp1^{14} +$
$\left(-174\,960\,000\,m^4\,\pi - 258\,998\,272\,h^4\,\pi^7\right)\,\sharp1^{15} + \left(4\,100\,625\,m^4 + 61\,988\,864\,h^4\,\pi^6\right)\,\sharp1^{16} -$
$11\,759\,616\,h^4\,\pi^5\,\sharp1^{17} + 1\,727\,488\,h^4\,\pi^4\,\sharp1^{18} - 189\,440\,h^4\,\pi^3\,\sharp1^{19} +$
$14\,592\,h^4\,\pi^2\,\sharp1^{20} - 704\,h^4\,\pi\,\sharp1^{21} + 16\,h^4\,\sharp1^{22}\,\&,\,20\big]\big\},$

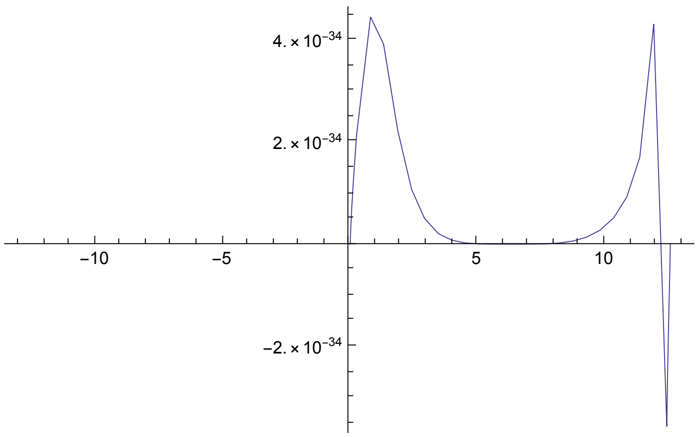
$\big\{\theta \to \text{Root}\big[3\,317\,760\,000\,m^4\,\pi^{16} - 37\,158\,912\,000\,m^4\,\pi^{15}\,\sharp1 + 230\,385\,254\,400\,m^4\,\pi^{14}\,\sharp1^2 +$
$\left(-942\,137\,671\,680\,m^4\,\pi^{13} - 67\,108\,864\,h^4\,\pi^{19}\right)\,\sharp1^3 +$
$\left(2\,801\,594\,843\,136\,m^4\,\pi^{12} + 587\,202\,560\,h^4\,\pi^{18}\right)\,\sharp1^4 +$
$\left(-6\,218\,413\,867\,008\,m^4\,\pi^{11} - 2\,428\,502\,016\,h^4\,\pi^{17}\right)\,\sharp1^5 +$
$\left(10\,484\,567\,506\,944\,m^4\,\pi^{10} + 6\,309\,281\,792\,h^4\,\pi^{16}\right)\,\sharp1^6 +$
$\left(-13\,268\,250\,427\,392\,m^4\,\pi^9 - 11\,542\,724\,608\,h^4\,\pi^{15}\right)\,\sharp1^7 +$
$\left(12\,416\,904\,377\,856\,m^4\,\pi^8 + 15\,797\,846\,016\,h^4\,\pi^{14}\right)\,\sharp1^8 +$
$\left(-8\,208\,129\,116\,160\,m^4\,\pi^7 - 16\,771\,973\,120\,h^4\,\pi^{13}\right)\,\sharp1^9 +$
$\left(3\,742\,726\,072\,320\,m^4\,\pi^6 + 14\,132\,445\,184\,h^4\,\pi^{12}\right)\,\sharp1^{10} +$

$\left(-1\,171\,098\,777\,600\, m^4\, \pi^5 - 9\,589\,751\,808\, h^4\, \pi^{11}\right)\, \#1^{11} +$
$\left(250\,171\,934\,400\, m^4\, \pi^4 + 5\,285\,609\,472\, h^4\, \pi^{10}\right)\, \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4\, \pi^3 - 2\,375\,712\,768\, h^4\, \pi^9\right)\, \#1^{13} +$
$\left(3\,289\,248\,000\, m^4\, \pi^2 + 870\,604\,800\, h^4\, \pi^8\right)\, \#1^{14} +$
$\left(-174\,960\,000\, m^4\, \pi - 258\,998\,272\, h^4\, \pi^7\right)\, \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4\, \pi^6\right)\, \#1^{16} -$
$11\,759\,616\, h^4\, \pi^5\, \#1^{17} + 1\,727\,488\, h^4\, \pi^4\, \#1^{18} - 189\,440\, h^4\, \pi^3\, \#1^{19} +$
$14\,592\, h^4\, \pi^2\, \#1^{20} - 704\, h^4\, \pi\, \#1^{21} + 16\, h^4\, \#1^{22}\, \&,\, 21]\},$

$\{\theta \to \mathrm{Root}[3\,317\,760\,000\, m^4\, \pi^{16} - 37\,158\,912\,000\, m^4\, \pi^{15}\, \#1 + 230\,385\,254\,400\, m^4\, \pi^{14}\, \#1^2 +$
$\left(-942\,137\,671\,680\, m^4\, \pi^{13} - 67\,108\,864\, h^4\, \pi^{19}\right)\, \#1^3 +$
$\left(2\,801\,594\,843\,136\, m^4\, \pi^{12} + 587\,202\,560\, h^4\, \pi^{18}\right)\, \#1^4 +$
$\left(-6\,218\,413\,867\,008\, m^4\, \pi^{11} - 2\,428\,502\,016\, h^4\, \pi^{17}\right)\, \#1^5 +$
$\left(10\,484\,567\,506\,944\, m^4\, \pi^{10} + 6\,309\,281\,792\, h^4\, \pi^{16}\right)\, \#1^6 +$
$\left(-13\,268\,250\,427\,392\, m^4\, \pi^9 - 11\,542\,724\,608\, h^4\, \pi^{15}\right)\, \#1^7 +$
$\left(12\,416\,904\,377\,856\, m^4\, \pi^8 + 15\,797\,846\,016\, h^4\, \pi^{14}\right)\, \#1^8 +$
$\left(-8\,208\,129\,116\,160\, m^4\, \pi^7 - 16\,771\,973\,120\, h^4\, \pi^{13}\right)\, \#1^9 +$
$\left(3\,742\,726\,072\,320\, m^4\, \pi^6 + 14\,132\,445\,184\, h^4\, \pi^{12}\right)\, \#1^{10} +$
$\left(-1\,171\,098\,777\,600\, m^4\, \pi^5 - 9\,589\,751\,808\, h^4\, \pi^{11}\right)\, \#1^{11} +$
$\left(250\,171\,934\,400\, m^4\, \pi^4 + 5\,285\,609\,472\, h^4\, \pi^{10}\right)\, \#1^{12} +$
$\left(-35\,827\,920\,000\, m^4\, \pi^3 - 2\,375\,712\,768\, h^4\, \pi^9\right)\, \#1^{13} +$
$\left(3\,289\,248\,000\, m^4\, \pi^2 + 870\,604\,800\, h^4\, \pi^8\right)\, \#1^{14} +$
$\left(-174\,960\,000\, m^4\, \pi - 258\,998\,272\, h^4\, \pi^7\right)\, \#1^{15} + \left(4\,100\,625\, m^4 + 61\,988\,864\, h^4\, \pi^6\right)\, \#1^{16} -$
$11\,759\,616\, h^4\, \pi^5\, \#1^{17} + 1\,727\,488\, h^4\, \pi^4\, \#1^{18} - 189\,440\, h^4\, \pi^3\, \#1^{19} +$
$14\,592\, h^4\, \pi^2\, \#1^{20} - 704\, h^4\, \pi\, \#1^{21} + 16\, h^4\, \#1^{22}\, \&,\, 22]\}\}$

Numbers have specific meanings based on their discrete sets of solutions relating to the structure of light through time. For instance, the reduced time traveled by a single wavelength of light has 22 solutions in terms of the mass of that light.

$$\text{Plot}\left[-\frac{2\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2\,\left(-\frac{h\,(4\,\pi-2\,\theta)}{12\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{h\,\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta^2}\right)}{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{Solve}\left[m==-\frac{2\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2\,\left(-\frac{h\,(4\,\pi-2\,\theta)}{12\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{h\,\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta^2}\right)}{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)},\right.$$

$$\text{Solve}\Big[$$

$$-\frac{h\,(4\,\pi-\theta)}{3\,\pi^2\,\theta^3}-\frac{h}{6\,\pi^2\,\theta^2}==m\,\frac{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}{2\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2},\,\theta\Big]$$

$$\left\{\left\{h\to\frac{m\,\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}{2\,\left(-\frac{4\,\pi-\theta}{3\,\pi^2\,\theta^3}-\frac{1}{6\,\pi^2\,\theta^2}\right)\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2}\right\}\right\}$$

$$\text{Solve}\left[h==\frac{m\,\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}{2\,\left(-\frac{4\,\pi-\theta}{3\,\pi^2\,\theta^3}-\frac{1}{6\,\pi^2\,\theta^2}\right)\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2},\,m\right]$$

$$\left\{\left\{m\to\frac{2\,h\,\left(-\frac{4\,\pi-\theta}{3\,\pi^2\,\theta^3}-\frac{1}{6\,\pi^2\,\theta^2}\right)\,\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2}{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}\right\}\right\}$$

$$\text{Solve}\left[h == \left(\frac{2\,h\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2}{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)\right)\Big/\left(2\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2\right),\theta\right]$$

{{}}

$$\text{Solve}\left[h == \frac{m\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2},m\right]$$

$$\left\{\left\{m\to\frac{7\,h}{53\times 3^{3/4}\sqrt{\pi}}\right\}\right\}$$

$$\text{Solve}\left[h == \frac{\frac{7\,h}{53\times 3^{3/4}\sqrt{\pi}}\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2},\theta\right]$$

Solve[True, π]

$$\text{Simplify}\left[\frac{\frac{7\,h}{53\times 3^{3/4}\sqrt{\pi}}\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-80\pi^4+224\pi^3\theta-448\pi^2\theta^2+160\pi\theta^3-15\theta^4\right)}{2\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2}\Big/h\right]$$

$$\frac{7\times 3^{1/4}\pi^{3/2}\theta\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(80\pi^4-224\pi^3\theta+448\pi^2\theta^2-160\pi\theta^3+15\theta^4\right)}{53(8\pi-\theta)\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2}$$

$$\text{Solve}\left[7\times 3^{1/4}\,\pi^{3/2}\,\theta\,\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(80\pi^4-224\pi^3\theta+448\pi^2\theta^2-160\pi\theta^3+15\theta^4\right)== 53\,(8\pi-\theta)\,\sqrt{(-2\pi+\theta)^4}\,\left(8\pi^2-6\pi\theta+\theta^2\right)^2,\ \theta\right]$$

$$\{\{\theta\to\pi\},\{\theta\to 4\pi\},\{\theta\to \pi\,\text{Root}[2168918902061400064-18978040393037250560\,\#1+79368876072309358592\,\#1^2-210927363520506036224\,\#1^3+399577242368348585984\,\#1^4-573829583478846586880\,\#1^5+648682023351408197632\,\#1^6-591701371191864410112\,\#1^7+442936140843213864960\,\#1^8-275308180674442018816\,\#1^9+143208928923654668288\,\#1^{10}-62655701239304847872\,\#1^{11}+23115614063608354304\,\#1^{12}-7194172796107088384\,\#1^{13}+1885645086111188480\,\#1^{14}-414645442256220736\,\#1^{15}+76017374115971904\,\#1^{16}-11512748778227136\,\#1^{17}+1421817926789824\,\#1^{18}-140603723926691\,\#1^{19}+10847052121181\,\#1^{20}-627853463651\,\#1^{21}+25604610845\,\#1^{22}-654909923\,\#1^{23}+7890481\,\#1^{24}\,\&,1]\},$$

$$\{\theta\to \pi\,\text{Root}[2168918902061400064-18978040393037250560\,\#1+79368876072309358592\,\#1^2-210927363520506036224\,\#1^3+399577242368348585984\,\#1^4-573829583478846586880\,\#1^5+648682023351408197632\,\#1^6-591701371191864410112\,\#1^7+442936140843213864960\,\#1^8-275308180674442018816\,\#1^9+143208928923654668288\,\#1^{10}-62655701239304847872\,\#1^{11}+23115614063608354304\,\#1^{12}-7194172796107088384\,\#1^{13}+1885645086111188480\,\#1^{14}-414645442256220736\,\#1^{15}+76017374115971904\,\#1^{16}-11512748778227136\,\#1^{17}+1421817926789824\,\#1^{18}-140603723926691\,\#1^{19}+10847052121181\,\#1^{20}-627853463651\,\#1^{21}+25604610845\,\#1^{22}-654909923\,\#1^{23}+7890481\,\#1^{24}\,\&,13]\},$$

$$\{\theta\to \pi\,\text{Root}[2168918902061400064-18978040393037250560\,\#1+79368876072309358592\,\#1^2-210927363520506036224\,\#1^3+399577242368348585984\,\#1^4-573829583478846586880\,\#1^5+648682023351408197632\,\#1^6-591701371191864410112\,\#1^7+442936140843213864960\,\#1^8-275308180674442018816\,\#1^9+143208928923654668288\,\#1^{10}-62655701239304847872\,\#1^{11}+23115614063608354304\,\#1^{12}-7194172796107088384\,\#1^{13}+1885645086111188480\,\#1^{14}-414645442256220736\,\#1^{15}+76017374115971904\,\#1^{16}-11512748778227136\,\#1^{17}+1421817926789824\,\#1^{18}-140603723926691\,\#1^{19}+10847052121181\,\#1^{20}-627853463651\,\#1^{21}+25604610845\,\#1^{22}-654909923\,\#1^{23}+7890481\,\#1^{24}\,\&,14]\}\}$$

$$\text{Solve}\left[\frac{7\times 3^{1/4}\,\pi^{3/2}\,\theta\,\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(80\pi^4-224\pi^3\theta+448\pi^2\theta^2-160\pi\theta^3+15\theta^4\right)}{53\,(8\pi-\theta)\,\sqrt{(-2\pi+\theta)^4}\,\left(8\pi^2-6\pi\theta+\theta^2\right)^2}==1,\ \theta\right]$$

$$\text{Solve}\left[h == \frac{\frac{7\,h}{53\times 3^{3/4}\,\sqrt{\pi}}\,\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}{2\left(-\frac{4\,\pi-\theta}{3\,\pi^2\,\theta^3}-\frac{1}{6\,\pi^2\,\theta^2}\right)\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2},\,h\right]$$

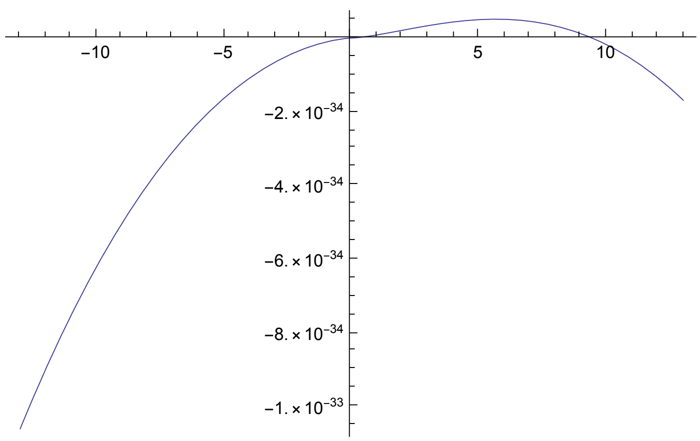
$$\{\{h\to 0\}\}$$

$$\text{ParametricPlot}\left[\left\{\frac{m\,\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\pi^4+224\,\pi^3\,\theta-448\,\pi^2\,\theta^2+160\,\pi\,\theta^3-15\,\theta^4\right)}{2\left(-\frac{4\,\pi-\theta}{3\,\pi^2\,\theta^3}-\frac{1}{6\,\pi^2\,\theta^2}\right)\theta^2\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)^2},\,\textit{y function}\right\},\,\{\textit{var},\,\textit{min},\,\textit{max}\}\right]$$

$$\text{Solve}\left[h == \frac{m\,\sqrt{\frac{((4\,\theta-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-80\,\theta^4+224\,\theta^3\,\theta-448\,\theta^2\,\theta^2+160\,\theta\,\theta^3-15\,\theta^4\right)}{2\,\theta^2\,\sqrt{(-2\,\theta+\theta)^4}\,\left(8\,\theta^2-6\,\theta\,\theta+\theta^2\right)^2\left(\frac{4\,\theta-2\,\theta}{12\,\pi\,\theta\,\sqrt{(4\,\theta-\theta)\,\theta}}-\frac{\sqrt{(4\,\theta-\theta)\,\theta}}{6\,\theta\,\theta^2}\right)},\,m\right]$$

$$\left\{\left\{m\to-\frac{(6.626*10\,\hat{}\,-34)\,\theta\,\sqrt{\theta^4}\,(-3\,\pi+\theta)}{159\times 3^{1/4}\,\pi\,\left(\theta^2\right)^{3/4}}\right\}\right\}$$

$$\text{Plot}\left[-\frac{(6.626*10\,\hat{}\,-34)\,\theta\,\sqrt{\theta^4}\,(-3\,\pi+\theta)}{159\times 3^{1/4}\,\pi\,\left(\theta^2\right)^{3/4}},\,\{\theta,\,-13,\,13\}\right]$$



$$\theta := \pi$$

$$\mathbf{Solve}\left[h == \left(\frac{(6.626 * 10\wedge -34)\ \theta\ \sqrt{\theta^4}\ (-3\,\pi + \theta)}{159 \times 3^{1/4}\ \pi\ \left(\theta^2\right)^{3/4}}\right.\right.$$
$$\left.\sqrt{\frac{((4\,\theta - \theta)\ \theta)^{3/2}}{\theta^2}}\ \left(-80\,\theta^4 + 224\,\theta^3\,\theta - 448\,\theta^2\,\theta^2 + 160\,\theta\,\theta^3 - 15\,\theta^4\right) \right/$$
$$\left.\left(2\,\theta^2\ \sqrt{(-2\,\theta + \theta)^4}\ \left(8\,\theta^2 - 6\,\theta\,\theta + \theta^2\right)^2 \left(\frac{4\,\theta - 2\,\theta}{12\,\pi\,\theta\ \sqrt{(4\,\theta - \theta)\ \theta}} - \frac{\sqrt{(4\,\theta - \theta)\ \theta}}{6\,\theta\,\theta^2}\right)\right)\right), \theta\right]$$

$\mathrm{Solve}\left[h == -6.626 \times 10^{-34}, \pi\right]$

Solve[
π **Root**[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 #1 + 79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 + 399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 + 648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 + 442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 + 143 208 928 923 654 668 288 #1^{10} - 62 655 701 239 304 847 872 #1^{11} + 23 115 614 063 608 354 304 #1^{12} - 7 194 172 796 107 088 384 #1^{13} + 1 885 645 086 111 188 480 #1^{14} - 414 645 442 256 220 736 #1^{15} + 76 017 374 115 971 904 #1^{16} - 11 512 748 778 227 136 #1^{17} + 1 421 817 926 789 824 #1^{18} - 140 603 723 926 691 #1^{19} + 10 847 052 121 181 #1^{20} - 627 853 463 651 #1^{21} + 25 604 610 845 #1^{22} - 654 909 923 #1^{23} + 7 890 481 #1^{24} &, 1] ==
Root[3 317 760 000 m^4 π^{16} - 37 158 912 000 m^4 π^{15} #1 + 230 385 254 400 m^4 π^{14} #1^2 +
(-942 137 671 680 m^4 π^{13} - 67 108 864 h^4 π^{19}) #1^3 +
(2 801 594 843 136 m^4 π^{12} + 587 202 560 h^4 π^{18}) #1^4 +
(-6 218 413 867 008 m^4 π^{11} - 2 428 502 016 h^4 π^{17}) #1^5 +
(10 484 567 506 944 m^4 π^{10} + 6 309 281 792 h^4 π^{16}) #1^6 +
(-13 268 250 427 392 m^4 π^9 - 11 542 724 608 h^4 π^{15}) #1^7 +
(12 416 904 377 856 m^4 π^8 + 15 797 846 016 h^4 π^{14}) #1^8 +
(-8 208 129 116 160 m^4 π^7 - 16 771 973 120 h^4 π^{13}) #1^9 +
(3 742 726 072 320 m^4 π^6 + 14 132 445 184 h^4 π^{12}) #1^{10} +
(-1 171 098 777 600 m^4 π^5 - 9 589 751 808 h^4 π^{11}) #1^{11} +
(250 171 934 400 m^4 π^4 + 5 285 609 472 h^4 π^{10}) #1^{12} +
(-35 827 920 000 m^4 π^3 - 2 375 712 768 h^4 π^9) #1^{13} +
(3 289 248 000 m^4 π^2 + 870 604 800 h^4 π^8) #1^{14} + (-174 960 000 m^4 π - 258 998 272 h^4 π^7) #1^{15} +
(4 100 625 m^4 + 61 988 864 h^4 π^6) #1^{16} - 11 759 616 h^4 π^5 #1^{17} + 1 727 488 h^4 π^4 #1^{18} - 189 440 h^4 π^3 #1^{19} + 14 592 h^4 π^2 #1^{20} - 704 h^4 π #1^{21} + 16 h^4 #1^{22} &, 1], m]

{{m → -(2 (4 194 304 h^4 π^6 Root[2 168 918 902 061 400 064 -
18 978 040 393 037 250 560 #1 + 79 368 876 072 309 358 592 #1^2 -
210 927 363 520 506 036 224 #1^3 + 399 577 242 368 348 585 984 #1^4 -
573 829 583 478 846 586 880 #1^5 + 648 682 023 351 408 197 632 #1^6 -

$591 701 371 191 864 410 112 \#1^{7} + 442 936 140 843 213 864 960 \#1^{8} -$
$275 308 180 674 442 018 816 \#1^{9} + 143 208 928 923 654 668 288 \#1^{10} -$
$62 655 701 239 304 847 872 \#1^{11} + 23 115 614 063 608 354 304 \#1^{12} -$
$7 194 172 796 107 088 384 \#1^{13} + 1 885 645 086 111 188 480 \#1^{14} -$
$414 645 442 256 220 736 \#1^{15} + 76 017 374 115 971 904 \#1^{16} -$
$11 512 748 778 227 136 \#1^{17} + 1 421 817 926 789 824 \#1^{18} -$
$140 603 723 926 691 \#1^{19} + 10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{3} -$
$36 700 160 h^{4} \pi^{6} \mathrm{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{4} +$
$151 781 376 h^{4} \pi^{6} \mathrm{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{5} -$
$394 330 112 h^{4} \pi^{6} \mathrm{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$

$25\,604\,610\,845\, \sharp1^{22} - 654\,909\,923\, \sharp1^{23} + 7\,890\,481\, \sharp1^{24}\, \&,\, 1\big]^{6} +$
$721\,420\,288\, h^{4}\, \pi^{6}\, \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\, \sharp1^{2} - 210\,927\,363\,520\,506\,036\,224\, \sharp1^{3} +$
$399\,577\,242\,368\,348\,585\,984\, \sharp1^{4} - 573\,829\,583\,478\,846\,586\,880\, \sharp1^{5} +$
$648\,682\,023\,351\,408\,197\,632\, \sharp1^{6} - 591\,701\,371\,191\,864\,410\,112\, \sharp1^{7} +$
$442\,936\,140\,843\,213\,864\,960\, \sharp1^{8} - 275\,308\,180\,674\,442\,018\,816\, \sharp1^{9} +$
$143\,208\,928\,923\,654\,668\,288\, \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\, \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\, \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \sharp1^{14} - 414\,645\,442\,256\,220\,736\, \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\, \sharp1^{16} - 11\,512\,748\,778\,227\,136\, \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\, \sharp1^{18} - 140\,603\,723\,926\,691\, \sharp1^{19} +$
$10\,847\,052\,121\,181\, \sharp1^{20} - 627\,853\,463\,651\, \sharp1^{21} +$
$25\,604\,610\,845\, \sharp1^{22} - 654\,909\,923\, \sharp1^{23} + 7\,890\,481\, \sharp1^{24}\, \&,\, 1\big]^{7} -$
$987\,365\,376\, h^{4}\, \pi^{6}\, \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\, \sharp1^{2} - 210\,927\,363\,520\,506\,036\,224\, \sharp1^{3} +$
$399\,577\,242\,368\,348\,585\,984\, \sharp1^{4} - 573\,829\,583\,478\,846\,586\,880\, \sharp1^{5} +$
$648\,682\,023\,351\,408\,197\,632\, \sharp1^{6} - 591\,701\,371\,191\,864\,410\,112\, \sharp1^{7} +$
$442\,936\,140\,843\,213\,864\,960\, \sharp1^{8} - 275\,308\,180\,674\,442\,018\,816\, \sharp1^{9} +$
$143\,208\,928\,923\,654\,668\,288\, \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\, \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\, \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \sharp1^{14} - 414\,645\,442\,256\,220\,736\, \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\, \sharp1^{16} - 11\,512\,748\,778\,227\,136\, \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\, \sharp1^{18} - 140\,603\,723\,926\,691\, \sharp1^{19} +$
$10\,847\,052\,121\,181\, \sharp1^{20} - 627\,853\,463\,651\, \sharp1^{21} + 25\,604\,610\,845\, \sharp1^{22} -$
$654\,909\,923\, \sharp1^{23} + 7\,890\,481\, \sharp1^{24}\, \&,\, 1\big]^{8} + 1\,048\,248\,320\, h^{4}$
$\pi^{6}\, \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\, \sharp1^{2} - 210\,927\,363\,520\,506\,036\,224\, \sharp1^{3} +$
$399\,577\,242\,368\,348\,585\,984\, \sharp1^{4} - 573\,829\,583\,478\,846\,586\,880\, \sharp1^{5} +$
$648\,682\,023\,351\,408\,197\,632\, \sharp1^{6} - 591\,701\,371\,191\,864\,410\,112\, \sharp1^{7} +$
$442\,936\,140\,843\,213\,864\,960\, \sharp1^{8} - 275\,308\,180\,674\,442\,018\,816\, \sharp1^{9} +$
$143\,208\,928\,923\,654\,668\,288\, \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\, \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\, \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \sharp1^{14} - 414\,645\,442\,256\,220\,736\, \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\, \sharp1^{16} - 11\,512\,748\,778\,227\,136\, \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\, \sharp1^{18} - 140\,603\,723\,926\,691\, \sharp1^{19} +$
$10\,847\,052\,121\,181\, \sharp1^{20} - 627\,853\,463\,651\, \sharp1^{21} +$
$25\,604\,610\,845\, \sharp1^{22} - 654\,909\,923\, \sharp1^{23} + 7\,890\,481\, \sharp1^{24}\, \&,\, 1\big]^{9} -$
$883\,277\,824\, h^{4}\, \pi^{6}\, \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\, \sharp1^{2} - 210\,927\,363\,520\,506\,036\,224\, \sharp1^{3} +$
$399\,577\,242\,368\,348\,585\,984\, \sharp1^{4} - 573\,829\,583\,478\,846\,586\,880\, \sharp1^{5} +$
$648\,682\,023\,351\,408\,197\,632\, \sharp1^{6} - 591\,701\,371\,191\,864\,410\,112\, \sharp1^{7} +$
$442\,936\,140\,843\,213\,864\,960\, \sharp1^{8} - 275\,308\,180\,674\,442\,018\,816\, \sharp1^{9} +$

$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{10} +$
$599\,359\,488\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{11} -$
$330\,350\,592\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{12} +$
$148\,482\,048\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{13} -$

$54\,412\,800\ h^4\ \pi^6\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{14} +$
$16\,187\,392\ h^4\ \pi^6\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{15} -$
$3\,874\,304\ h^4\ \pi^6\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{16} +$
$734\,976\ h^4\ \pi^6\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$

$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\Big]^{17} -$
$107\,968\ h^4\ \pi^6\ \text{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\Big]^{18} +$
$11\,840\ h^4\ \pi^6\ \text{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\Big]^{19} -$
$912\ h^4\ \pi^6\ \text{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^2 - 210\,927\,363\,520\,506\,036\,224\ \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \#1^4 - 573\,829\,583\,478\,846\,586\,880\ \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \#1^6 - 591\,701\,371\,191\,864\,410\,112\ \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \#1^8 - 275\,308\,180\,674\,442\,018\,816\ \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\Big]^{20} +$
$44\ h^4\ \pi^6\ \text{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$

```
79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 +
399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 +
648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 +
442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 +
143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872 #1^11 +
23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384 #1^13 +
1 885 645 086 111 188 480 #1^14 - 414 645 442 256 220 736 #1^15 +
76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136 #1^17 +
1 421 817 926 789 824 #1^18 - 140 603 723 926 691 #1^19 +
10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 +
25 604 610 845 #1^22 - 654 909 923 #1^23 + 7 890 481 #1^24 &, 1]^21 -
h^4 π^6 Root[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 #1 +
79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 +
399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 +
648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 +
442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 +
143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872 #1^11 +
23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384 #1^13 +
1 885 645 086 111 188 480 #1^14 - 414 645 442 256 220 736 #1^15 +
76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136 #1^17 +
1 421 817 926 789 824 #1^18 - 140 603 723 926 691 #1^19 +
10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 + 25 604 610 845 #1^22 -
654 909 923 #1^23 + 7 890 481 #1^24 &, 1]^22)^(1/4)) /
(3 (40 960 000 - 458 752 000 Root[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560
#1 + 79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224
#1^3 + 399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880
#1^5 + 648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112
#1^7 + 442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816
#1^9 + 143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872
#1^11 + 23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384
#1^13 + 1 885 645 086 111 188 480 #1^14 - 414 645 442 256 220 736
#1^15 + 76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136
#1^17 + 1 421 817 926 789 824 #1^18 - 140 603 723 926 691
#1^19 + 10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 +
25 604 610 845 #1^22 - 654 909 923 #1^23 + 7 890 481 #1^24 &, 1] +
2 844 262 400 Root[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 #1 +
79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 +
399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 +
648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 +
442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 +
143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872 #1^11 +
23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384 #1^13 +
```

$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{2} -$
$11 631 329 280 \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{3} +$
$34 587 590 656 \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{4} -$
$76 770 541 568 \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{5} +$
$129 439 105 024 \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$

$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\ \&,\ 1\big]^{6} -$

$163\,805\,560\,832\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\ \&,\ 1\big]^{7} +$

$153\,295\,115\,776\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\ \&,\ 1\big]^{8} -$

$101\,334\,927\,360\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$

$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{9} +$
$46 206 494 720 \text{ Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{10} -$
$14 458 009 600 \text{ Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{11} +$
$3 088 542 400 \text{ Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$
$399 577 242 368 348 585 984 \#1^{4} - 573 829 583 478 846 586 880 \#1^{5} +$
$648 682 023 351 408 197 632 \#1^{6} - 591 701 371 191 864 410 112 \#1^{7} +$
$442 936 140 843 213 864 960 \#1^{8} - 275 308 180 674 442 018 816 \#1^{9} +$
$143 208 928 923 654 668 288 \#1^{10} - 62 655 701 239 304 847 872 \#1^{11} +$
$23 115 614 063 608 354 304 \#1^{12} - 7 194 172 796 107 088 384 \#1^{13} +$
$1 885 645 086 111 188 480 \#1^{14} - 414 645 442 256 220 736 \#1^{15} +$
$76 017 374 115 971 904 \#1^{16} - 11 512 748 778 227 136 \#1^{17} +$
$1 421 817 926 789 824 \#1^{18} - 140 603 723 926 691 \#1^{19} +$
$10 847 052 121 181 \#1^{20} - 627 853 463 651 \#1^{21} +$
$25 604 610 845 \#1^{22} - 654 909 923 \#1^{23} + 7 890 481 \#1^{24} \&, 1]^{12} -$
$442 320 000 \text{ Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \#1 +$
$79 368 876 072 309 358 592 \#1^{2} - 210 927 363 520 506 036 224 \#1^{3} +$

399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{13} +
40 608 000 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{14} −
2 160 000 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{15} +
50 625 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +

$$1\,421\,817\,926\,789\,824\,\sharp1^{18} - 140\,603\,723\,926\,691\,\sharp1^{19} +$$
$$10\,847\,052\,121\,181\,\sharp1^{20} - 627\,853\,463\,651\,\sharp1^{21} + 25\,604\,610\,845\,\sharp1^{22} -$$
$$654\,909\,923\,\sharp1^{23} + 7\,890\,481\,\sharp1^{24}\,\&,\,1\Big]^{16}\Big)^{1/4}\Big)\Big\}\text{,}$$

$$\Big\{m \to -\Big(2\,\mathrm{i}\,\Big(4\,194\,304\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\sharp1^2 - 210\,927\,363\,520\,506\,036\,224\,\sharp1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\sharp1^4 - 573\,829\,583\,478\,846\,586\,880\,\sharp1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\sharp1^6 - 591\,701\,371\,191\,864\,410\,112\,\sharp1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\sharp1^8 - 275\,308\,180\,674\,442\,018\,816\,\sharp1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\sharp1^{14} - 414\,645\,442\,256\,220\,736\,\sharp1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\sharp1^{16} - 11\,512\,748\,778\,227\,136\,\sharp1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\sharp1^{18} - 140\,603\,723\,926\,691\,\sharp1^{19} +$$
$$10\,847\,052\,121\,181\,\sharp1^{20} - 627\,853\,463\,651\,\sharp1^{21} +$$
$$25\,604\,610\,845\,\sharp1^{22} - 654\,909\,923\,\sharp1^{23} + 7\,890\,481\,\sharp1^{24}\,\&,\,1\Big]^3 -$$
$$36\,700\,160\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\sharp1^2 - 210\,927\,363\,520\,506\,036\,224\,\sharp1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\sharp1^4 - 573\,829\,583\,478\,846\,586\,880\,\sharp1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\sharp1^6 - 591\,701\,371\,191\,864\,410\,112\,\sharp1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\sharp1^8 - 275\,308\,180\,674\,442\,018\,816\,\sharp1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\sharp1^{14} - 414\,645\,442\,256\,220\,736\,\sharp1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\sharp1^{16} - 11\,512\,748\,778\,227\,136\,\sharp1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\sharp1^{18} - 140\,603\,723\,926\,691\,\sharp1^{19} +$$
$$10\,847\,052\,121\,181\,\sharp1^{20} - 627\,853\,463\,651\,\sharp1^{21} +$$
$$25\,604\,610\,845\,\sharp1^{22} - 654\,909\,923\,\sharp1^{23} + 7\,890\,481\,\sharp1^{24}\,\&,\,1\Big]^4 +$$
$$151\,781\,376\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\sharp1^2 - 210\,927\,363\,520\,506\,036\,224\,\sharp1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\sharp1^4 - 573\,829\,583\,478\,846\,586\,880\,\sharp1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\sharp1^6 - 591\,701\,371\,191\,864\,410\,112\,\sharp1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\sharp1^8 - 275\,308\,180\,674\,442\,018\,816\,\sharp1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\sharp1^{14} - 414\,645\,442\,256\,220\,736\,\sharp1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\sharp1^{16} - 11\,512\,748\,778\,227\,136\,\sharp1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\sharp1^{18} - 140\,603\,723\,926\,691\,\sharp1^{19} +$$
$$10\,847\,052\,121\,181\,\sharp1^{20} - 627\,853\,463\,651\,\sharp1^{21} +$$
$$25\,604\,610\,845\,\sharp1^{22} - 654\,909\,923\,\sharp1^{23} + 7\,890\,481\,\sharp1^{24}\,\&,\,1\Big]^5 -$$
$$394\,330\,112\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\sharp1^2 - 210\,927\,363\,520\,506\,036\,224\,\sharp1^3 +$$

$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1]^{6} +$
$721\,420\,288\,h^{4}\,\pi^{6}\,\mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1]^{7} -$
$987\,365\,376\,h^{4}\,\pi^{6}\,\mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} + 25\,604\,610\,845\,\sharp 1^{22} -$
$654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1]^{8} + 1\,048\,248\,320\,h^{4}$
$\pi^{6}\,\mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$

$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{9} -$
$883\,277\,824\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{10} +$
$599\,359\,488\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{11} -$
$330\,350\,592\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{12} +$
$148\,482\,048\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$

$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1]^{13} -$
$54\,412\,800\ h^{4}\ \pi^{6}\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1]^{14} +$
$16\,187\,392\ h^{4}\ \pi^{6}\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1]^{15} -$
$3\,874\,304\ h^{4}\ \pi^{6}\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$

$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1]^{16} +$
$734\,976\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1]^{17} -$
$107\,968\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1]^{18} +$
$11\,840\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1]^{19} -$
$912\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$

$442 936 140 843 213 864 960 \sharp 1^{8} - 275 308 180 674 442 018 816 \sharp 1^{9} +$
$143 208 928 923 654 668 288 \sharp 1^{10} - 62 655 701 239 304 847 872 \sharp 1^{11} +$
$23 115 614 063 608 354 304 \sharp 1^{12} - 7 194 172 796 107 088 384 \sharp 1^{13} +$
$1 885 645 086 111 188 480 \sharp 1^{14} - 414 645 442 256 220 736 \sharp 1^{15} +$
$76 017 374 115 971 904 \sharp 1^{16} - 11 512 748 778 227 136 \sharp 1^{17} +$
$1 421 817 926 789 824 \sharp 1^{18} - 140 603 723 926 691 \sharp 1^{19} +$
$10 847 052 121 181 \sharp 1^{20} - 627 853 463 651 \sharp 1^{21} +$
$25 604 610 845 \sharp 1^{22} - 654 909 923 \sharp 1^{23} + 7 890 481 \sharp 1^{24} \&, 1]^{20} +$
$44 h^{4} \pi^{6} \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \sharp 1 +$
$79 368 876 072 309 358 592 \sharp 1^{2} - 210 927 363 520 506 036 224 \sharp 1^{3} +$
$399 577 242 368 348 585 984 \sharp 1^{4} - 573 829 583 478 846 586 880 \sharp 1^{5} +$
$648 682 023 351 408 197 632 \sharp 1^{6} - 591 701 371 191 864 410 112 \sharp 1^{7} +$
$442 936 140 843 213 864 960 \sharp 1^{8} - 275 308 180 674 442 018 816 \sharp 1^{9} +$
$143 208 928 923 654 668 288 \sharp 1^{10} - 62 655 701 239 304 847 872 \sharp 1^{11} +$
$23 115 614 063 608 354 304 \sharp 1^{12} - 7 194 172 796 107 088 384 \sharp 1^{13} +$
$1 885 645 086 111 188 480 \sharp 1^{14} - 414 645 442 256 220 736 \sharp 1^{15} +$
$76 017 374 115 971 904 \sharp 1^{16} - 11 512 748 778 227 136 \sharp 1^{17} +$
$1 421 817 926 789 824 \sharp 1^{18} - 140 603 723 926 691 \sharp 1^{19} +$
$10 847 052 121 181 \sharp 1^{20} - 627 853 463 651 \sharp 1^{21} +$
$25 604 610 845 \sharp 1^{22} - 654 909 923 \sharp 1^{23} + 7 890 481 \sharp 1^{24} \&, 1]^{21} -$
$h^{4} \pi^{6} \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 \sharp 1 +$
$79 368 876 072 309 358 592 \sharp 1^{2} - 210 927 363 520 506 036 224 \sharp 1^{3} +$
$399 577 242 368 348 585 984 \sharp 1^{4} - 573 829 583 478 846 586 880 \sharp 1^{5} +$
$648 682 023 351 408 197 632 \sharp 1^{6} - 591 701 371 191 864 410 112 \sharp 1^{7} +$
$442 936 140 843 213 864 960 \sharp 1^{8} - 275 308 180 674 442 018 816 \sharp 1^{9} +$
$143 208 928 923 654 668 288 \sharp 1^{10} - 62 655 701 239 304 847 872 \sharp 1^{11} +$
$23 115 614 063 608 354 304 \sharp 1^{12} - 7 194 172 796 107 088 384 \sharp 1^{13} +$
$1 885 645 086 111 188 480 \sharp 1^{14} - 414 645 442 256 220 736 \sharp 1^{15} +$
$76 017 374 115 971 904 \sharp 1^{16} - 11 512 748 778 227 136 \sharp 1^{17} +$
$1 421 817 926 789 824 \sharp 1^{18} - 140 603 723 926 691 \sharp 1^{19} +$
$10 847 052 121 181 \sharp 1^{20} - 627 853 463 651 \sharp 1^{21} + 25 604 610 845 \sharp 1^{22} -$
$654 909 923 \sharp 1^{23} + 7 890 481 \sharp 1^{24} \&, 1]^{22})^{1/4}) \Big/$

$(3 (40 960 000 - 458 752 000 \text{Root}[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560$
$\sharp 1 + 79 368 876 072 309 358 592 \sharp 1^{2} - 210 927 363 520 506 036 224$
$\sharp 1^{3} + 399 577 242 368 348 585 984 \sharp 1^{4} - 573 829 583 478 846 586 880$
$\sharp 1^{5} + 648 682 023 351 408 197 632 \sharp 1^{6} - 591 701 371 191 864 410 112$
$\sharp 1^{7} + 442 936 140 843 213 864 960 \sharp 1^{8} - 275 308 180 674 442 018 816$
$\sharp 1^{9} + 143 208 928 923 654 668 288 \sharp 1^{10} - 62 655 701 239 304 847 872$
$\sharp 1^{11} + 23 115 614 063 608 354 304 \sharp 1^{12} - 7 194 172 796 107 088 384$
$\sharp 1^{13} + 1 885 645 086 111 188 480 \sharp 1^{14} - 414 645 442 256 220 736$
$\sharp 1^{15} + 76 017 374 115 971 904 \sharp 1^{16} - 11 512 748 778 227 136$
$\sharp 1^{17} + 1 421 817 926 789 824 \sharp 1^{18} - 140 603 723 926 691$

$\#1^{19}$ + 10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1] +
2 844 262 400 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{2} −
11 631 329 280 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{3} +
34 587 590 656 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{4} −
76 770 541 568 Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +

$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{5} +$
$129\,439\,105\,024\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{6} -$
$163\,805\,560\,832\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{7} +$
$153\,295\,115\,776\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{8} -$

$101\,334\,927\,360\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{9} +$

$46\,206\,494\,720\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{10} -$

$14\,458\,009\,600\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{11} +$

$3\,088\,542\,400\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$

$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{12} -$
$442\,320\,000\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{13} +$
$40\,608\,000\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{14} -$
$2\,160\,000\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\big]^{15} +$
$50\,625\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$

79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ + 25 604 610 845 $\#1^{22}$ −
654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1$]^{16})^{1/4})\}$,

$\{$m → (2 ⅈ (4 194 304 $h^{4}\pi^{6}$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1$]^{3}$ −
36 700 160 $h^{4}\pi^{6}$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1$]^{4}$ +
151 781 376 $h^{4}\pi^{6}$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +

$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{5} -$
$394\,330\,112\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{6} +$
$721\,420\,288\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{7} -$
$987\,365\,376\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{8} +$
$1\,048\,248\,320\,h^4\,\pi^6\,\text{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$

$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^9 -$
$883\,277\,824\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^{10} +$
$599\,359\,488\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^{11} -$
$330\,350\,592\,h^4\,\pi^6\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$

$76\,017\,374\,115\,971\,904\ \sharp1^{16} - 11\,512\,748\,778\,227\,136\ \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\ \sharp1^{18} - 140\,603\,723\,926\,691\ \sharp1^{19} +$
$10\,847\,052\,121\,181\ \sharp1^{20} - 627\,853\,463\,651\ \sharp1^{21} +$
$25\,604\,610\,845\ \sharp1^{22} - 654\,909\,923\ \sharp1^{23} + 7\,890\,481\ \sharp1^{24}\ \&,\ 1\big]^{12} +$
$148\,482\,048\ h^4\ \pi^6\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\ \sharp1^2 - 210\,927\,363\,520\,506\,036\,224\ \sharp1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \sharp1^4 - 573\,829\,583\,478\,846\,586\,880\ \sharp1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \sharp1^6 - 591\,701\,371\,191\,864\,410\,112\ \sharp1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \sharp1^8 - 275\,308\,180\,674\,442\,018\,816\ \sharp1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\ \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\ \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \sharp1^{14} - 414\,645\,442\,256\,220\,736\ \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\ \sharp1^{16} - 11\,512\,748\,778\,227\,136\ \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\ \sharp1^{18} - 140\,603\,723\,926\,691\ \sharp1^{19} +$
$10\,847\,052\,121\,181\ \sharp1^{20} - 627\,853\,463\,651\ \sharp1^{21} +$
$25\,604\,610\,845\ \sharp1^{22} - 654\,909\,923\ \sharp1^{23} + 7\,890\,481\ \sharp1^{24}\ \&,\ 1\big]^{13} -$
$54\,412\,800\ h^4\ \pi^6\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\ \sharp1^2 - 210\,927\,363\,520\,506\,036\,224\ \sharp1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \sharp1^4 - 573\,829\,583\,478\,846\,586\,880\ \sharp1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \sharp1^6 - 591\,701\,371\,191\,864\,410\,112\ \sharp1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \sharp1^8 - 275\,308\,180\,674\,442\,018\,816\ \sharp1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\ \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\ \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \sharp1^{14} - 414\,645\,442\,256\,220\,736\ \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\ \sharp1^{16} - 11\,512\,748\,778\,227\,136\ \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\ \sharp1^{18} - 140\,603\,723\,926\,691\ \sharp1^{19} +$
$10\,847\,052\,121\,181\ \sharp1^{20} - 627\,853\,463\,651\ \sharp1^{21} +$
$25\,604\,610\,845\ \sharp1^{22} - 654\,909\,923\ \sharp1^{23} + 7\,890\,481\ \sharp1^{24}\ \&,\ 1\big]^{14} +$
$16\,187\,392\ h^4\ \pi^6\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\ \sharp1^2 - 210\,927\,363\,520\,506\,036\,224\ \sharp1^3 +$
$399\,577\,242\,368\,348\,585\,984\ \sharp1^4 - 573\,829\,583\,478\,846\,586\,880\ \sharp1^5 +$
$648\,682\,023\,351\,408\,197\,632\ \sharp1^6 - 591\,701\,371\,191\,864\,410\,112\ \sharp1^7 +$
$442\,936\,140\,843\,213\,864\,960\ \sharp1^8 - 275\,308\,180\,674\,442\,018\,816\ \sharp1^9 +$
$143\,208\,928\,923\,654\,668\,288\ \sharp1^{10} - 62\,655\,701\,239\,304\,847\,872\ \sharp1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \sharp1^{12} - 7\,194\,172\,796\,107\,088\,384\ \sharp1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \sharp1^{14} - 414\,645\,442\,256\,220\,736\ \sharp1^{15} +$
$76\,017\,374\,115\,971\,904\ \sharp1^{16} - 11\,512\,748\,778\,227\,136\ \sharp1^{17} +$
$1\,421\,817\,926\,789\,824\ \sharp1^{18} - 140\,603\,723\,926\,691\ \sharp1^{19} +$
$10\,847\,052\,121\,181\ \sharp1^{20} - 627\,853\,463\,651\ \sharp1^{21} +$
$25\,604\,610\,845\ \sharp1^{22} - 654\,909\,923\ \sharp1^{23} + 7\,890\,481\ \sharp1^{24}\ \&,\ 1\big]^{15} -$
$3\,874\,304\ h^4\ \pi^6\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \sharp1 +$
$79\,368\,876\,072\,309\,358\,592\ \sharp1^2 - 210\,927\,363\,520\,506\,036\,224\ \sharp1^3 +$

$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{16} +$
$734\,976\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{17} -$
$107\,968\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{18} +$
$11\,840\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$

$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{19} -$
$912\,h^4\,\pi^6\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{20} +$
$44\,h^4\,\pi^6\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{21} -$
$h^4\,\pi^6\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$
$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$
$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$
$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + 25\,604\,610\,845\,\#1^{22} -$
$654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{22}\Big)^{1/4}\Big) \Big/$
$\Big(3\,\Big(40\,960\,000 - 458\,752\,000\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$

399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1] +
2 844 262 400 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{2} –
11 631 329 280 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{3} +
34 587 590 656 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +

$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{4} -$
$76\,770\,541\,568\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{5} +$
$129\,439\,105\,024\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{6} -$
$163\,805\,560\,832\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{7} +$
$153\,295\,115\,776\,\text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$

648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{8} –
101 334 927 360 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{9} +
46 206 494 720 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ – 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ – 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{10} –
14 458 009 600 Root[2 168 918 902 061 400 064 – 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ – 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ – 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ – 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ – 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ – 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ – 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ – 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ – 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ – 140 603 723 926 691 $\#1^{19}$ +

$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1\big]^{11} +$
$3\,088\,542\,400\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1\big]^{12} -$
$442\,320\,000\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1\big]^{13} +$
$40\,608\,000\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} +$
$76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} +$
$1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} +$
$10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} +$
$25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\,1\big]^{14} -$
$2\,160\,000\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 +$
$79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} +$

$$
\begin{aligned}
&442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} + \\
&143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + \\
&25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^{15} + \\
&50\,625\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} + \\
&399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} + \\
&648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} + \\
&442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} + \\
&143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + 25\,604\,610\,845\,\#1^{22} - \\
&654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^{16}\Big)^{1/4}\Big)\Big\},
\end{aligned}
$$

$$
\begin{aligned}
&\Big\{m \to \Big(2\,\Big(4\,194\,304\,h^{4}\,\pi^{6}\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} + \\
&399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} + \\
&648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} + \\
&442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} + \\
&143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + \\
&25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\ 1\big]^{3} - \\
&36\,700\,160\,h^{4}\,\pi^{6}\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} + \\
&399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} + \\
&648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} + \\
&442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} + \\
&143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +
\end{aligned}
$$

$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\Big]^4 +$$
$$151\,781\,376\, h^4 \pi^6\, \mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\Big]^5 -$$
$$394\,330\,112\, h^4 \pi^6\, \mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\Big]^6 +$$
$$721\,420\,288\, h^4 \pi^6\, \mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1\Big]^7 -$$
$$987\,365\,376\, h^4 \pi^6\, \mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 +$$

$442\,936\,140\,843\,213\,864\,960\;\#1^{8} - 275\,308\,180\,674\,442\,018\,816\;\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\;\#1^{10} - 62\,655\,701\,239\,304\,847\,872\;\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\;\#1^{12} - 7\,194\,172\,796\,107\,088\,384\;\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\;\#1^{14} - 414\,645\,442\,256\,220\,736\;\#1^{15} +$
$76\,017\,374\,115\,971\,904\;\#1^{16} - 11\,512\,748\,778\,227\,136\;\#1^{17} +$
$1\,421\,817\,926\,789\,824\;\#1^{18} - 140\,603\,723\,926\,691\;\#1^{19} +$
$10\,847\,052\,121\,181\;\#1^{20} - 627\,853\,463\,651\;\#1^{21} +$
$25\,604\,610\,845\;\#1^{22} - 654\,909\,923\;\#1^{23} + 7\,890\,481\;\#1^{24}\ \&,\ 1\big]^{8} +$
$1\,048\,248\,320\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\;\#1 +$
$79\,368\,876\,072\,309\,358\,592\;\#1^{2} - 210\,927\,363\,520\,506\,036\,224\;\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\;\#1^{4} - 573\,829\,583\,478\,846\,586\,880\;\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\;\#1^{6} - 591\,701\,371\,191\,864\,410\,112\;\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\;\#1^{8} - 275\,308\,180\,674\,442\,018\,816\;\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\;\#1^{10} - 62\,655\,701\,239\,304\,847\,872\;\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\;\#1^{12} - 7\,194\,172\,796\,107\,088\,384\;\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\;\#1^{14} - 414\,645\,442\,256\,220\,736\;\#1^{15} +$
$76\,017\,374\,115\,971\,904\;\#1^{16} - 11\,512\,748\,778\,227\,136\;\#1^{17} +$
$1\,421\,817\,926\,789\,824\;\#1^{18} - 140\,603\,723\,926\,691\;\#1^{19} +$
$10\,847\,052\,121\,181\;\#1^{20} - 627\,853\,463\,651\;\#1^{21} +$
$25\,604\,610\,845\;\#1^{22} - 654\,909\,923\;\#1^{23} + 7\,890\,481\;\#1^{24}\ \&,\ 1\big]^{9} -$
$883\,277\,824\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\;\#1 +$
$79\,368\,876\,072\,309\,358\,592\;\#1^{2} - 210\,927\,363\,520\,506\,036\,224\;\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\;\#1^{4} - 573\,829\,583\,478\,846\,586\,880\;\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\;\#1^{6} - 591\,701\,371\,191\,864\,410\,112\;\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\;\#1^{8} - 275\,308\,180\,674\,442\,018\,816\;\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\;\#1^{10} - 62\,655\,701\,239\,304\,847\,872\;\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\;\#1^{12} - 7\,194\,172\,796\,107\,088\,384\;\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\;\#1^{14} - 414\,645\,442\,256\,220\,736\;\#1^{15} +$
$76\,017\,374\,115\,971\,904\;\#1^{16} - 11\,512\,748\,778\,227\,136\;\#1^{17} +$
$1\,421\,817\,926\,789\,824\;\#1^{18} - 140\,603\,723\,926\,691\;\#1^{19} +$
$10\,847\,052\,121\,181\;\#1^{20} - 627\,853\,463\,651\;\#1^{21} +$
$25\,604\,610\,845\;\#1^{22} - 654\,909\,923\;\#1^{23} + 7\,890\,481\;\#1^{24}\ \&,\ 1\big]^{10} +$
$599\,359\,488\ h^{4}\,\pi^{6}\ \text{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\;\#1 +$
$79\,368\,876\,072\,309\,358\,592\;\#1^{2} - 210\,927\,363\,520\,506\,036\,224\;\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\;\#1^{4} - 573\,829\,583\,478\,846\,586\,880\;\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\;\#1^{6} - 591\,701\,371\,191\,864\,410\,112\;\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\;\#1^{8} - 275\,308\,180\,674\,442\,018\,816\;\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\;\#1^{10} - 62\,655\,701\,239\,304\,847\,872\;\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\;\#1^{12} - 7\,194\,172\,796\,107\,088\,384\;\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\;\#1^{14} - 414\,645\,442\,256\,220\,736\;\#1^{15} +$
$76\,017\,374\,115\,971\,904\;\#1^{16} - 11\,512\,748\,778\,227\,136\;\#1^{17} +$
$1\,421\,817\,926\,789\,824\;\#1^{18} - 140\,603\,723\,926\,691\;\#1^{19} +$
$10\,847\,052\,121\,181\;\#1^{20} - 627\,853\,463\,651\;\#1^{21} +$

$$
\begin{aligned}
&\quad 25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\Big]^{11} - \\
&330\,350\,592\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + \\
&\quad 25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\Big]^{12} + \\
&148\,482\,048\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + \\
&\quad 25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\Big]^{13} - \\
&54\,412\,800\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + \\
&\quad 25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\Big]^{14} + \\
&16\,187\,392\,h^4\,\pi^6\,\mathrm{Root}\Big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\#1^2 - 210\,927\,363\,520\,506\,036\,224\,\#1^3 + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\#1^4 - 573\,829\,583\,478\,846\,586\,880\,\#1^5 + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\#1^6 - 591\,701\,371\,191\,864\,410\,112\,\#1^7 + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\#1^8 - 275\,308\,180\,674\,442\,018\,816\,\#1^9 +
\end{aligned}
$$

143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{15} −
3 874 304 $h^4 \pi^6$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{16} +
734 976 $h^4 \pi^6$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{17} −
107 968 $h^4 \pi^6$ Root[2 168 918 902 061 400 064 − 18 978 040 393 037 250 560 $\#1$ +
79 368 876 072 309 358 592 $\#1^{2}$ − 210 927 363 520 506 036 224 $\#1^{3}$ +
399 577 242 368 348 585 984 $\#1^{4}$ − 573 829 583 478 846 586 880 $\#1^{5}$ +
648 682 023 351 408 197 632 $\#1^{6}$ − 591 701 371 191 864 410 112 $\#1^{7}$ +
442 936 140 843 213 864 960 $\#1^{8}$ − 275 308 180 674 442 018 816 $\#1^{9}$ +
143 208 928 923 654 668 288 $\#1^{10}$ − 62 655 701 239 304 847 872 $\#1^{11}$ +
23 115 614 063 608 354 304 $\#1^{12}$ − 7 194 172 796 107 088 384 $\#1^{13}$ +
1 885 645 086 111 188 480 $\#1^{14}$ − 414 645 442 256 220 736 $\#1^{15}$ +
76 017 374 115 971 904 $\#1^{16}$ − 11 512 748 778 227 136 $\#1^{17}$ +
1 421 817 926 789 824 $\#1^{18}$ − 140 603 723 926 691 $\#1^{19}$ +
10 847 052 121 181 $\#1^{20}$ − 627 853 463 651 $\#1^{21}$ +
25 604 610 845 $\#1^{22}$ − 654 909 923 $\#1^{23}$ + 7 890 481 $\#1^{24}$ &, 1]^{18} +

$11\,840\, h^4 \pi^6 \,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \#1 +$
$79\,368\,876\,072\,309\,358\,592\, \#1^2 - 210\,927\,363\,520\,506\,036\,224\, \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\, \#1^4 - 573\,829\,583\,478\,846\,586\,880\, \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\, \#1^6 - 591\,701\,371\,191\,864\,410\,112\, \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\, \#1^8 - 275\,308\,180\,674\,442\,018\,816\, \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\, \#1^{10} - 62\,655\,701\,239\,304\,847\,872\, \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \#1^{12} - 7\,194\,172\,796\,107\,088\,384\, \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \#1^{14} - 414\,645\,442\,256\,220\,736\, \#1^{15} +$
$76\,017\,374\,115\,971\,904\, \#1^{16} - 11\,512\,748\,778\,227\,136\, \#1^{17} +$
$1\,421\,817\,926\,789\,824\, \#1^{18} - 140\,603\,723\,926\,691\, \#1^{19} +$
$10\,847\,052\,121\,181\, \#1^{20} - 627\,853\,463\,651\, \#1^{21} +$
$25\,604\,610\,845\, \#1^{22} - 654\,909\,923\, \#1^{23} + 7\,890\,481\, \#1^{24}\, \&,\ 1\big]^{19} -$

$912\, h^4 \pi^6 \,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \#1 +$
$79\,368\,876\,072\,309\,358\,592\, \#1^2 - 210\,927\,363\,520\,506\,036\,224\, \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\, \#1^4 - 573\,829\,583\,478\,846\,586\,880\, \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\, \#1^6 - 591\,701\,371\,191\,864\,410\,112\, \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\, \#1^8 - 275\,308\,180\,674\,442\,018\,816\, \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\, \#1^{10} - 62\,655\,701\,239\,304\,847\,872\, \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \#1^{12} - 7\,194\,172\,796\,107\,088\,384\, \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \#1^{14} - 414\,645\,442\,256\,220\,736\, \#1^{15} +$
$76\,017\,374\,115\,971\,904\, \#1^{16} - 11\,512\,748\,778\,227\,136\, \#1^{17} +$
$1\,421\,817\,926\,789\,824\, \#1^{18} - 140\,603\,723\,926\,691\, \#1^{19} +$
$10\,847\,052\,121\,181\, \#1^{20} - 627\,853\,463\,651\, \#1^{21} +$
$25\,604\,610\,845\, \#1^{22} - 654\,909\,923\, \#1^{23} + 7\,890\,481\, \#1^{24}\, \&,\ 1\big]^{20} +$

$44\, h^4 \pi^6 \,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \#1 +$
$79\,368\,876\,072\,309\,358\,592\, \#1^2 - 210\,927\,363\,520\,506\,036\,224\, \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\, \#1^4 - 573\,829\,583\,478\,846\,586\,880\, \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\, \#1^6 - 591\,701\,371\,191\,864\,410\,112\, \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\, \#1^8 - 275\,308\,180\,674\,442\,018\,816\, \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\, \#1^{10} - 62\,655\,701\,239\,304\,847\,872\, \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \#1^{12} - 7\,194\,172\,796\,107\,088\,384\, \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\, \#1^{14} - 414\,645\,442\,256\,220\,736\, \#1^{15} +$
$76\,017\,374\,115\,971\,904\, \#1^{16} - 11\,512\,748\,778\,227\,136\, \#1^{17} +$
$1\,421\,817\,926\,789\,824\, \#1^{18} - 140\,603\,723\,926\,691\, \#1^{19} +$
$10\,847\,052\,121\,181\, \#1^{20} - 627\,853\,463\,651\, \#1^{21} +$
$25\,604\,610\,845\, \#1^{22} - 654\,909\,923\, \#1^{23} + 7\,890\,481\, \#1^{24}\, \&,\ 1\big]^{21} -$

$h^4 \pi^6 \,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\, \#1 +$
$79\,368\,876\,072\,309\,358\,592\, \#1^2 - 210\,927\,363\,520\,506\,036\,224\, \#1^3 +$
$399\,577\,242\,368\,348\,585\,984\, \#1^4 - 573\,829\,583\,478\,846\,586\,880\, \#1^5 +$
$648\,682\,023\,351\,408\,197\,632\, \#1^6 - 591\,701\,371\,191\,864\,410\,112\, \#1^7 +$
$442\,936\,140\,843\,213\,864\,960\, \#1^8 - 275\,308\,180\,674\,442\,018\,816\, \#1^9 +$
$143\,208\,928\,923\,654\,668\,288\, \#1^{10} - 62\,655\,701\,239\,304\,847\,872\, \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\, \#1^{12} - 7\,194\,172\,796\,107\,088\,384\, \#1^{13} +$

$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} + 25\,604\,610\,845\,\#1^{22} -$$
$$654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{22})^{1/4}) \Big/$$
$$\Big(3\ \Big(40\,960\,000 - 458\,752\,000\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1] +$$
$$2\,844\,262\,400\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{2} -$$
$$11\,631\,329\,280\ \mathrm{Root}[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$$
$$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$$
$$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$$
$$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$$
$$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$$
$$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$$
$$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$$
$$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$$
$$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$$
$$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$$
$$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$$
$$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\ \&,\ 1]^{3} +$$

$$
\begin{aligned}
&34\,587\,590\,656\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} + \\
&\quad 25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\ 1\big]^{4} - \\
&76\,770\,541\,568\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} + \\
&\quad 25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\ 1\big]^{5} + \\
&129\,439\,105\,024\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} + \\
&\quad 1\,885\,645\,086\,111\,188\,480\,\sharp 1^{14} - 414\,645\,442\,256\,220\,736\,\sharp 1^{15} + \\
&\quad 76\,017\,374\,115\,971\,904\,\sharp 1^{16} - 11\,512\,748\,778\,227\,136\,\sharp 1^{17} + \\
&\quad 1\,421\,817\,926\,789\,824\,\sharp 1^{18} - 140\,603\,723\,926\,691\,\sharp 1^{19} + \\
&\quad 10\,847\,052\,121\,181\,\sharp 1^{20} - 627\,853\,463\,651\,\sharp 1^{21} + \\
&\quad 25\,604\,610\,845\,\sharp 1^{22} - 654\,909\,923\,\sharp 1^{23} + 7\,890\,481\,\sharp 1^{24}\,\&,\ 1\big]^{6} - \\
&163\,805\,560\,832\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\sharp 1 + \\
&\quad 79\,368\,876\,072\,309\,358\,592\,\sharp 1^{2} - 210\,927\,363\,520\,506\,036\,224\,\sharp 1^{3} + \\
&\quad 399\,577\,242\,368\,348\,585\,984\,\sharp 1^{4} - 573\,829\,583\,478\,846\,586\,880\,\sharp 1^{5} + \\
&\quad 648\,682\,023\,351\,408\,197\,632\,\sharp 1^{6} - 591\,701\,371\,191\,864\,410\,112\,\sharp 1^{7} + \\
&\quad 442\,936\,140\,843\,213\,864\,960\,\sharp 1^{8} - 275\,308\,180\,674\,442\,018\,816\,\sharp 1^{9} + \\
&\quad 143\,208\,928\,923\,654\,668\,288\,\sharp 1^{10} - 62\,655\,701\,239\,304\,847\,872\,\sharp 1^{11} + \\
&\quad 23\,115\,614\,063\,608\,354\,304\,\sharp 1^{12} - 7\,194\,172\,796\,107\,088\,384\,\sharp 1^{13} +
\end{aligned}
$$

$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{7} +$
$153\,295\,115\,776\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{8} -$
$101\,334\,927\,360\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{9} +$
$46\,206\,494\,720\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$
$79\,368\,876\,072\,309\,358\,592\,\#1^{2} - 210\,927\,363\,520\,506\,036\,224\,\#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\,\#1^{4} - 573\,829\,583\,478\,846\,586\,880\,\#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\,\#1^{6} - 591\,701\,371\,191\,864\,410\,112\,\#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\,\#1^{8} - 275\,308\,180\,674\,442\,018\,816\,\#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\,\#1^{10} - 62\,655\,701\,239\,304\,847\,872\,\#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\,\#1^{12} - 7\,194\,172\,796\,107\,088\,384\,\#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\,\#1^{14} - 414\,645\,442\,256\,220\,736\,\#1^{15} +$
$76\,017\,374\,115\,971\,904\,\#1^{16} - 11\,512\,748\,778\,227\,136\,\#1^{17} +$
$1\,421\,817\,926\,789\,824\,\#1^{18} - 140\,603\,723\,926\,691\,\#1^{19} +$
$10\,847\,052\,121\,181\,\#1^{20} - 627\,853\,463\,651\,\#1^{21} +$
$25\,604\,610\,845\,\#1^{22} - 654\,909\,923\,\#1^{23} + 7\,890\,481\,\#1^{24}\,\&,\,1\big]^{10} -$
$14\,458\,009\,600\,\mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\,\#1 +$

$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{11} +$

$3\,088\,542\,400\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{12} -$

$442\,320\,000\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$
$76\,017\,374\,115\,971\,904\ \#1^{16} - 11\,512\,748\,778\,227\,136\ \#1^{17} +$
$1\,421\,817\,926\,789\,824\ \#1^{18} - 140\,603\,723\,926\,691\ \#1^{19} +$
$10\,847\,052\,121\,181\ \#1^{20} - 627\,853\,463\,651\ \#1^{21} +$
$25\,604\,610\,845\ \#1^{22} - 654\,909\,923\ \#1^{23} + 7\,890\,481\ \#1^{24}\ \&,\ 1\big]^{13} +$

$40\,608\,000\ \mathrm{Root}\big[2\,168\,918\,902\,061\,400\,064 - 18\,978\,040\,393\,037\,250\,560\ \#1 +$
$79\,368\,876\,072\,309\,358\,592\ \#1^{2} - 210\,927\,363\,520\,506\,036\,224\ \#1^{3} +$
$399\,577\,242\,368\,348\,585\,984\ \#1^{4} - 573\,829\,583\,478\,846\,586\,880\ \#1^{5} +$
$648\,682\,023\,351\,408\,197\,632\ \#1^{6} - 591\,701\,371\,191\,864\,410\,112\ \#1^{7} +$
$442\,936\,140\,843\,213\,864\,960\ \#1^{8} - 275\,308\,180\,674\,442\,018\,816\ \#1^{9} +$
$143\,208\,928\,923\,654\,668\,288\ \#1^{10} - 62\,655\,701\,239\,304\,847\,872\ \#1^{11} +$
$23\,115\,614\,063\,608\,354\,304\ \#1^{12} - 7\,194\,172\,796\,107\,088\,384\ \#1^{13} +$
$1\,885\,645\,086\,111\,188\,480\ \#1^{14} - 414\,645\,442\,256\,220\,736\ \#1^{15} +$

```
        76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136 #1^17 +
        1 421 817 926 789 824 #1^18 - 140 603 723 926 691 #1^19 +
        10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 +
        25 604 610 845 #1^22 - 654 909 923 #1^23 + 7 890 481 #1^24 &, 1]^14 -
  2 160 000 Root[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 #1 +
        79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 +
        399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 +
        648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 +
        442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 +
        143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872 #1^11 +
        23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384 #1^13 +
        1 885 645 086 111 188 480 #1^14 - 414 645 442 256 220 736 #1^15 +
        76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136 #1^17 +
        1 421 817 926 789 824 #1^18 - 140 603 723 926 691 #1^19 +
        10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 +
        25 604 610 845 #1^22 - 654 909 923 #1^23 + 7 890 481 #1^24 &, 1]^15 +
  50 625 Root[2 168 918 902 061 400 064 - 18 978 040 393 037 250 560 #1 +
        79 368 876 072 309 358 592 #1^2 - 210 927 363 520 506 036 224 #1^3 +
        399 577 242 368 348 585 984 #1^4 - 573 829 583 478 846 586 880 #1^5 +
        648 682 023 351 408 197 632 #1^6 - 591 701 371 191 864 410 112 #1^7 +
        442 936 140 843 213 864 960 #1^8 - 275 308 180 674 442 018 816 #1^9 +
        143 208 928 923 654 668 288 #1^10 - 62 655 701 239 304 847 872 #1^11 +
        23 115 614 063 608 354 304 #1^12 - 7 194 172 796 107 088 384 #1^13 +
        1 885 645 086 111 188 480 #1^14 - 414 645 442 256 220 736 #1^15 +
        76 017 374 115 971 904 #1^16 - 11 512 748 778 227 136 #1^17 +
        1 421 817 926 789 824 #1^18 - 140 603 723 926 691 #1^19 +
        10 847 052 121 181 #1^20 - 627 853 463 651 #1^21 + 25 604 610 845 #1^22 -
        654 909 923 #1^23 + 7 890 481 #1^24 &, 1]^16)^(1/4))}}
```

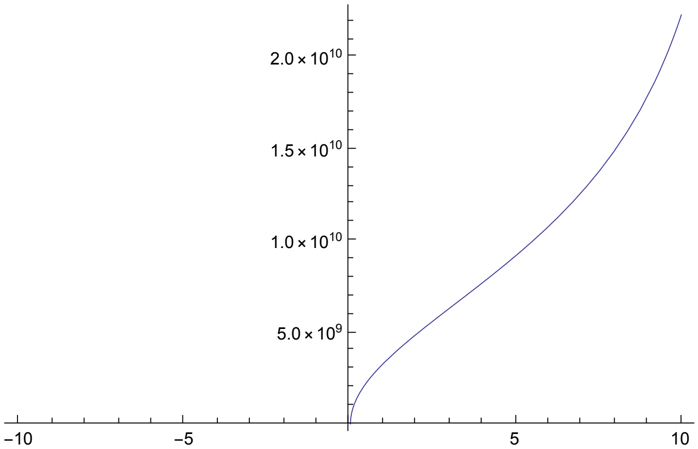
Previously, it was shown that the radius of our initial circle can be expressed in terms of the height of a cone and a given angle through which the initial circle is folded, pulling a cone into the third dimension.

$$\left\{r \to \frac{2\,h\,\pi}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\} \tag{51}$$

$$h = c * 6 * \theta;\ \text{where } c \simeq (3.0 * 10^{\wedge}8) \tag{52}$$

In our space-time model, the cone extends through its height at the speed of light. Although, for every distance r traveled by the light, through a certain amount of time, into the dimension represented by the distance h, the circumference of the initial circle declines at a rate such that the distance that theta covers in arc lengths relating to the circumference of the base of the cone and the radial distance covered, does not exceed r. For, if it did exceed r, light would have a specific geometric element that goes faster than light, which is a paradox of the highest order.

$$\text{Plot}\left[\frac{2\,(3.0*10\text{^}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}, \{\theta, -10, 10\}\right]$$



$$r = \frac{2\,(3.0*10\text{^}8)\,(6)\,(\Theta)\,\pi}{\sqrt{4\,\pi\,\Theta-\Theta^2}}$$

$$\frac{4\,\pi^2\,h^2}{4\,\pi\,\Theta-\Theta^2} = r^2$$

We are now going to redefine the variable h to distinguish it from Planck' s constant.

From this point forth, what was previously known as the variable h, height, will now be termed y, and it is the height of the cone.

$$\frac{4\,\pi^2\,y^2}{4\,\pi\,\Theta-\Theta^2} = r^2$$

h is Planck' s Constant and is expressible by :

h = 6.62606896*10^–34

6.62607×10^{-34}

E = h ν, where E is energy, h is Planck ' s Constant, and ν is frequency. (53)

E = ℏ ω, where E is energy, h – bar is h / 2 π, and omega is angular frequency. (54)

v = λ ν, where v is velocity, λ is wavelength, and f is frequency. (55)

E = m c ^ 2, where E is energy, m is mass, and c is the speed of light. (56)

We will now say that the wavelength, λ, has the quality of the geometric system that takes a circle and folds it into a cone. That wavelength can be described by the function of height and angle, and reduced to being purely in terms of theta.

$$r = \frac{2\,(3.0*10\text{^}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = \lambda$$

$$\text{Solve}\left[(3.0 * 10\text{^}8) == \frac{2\ (3.0 * 10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\,\pi\,\theta - \theta^2}} * \nu,\ \nu\right]$$

$$\left\{\left\{\nu \to \frac{0.0265258\ \sqrt{12.5664\,\theta - 1.\ \theta^2}}{\theta}\right\}\right\}$$

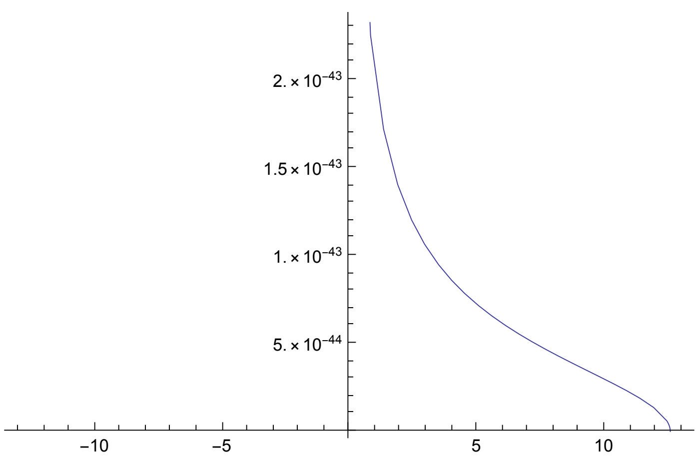
E = m c^2 = h ν

m c^2 = h ν = (6.62606896 * 10^-34) ν

$$\text{Solve}\left[(6.62606896 * 10\text{^}{-34}) \left(\frac{0.02652582384864922\text{\`}\ \sqrt{12.566370614359172\text{\`}\ \theta - 1.\text{\`}\ \theta^2}}{\theta}\right) == m\ (3.0 * 10\text{^}8),\ m\right]$$

$$\left\{\left\{m \to \frac{5.85873 \times 10^{-44}\ \sqrt{12.5664\,\theta - 1.\ \theta^2}}{\theta}\right\}\right\}$$

$$\text{Plot}\left[\frac{5.858731268065412\text{\`}*\text{^}{-44}\ \sqrt{12.566370614359172\text{\`}\ \theta - 1.\text{\`}\ \theta^2}}{\theta},\ \{\theta, -13, 13\}\right]$$



$$\text{Solve}\left[0 == \frac{5.858731268065412\text{\`}*\text{^}{-44}\ \sqrt{12.566370614359172\text{\`}\ \theta - 1.\text{\`}\ \theta^2}}{\theta},\ \theta\right]$$

$\{\{\theta \to 12.5664\}\}$

4 π - 12.566370614359172`

0.

$$\text{Solve}\left[\frac{4\,\pi^2\,y^2}{4\,\pi\ (4\,\pi) - (4\,\pi)^2} == r^2,\ y\right]$$

{{}}

$$m \to \frac{5.858731268065412\text{\`}*\text{^}{-44}\ \sqrt{12.566370614359172\text{\`}\ \theta - 1.\text{\`}\ \theta^2}}{\theta}$$

$$\frac{5.858731268065412`*^{-44}\sqrt{12.566370614359172`(360)-1.`(360)^2}}{360}$$

$0. + 5.75557\times 10^{-44}\,i$

$$\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}$$

$2\,\pi = \text{ArcTan}[r_1 / h]$

$r_1 = \sqrt{}(r^2 - h^2)$

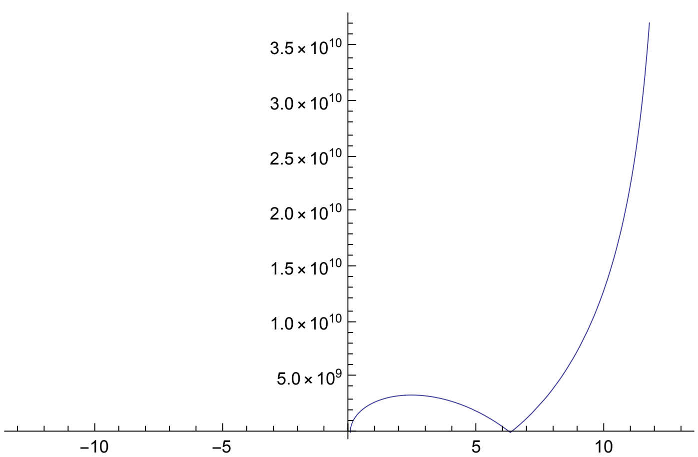
$$\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi} = h = c\,\tau = (18.0*10^8)\;\theta$$

$$r = \frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = \lambda$$

$$\frac{\sqrt{\left(\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2(4\,\pi-\theta)\,\theta}}{2\,\pi} = h$$

$$r_1 = \sqrt{\left(\left(\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^{\wedge}2 - \left(\frac{\sqrt{\left(\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2(4\,\pi-\theta)\,\theta}}{2\,\pi}\right)^{\wedge}2\right)}$$

$$\text{Plot}\left[\sqrt{\left(\left(\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^{\wedge}2 - \left(\frac{\sqrt{\left(\frac{2\,(3.0*10^8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2(4\,\pi-\theta)\,\theta}}{2\,\pi}\right)^{\wedge}2\right)},\ \{\theta,\,-13,\,13\}\right]$$

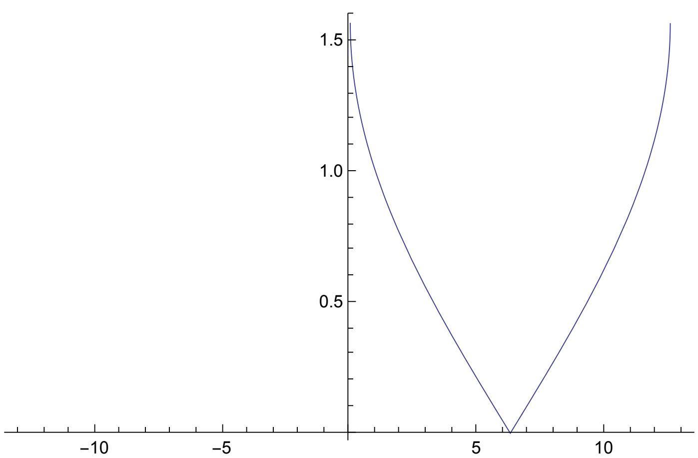


$$r_1 = \sqrt{\left(\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\wedge 2 - \left(\frac{\sqrt{\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2 (4\,\pi-\theta)\,\theta}}{2\,\pi}\right)\wedge 2\right)}$$

$2\,\pi$ = ArcTan[r_1 / h] :=

$$\text{ArcTan}\left[\sqrt{\left(\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\wedge 2 - \left(\frac{\sqrt{\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2 (4\,\pi-\theta)\,\theta}}{2\,\pi}\right)\wedge 2\right)} \Big/ \frac{\sqrt{\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2 (4\,\pi-\theta)\,\theta}}{2\,\pi}, \{\theta, -13, 13\}\right]$$

$$\text{Plot}\left[\text{ArcTan}\left[\sqrt{\left(\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\wedge 2 - \left(\frac{\sqrt{\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2 (4\,\pi-\theta)\,\theta}}{2\,\pi}\right)\wedge 2\right)} \Big/ \frac{\sqrt{\left(\frac{2\,(3.0*10\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2 (4\,\pi-\theta)\,\theta}}{2\,\pi}\right], \{\theta, -13, 13\}\right]$$



$$\text{Solve}\left[2\pi == \text{ArcTan}\left[\sqrt{\left(\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)\text{^}2-\left(\frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}\right)\text{^}2\right)} \Big/ \frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}\right], \theta\right]$$

{}

Tan[2 π]

0

$$\text{Solve}\left[0 == \sqrt{\left(\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)\text{^}2-\left(\frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}\right)\text{^}2\right)} \Big/ \frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}, \theta\right]$$

{{θ → 6.28319}, {θ → 6.28319}}

$$\sqrt{\left(\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)\text{^}2-\left(\frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}\right)\text{^}2\right)} \Big/ \frac{\sqrt{\left(\frac{2\ (3.0*10\text{^}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\ \theta}}{2\pi}, \theta\Big]$$

We know that only radiant energy is available to the eye for stimuli. I will now show that this radiant energy can be expressed in terms of the parameters of the cone. The wavelength of light is the height of the cone, and the velocity of the light is equal to the speed of light in a vaccuum. Therefore, we can place the energy of the light in terms of the speed of light, the initial radius of the circle, and the velocity of light. We can then show that information available in this energy comes in the idea of illusory contour. This mean that everything we see is an illusion.

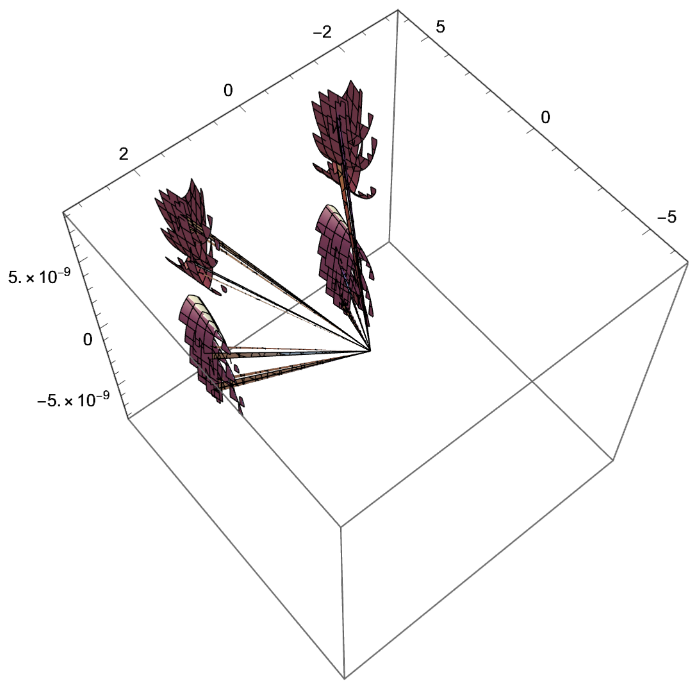
$$\text{velocity} = \lambda\nu = \eta\nu = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\nu = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\left(\frac{1}{\left(\frac{\theta}{k}\right)}\right) = c$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2}{c^2+r^2} == 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ r\right]$$

$$\left\{\left\{r\to-\frac{\sqrt{-c^2-c^2\,\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\text{Sin}[\beta]^2}}}\right\},\ \left\{r\to\frac{\sqrt{-c^2-c^2\,\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\text{Sin}[\beta]^2}}}\right\}\right\}$$

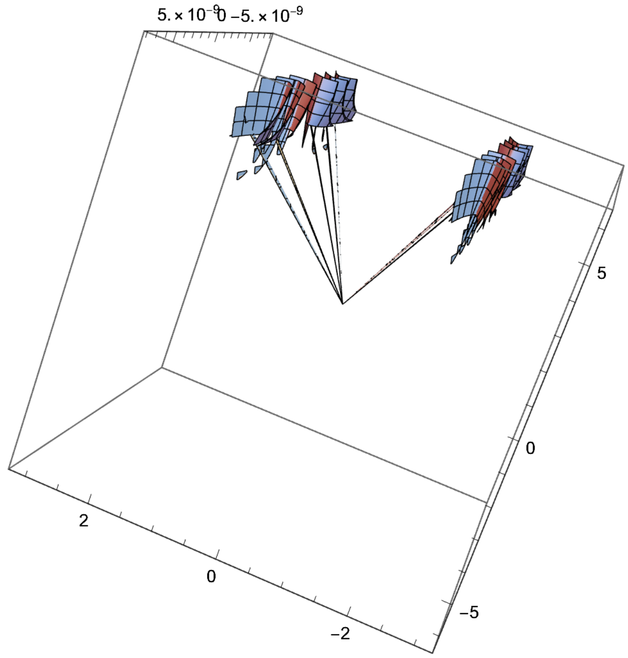
$$\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\left(\frac{1}{\left(\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right)}\right),\right.$$

$$\left.\{r,-(8*(10\wedge-9)),(8*(10\wedge-9))\},\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi,\pi\}\right]$$

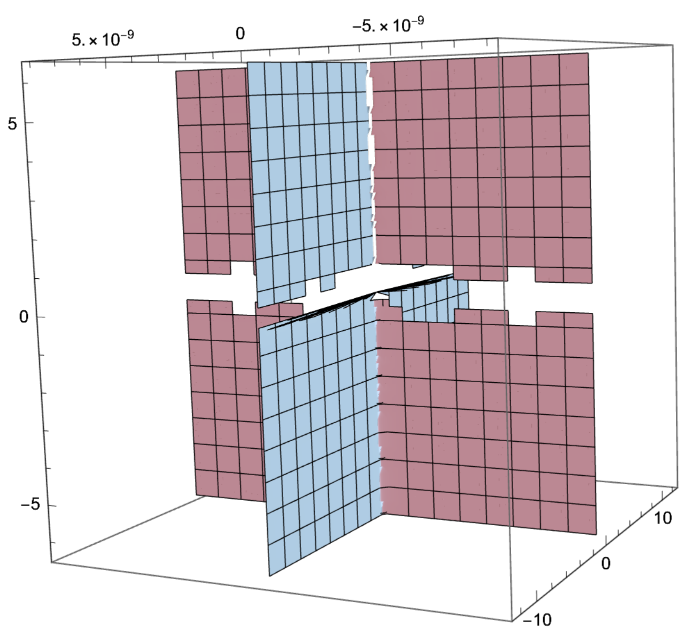


$$\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\left(2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\,\left(\frac{1}{\left(\frac{\theta}{2\,\pi}\right)}\right),\right.$$

$$\left.\{r, -(8*(10\wedge-9)), (8*(10\wedge-9))\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{ContourPlot3D}\left[\lambda\,\left(\frac{1}{\left(\frac{\theta}{k}\right)}\right), \{\lambda, -(8*10\wedge-9), (8*10\wedge-9)\}, \{\theta, -2\,\pi, 2\,\pi\}, \{k, -4\,\pi, 4\,\pi\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\frac{1}{\left(\frac{\theta}{k}\right)}\right) == c,\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\,k^2\,\pi\,r^2}{4\,c^2\,\pi^2 + k^2\,r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\frac{1}{\left(\frac{\theta}{(2\,\pi)}\right)}\right) == c,\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\,\pi\,r^2}{c^2 + r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\frac{1}{\left(\frac{\theta}{k}\right)}\right) == c,\ r\right]$$

$$\left\{\left\{r \to -\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi - k^2\,\theta}}\right\},\ \left\{r \to \frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi - k^2\,\theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\frac{1}{\left(\frac{\theta}{2\,\pi}\right)}\right) == c,\ r\right]$$

$$\left\{\left\{r \to -\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\},\ \left\{r \to \frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi} == \frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}},\ \theta\right]$$

$$\left\{\left\{\theta \to -1.88365\times 10^9\right\},\ \{\theta \to 0.\}\right\}$$

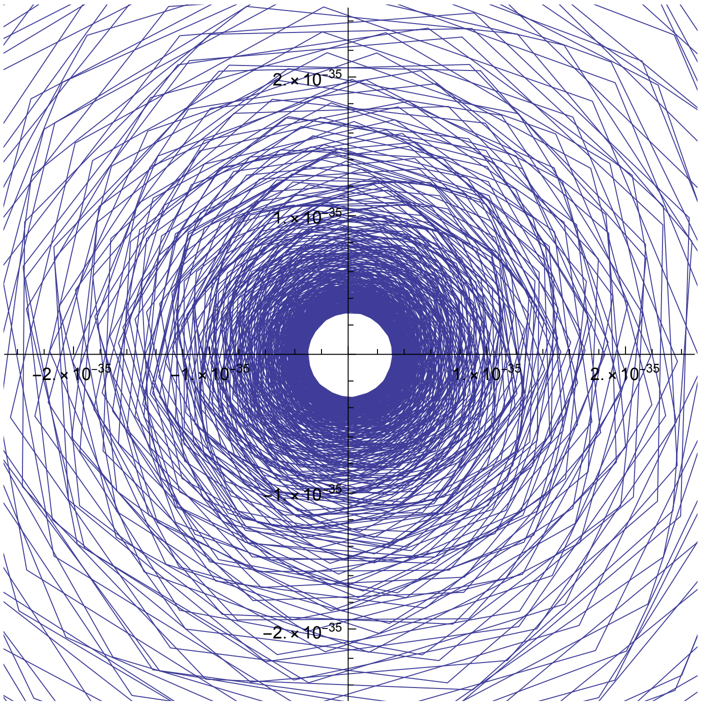
```
9.28 * 180 / π
```

```
531.705
```

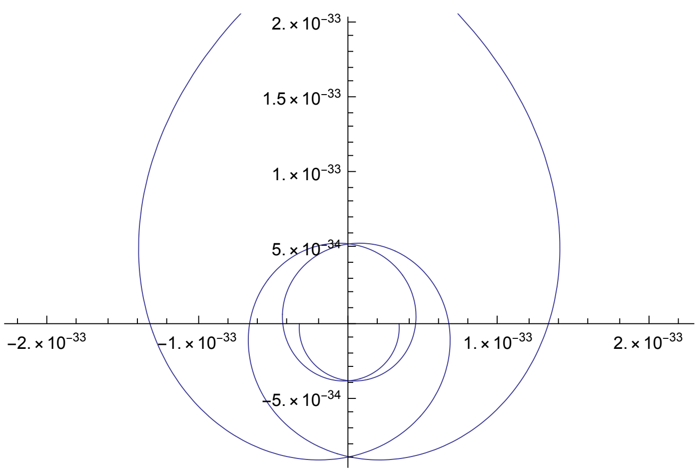
$$E = h\,\nu = h\,\frac{1}{\frac{4\,k^2\,\pi\,r^2}{4\,c^2\,\pi^2 + k^2\,r^2}} = \frac{h\,\left(4\,c^2\,\pi^2 + k^2\,r^2\right)}{4\,k^2\,\pi\,r^2} = \frac{h\,\left(4\,k^2\,\pi - k^2\,\theta\right)\,\left(4\,c^2\,\pi^2 + \frac{4\,c^2\,k^2\,\pi^2\,\theta}{4\,k^2\,\pi - k^2\,\theta}\right)}{16\,c^2\,k^2\,\pi^3\,\theta},$$

and when $k = 2\,\pi$, $E = \dfrac{h}{\frac{\left(\frac{4\,\pi\,r^2}{c^2+r^2}\right)}{2\,\pi}} = \dfrac{h\,\left(c^2 + r^2\right)}{2\,r^2} = \dfrac{h\,\left(c^2 + \left(\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right)^2\right)}{2\,\left(\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right)^2} = \dfrac{h\,(4\,\pi - \theta)\,\left(c^2 + \frac{c^2\,\theta}{4\,\pi - \theta}\right)}{2\,c^2\,\theta}$

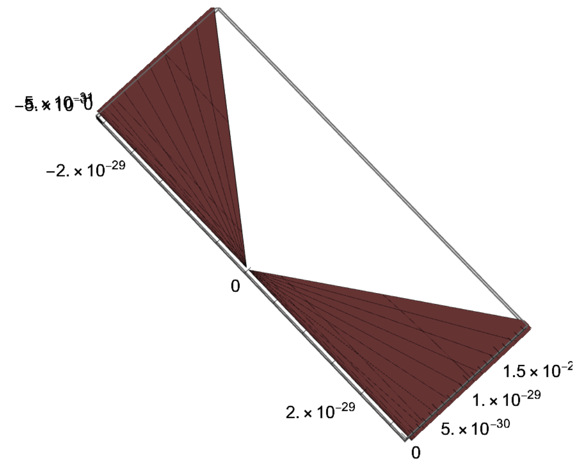
$$\text{PolarPlot}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2}, \{\theta, -400\pi, 400\pi\}\right]$$



$$\text{PolarPlot}\left[\frac{h\,(4\pi-\theta)\left(c^2+\frac{c^2\,\theta}{4\pi-\theta}\right)}{2\,c^2\,\theta}, \{\theta, -4\pi, 4\pi\}\right]$$

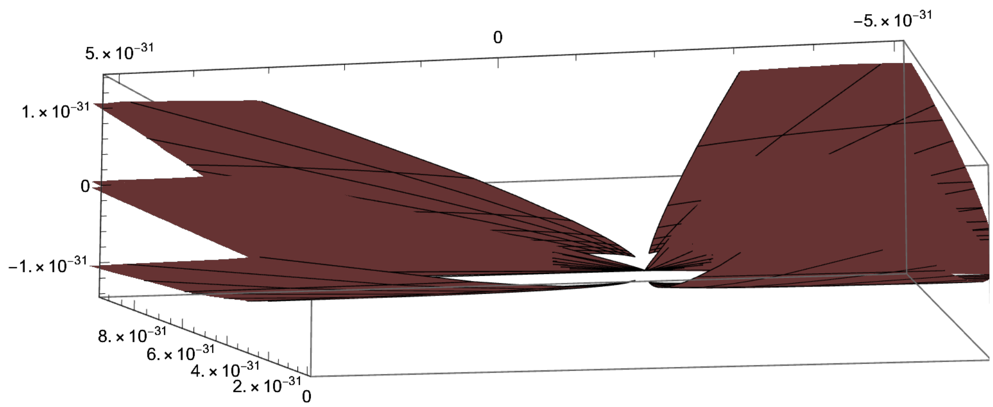


$$\texttt{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{\sqrt{-c^2-c^2\sqrt{1-\texttt{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\texttt{Sin}[\beta]^2}}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2},\ \{\theta,\ -.2\,\pi,\ .2\,\pi\},\ \{\beta,\ -.1\,\pi,\ .1\,\pi\}\right]$$



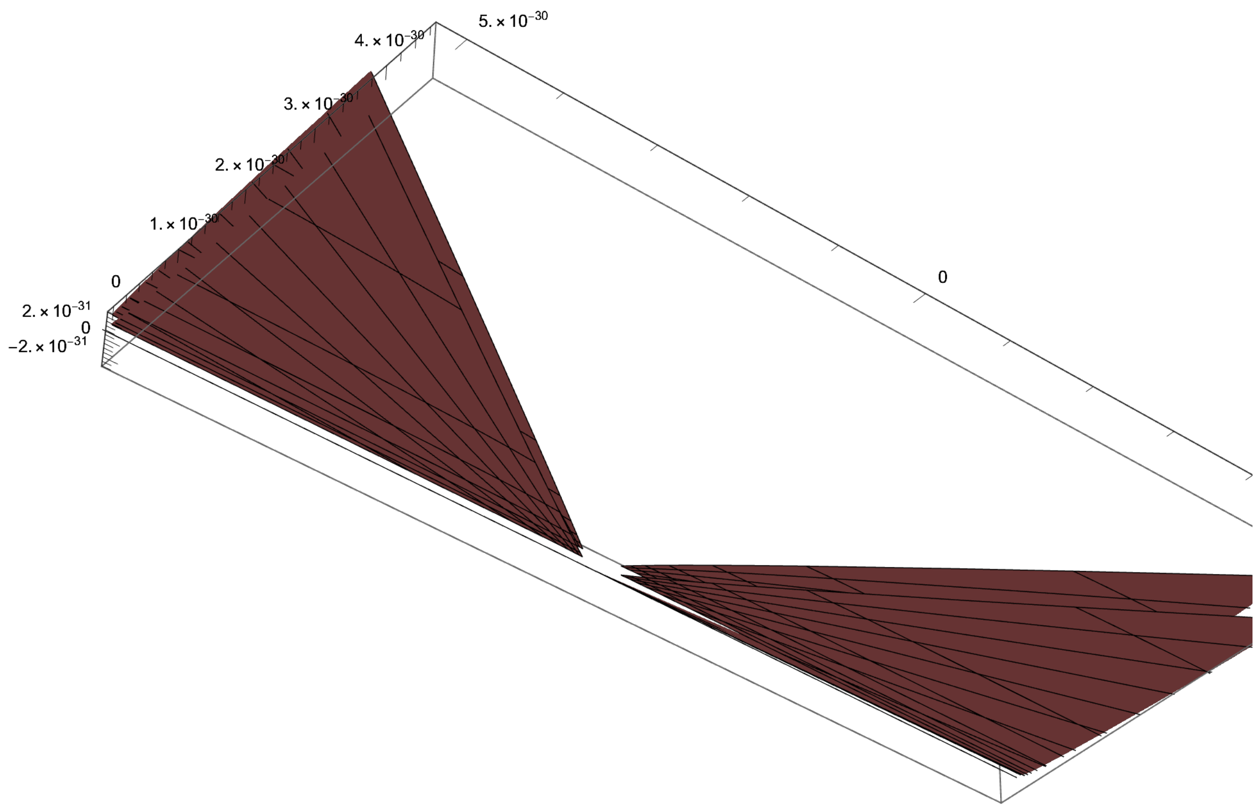
$$\texttt{SphericalPlot3D}\left[\left\{\frac{h\left(c^2+\left(\frac{\sqrt{-c^2-c^2\ \sqrt{1-\texttt{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\texttt{Sin}[\beta]^2}}}\right)^2\right)}{2\left(\frac{c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \frac{h\left(c^2+\left(\frac{c\ \sqrt{\theta}}{\sqrt{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\ \texttt{Sin}[\beta]^2}\right)}}\right)^2\right)}{2\left(\frac{c\ \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\ \texttt{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2}\right\},\right.$$

$$\left.\{\theta,\ -.4\,\pi,\ .4\,\pi\},\ \{\beta,\ -.2\,\pi,\ .2\,\pi\}\right]$$

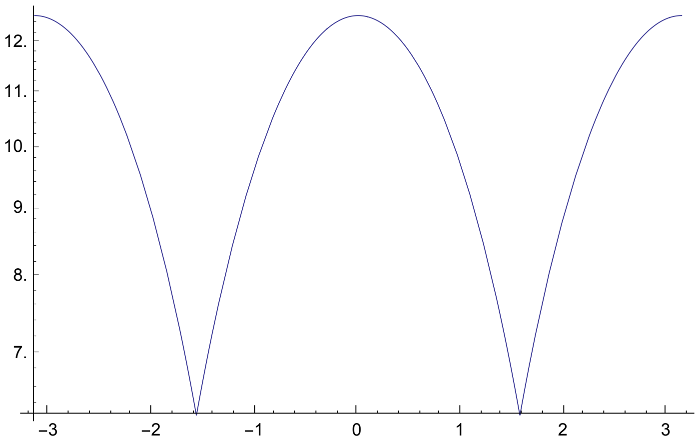


$$\text{SphericalPlot3D}\left[\left\{\frac{h\left(c^2+\left(\frac{\sqrt{-c^2-c^2\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\text{Sin}[\beta]^2}}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2},\ \frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}\right)^2}\right\},\right.$$

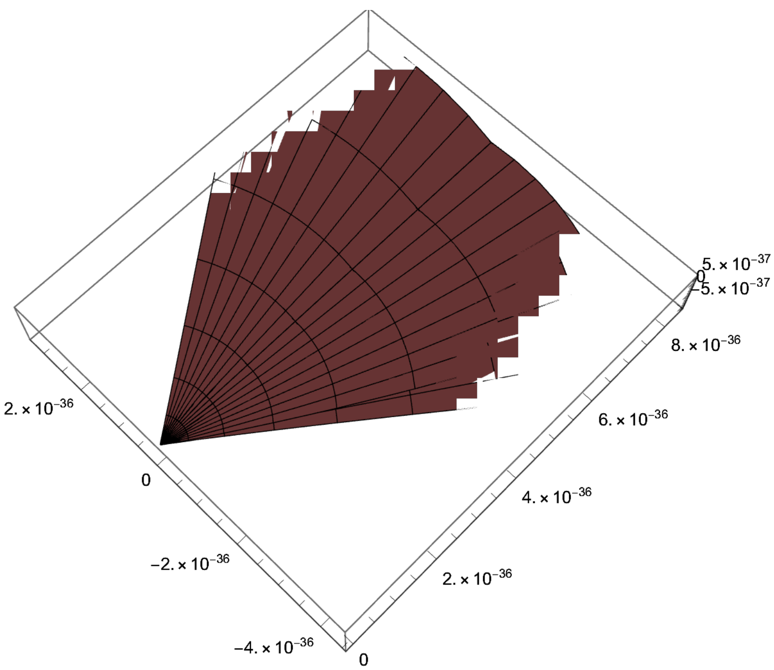
$$\left.\{\theta,-.2\pi,.2\pi\},\{\beta,-.1\pi,.1\pi\}\right]$$



```
LogPlot[2 (π + Sqrt[π^2 - π^2 Sin[β]^2]), {β, -π, π}]
```



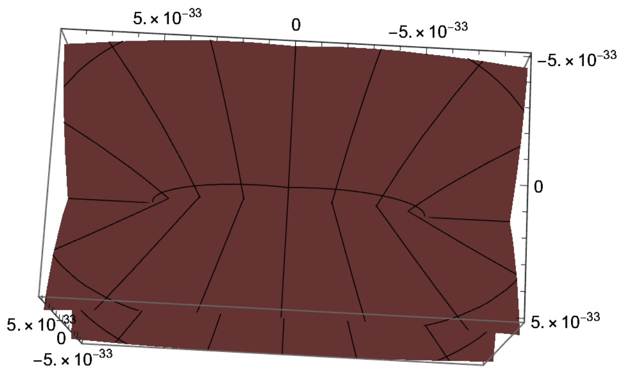

```
SphericalPlot3D[(h (c^2 + ((c Sqrt[θ])/Sqrt[4 π - θ])^2))/(2 (Sqrt[-c^2 - c^2 Sqrt[1 - Sin[β]^2]]/Sqrt[-1 + Sqrt[1 - Sin[β]^2]])^2), {θ, -.2 π, .2 π}, {β, -.1 π, .1 π}]
```



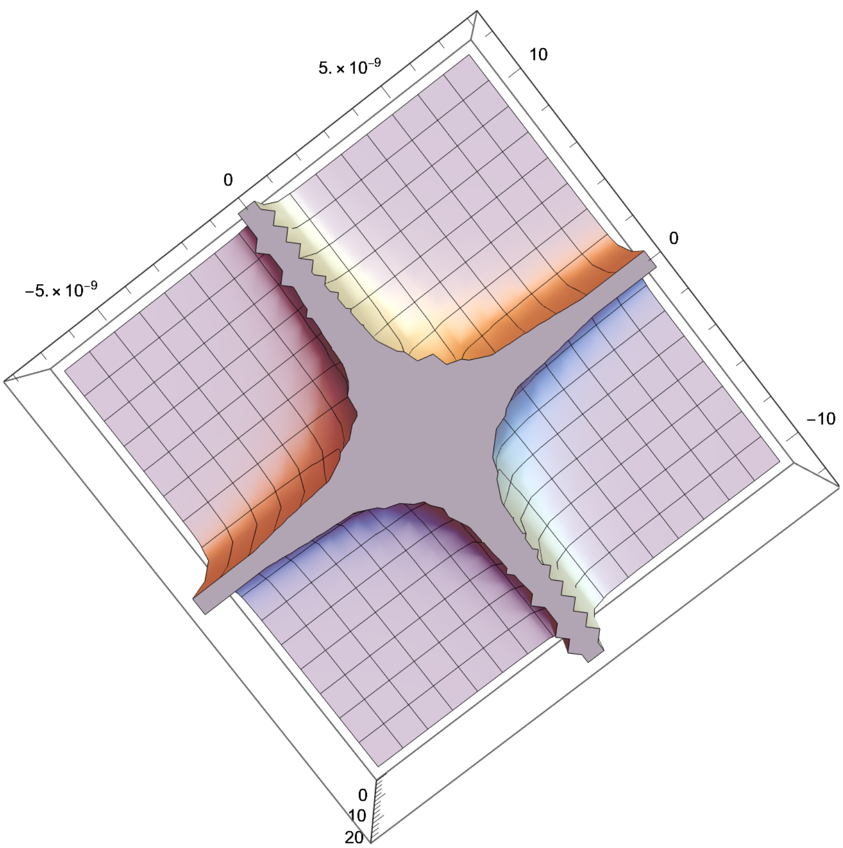

```
c := (2.99792458 * 10^8)
```

```
h := (6.62606896 * (10^-34))
```

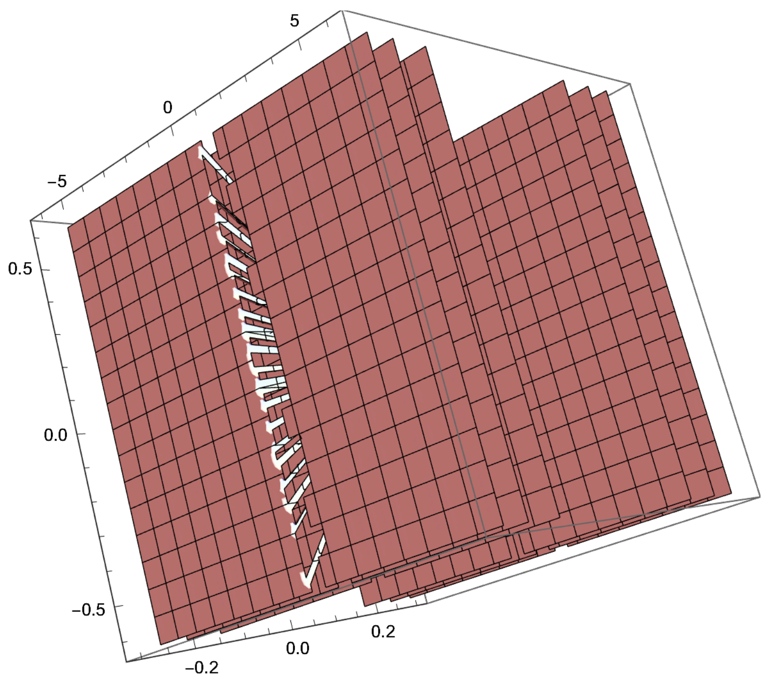
$$\text{SphericalPlot3D}\left[\frac{h\,(4\,\pi-\theta)\,\left(c^2+\frac{c^2\,2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\,\pi-\theta}\right)}{2\,c^2\,\theta},\ \{\beta,\,-\pi,\,\pi\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



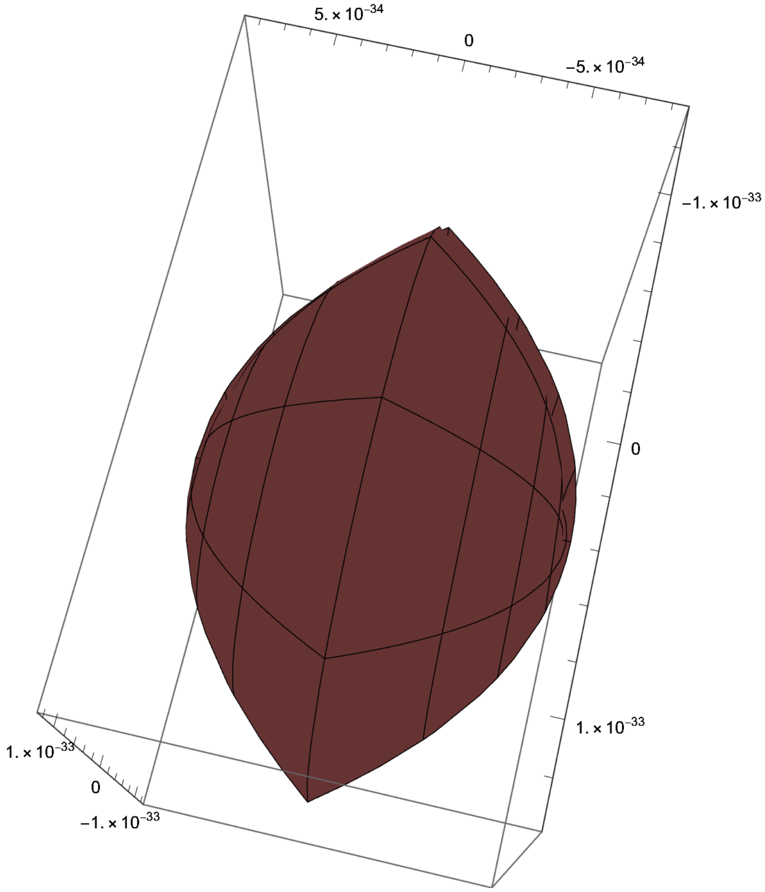
$$\text{Plot3D}\left[\frac{h\,\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,k^2\,\pi\,r^2},\ \{r,\,-(8*10^{\wedge}-9),\,(8*10^{\wedge}-9)\},\ \{k,\,-4\,\pi,\,4\,\pi\}\right]$$



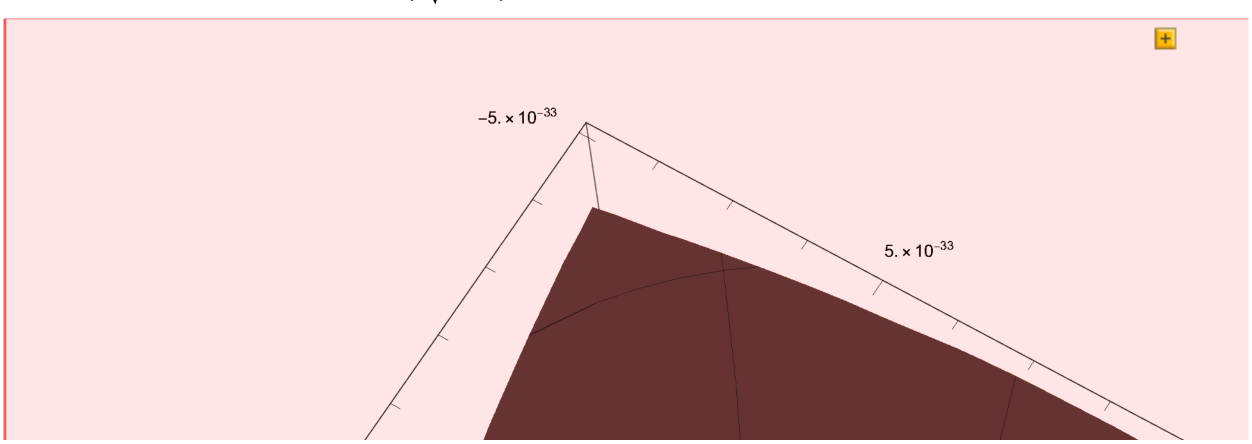
```
ContourPlot3D[h (4 k^2 π - k^2 θ) (4 c^2 π^2 + (4 c^2 k^2 π^2 θ)/(4 k^2 π - k^2 θ)) / (16 c^2 k^2 π^3 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])),
 {β, -.1 π, .1 π}, {θ, -.2 π, .2 π}, {k, -2 π, 2 π}]
```

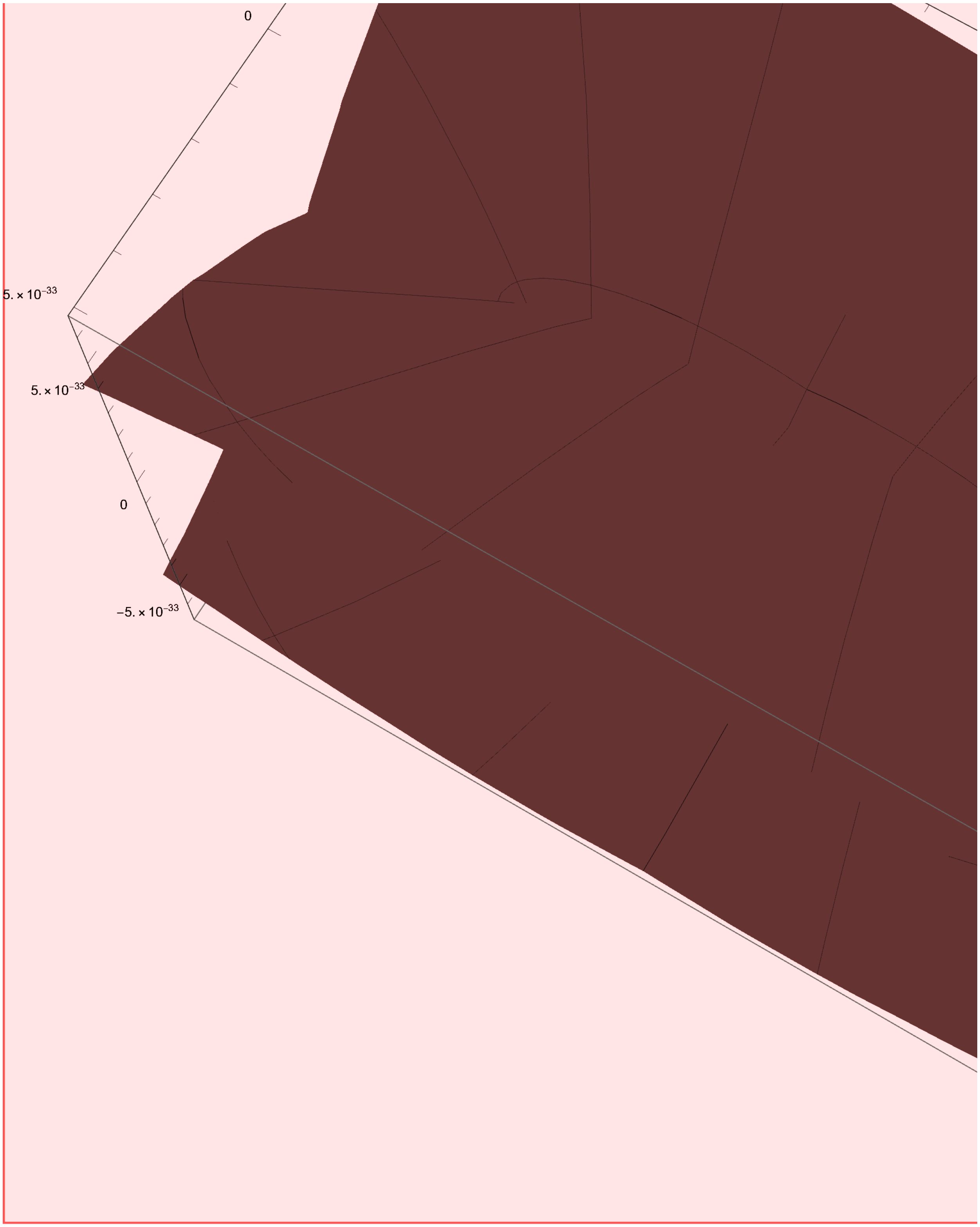


$$\text{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

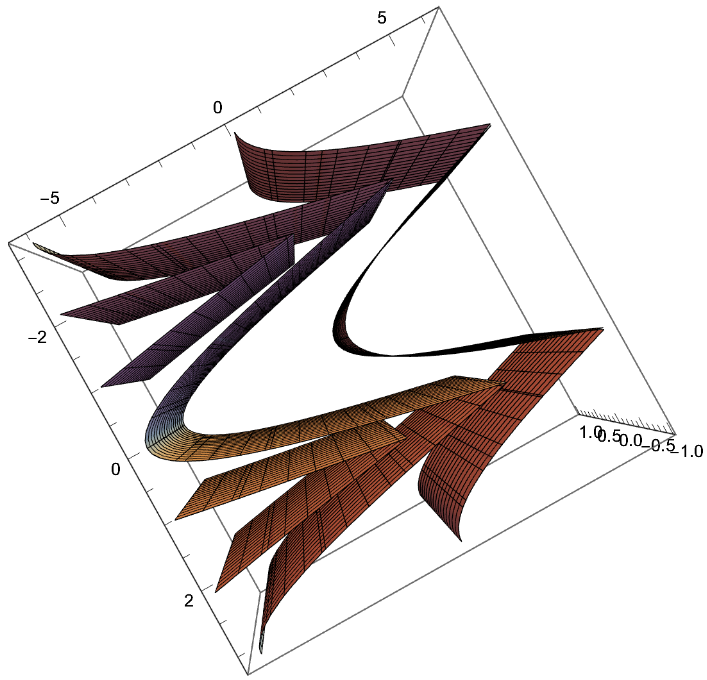


$$\text{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

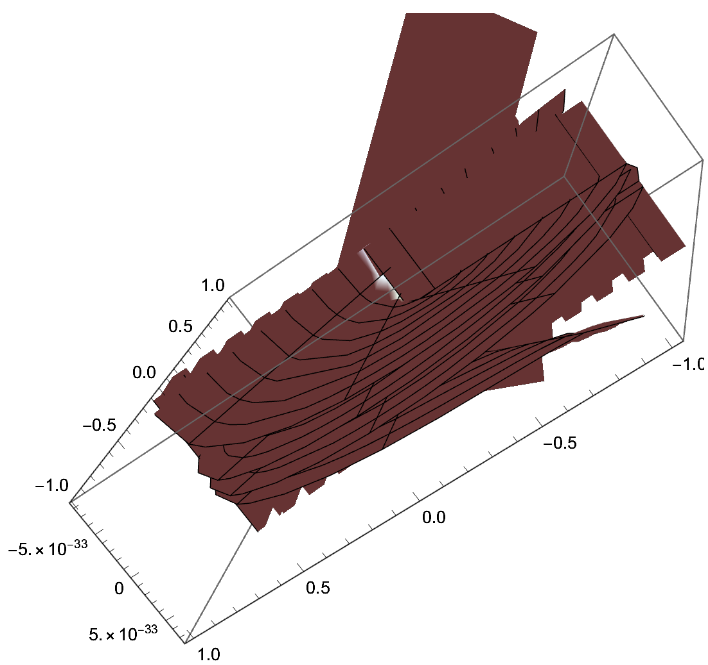



0
$5. \times 10^{-33}$
$5. \times 10^{-33}$
0
$-5. \times 10^{-33}$

$$\text{ContourPlot3D}\left[\frac{h\,(c^2+r^2)}{2\left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi,\pi\}\right]$$

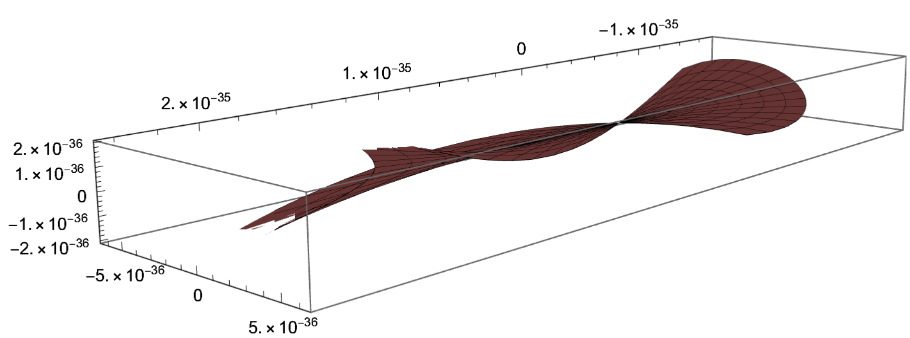


$$\text{RevolutionPlot3D}\left[\frac{h\,(c^2+r^2)}{2\left(\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



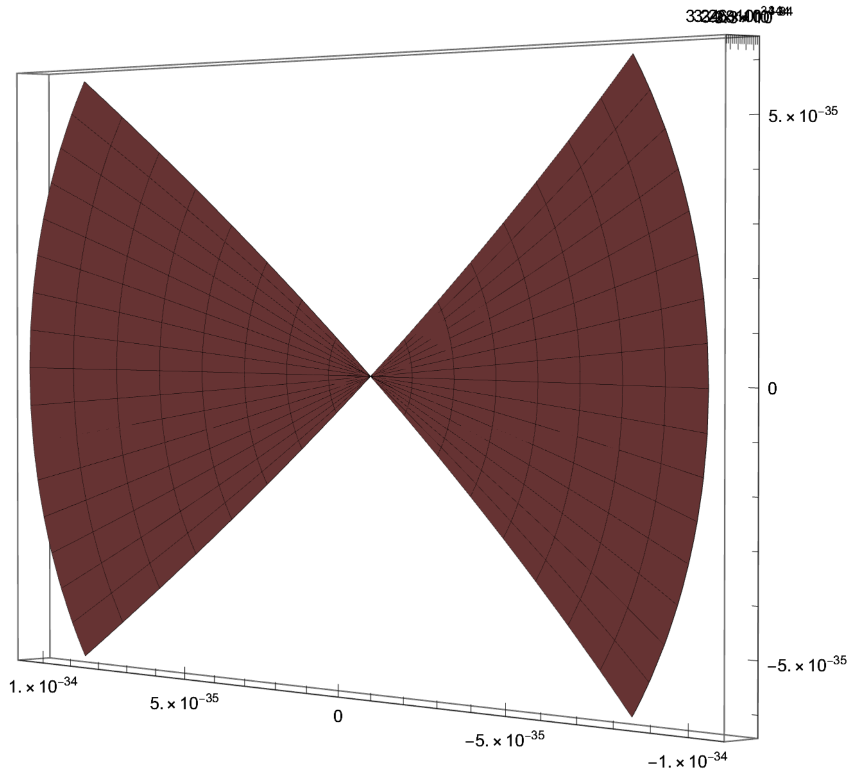
$$\text{SphericalPlot3D}\left[\frac{h\left(4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)\left(c^2+\frac{c^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}{4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)}{2\,c^2\,(\theta)},\right.$$
$$\left.\{\beta,-.1\,\pi,.1\,\pi\},\{\theta,-.2\,\pi,.2\,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{h\left(4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)\left(c^2+\frac{c^2\,\theta}{4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)}{2\,c^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)},\right.$$
$$\left.\{\beta,-.1\,\pi,.1\,\pi\},\{\theta,-.2\,\pi,.2\,\pi\}\right]$$

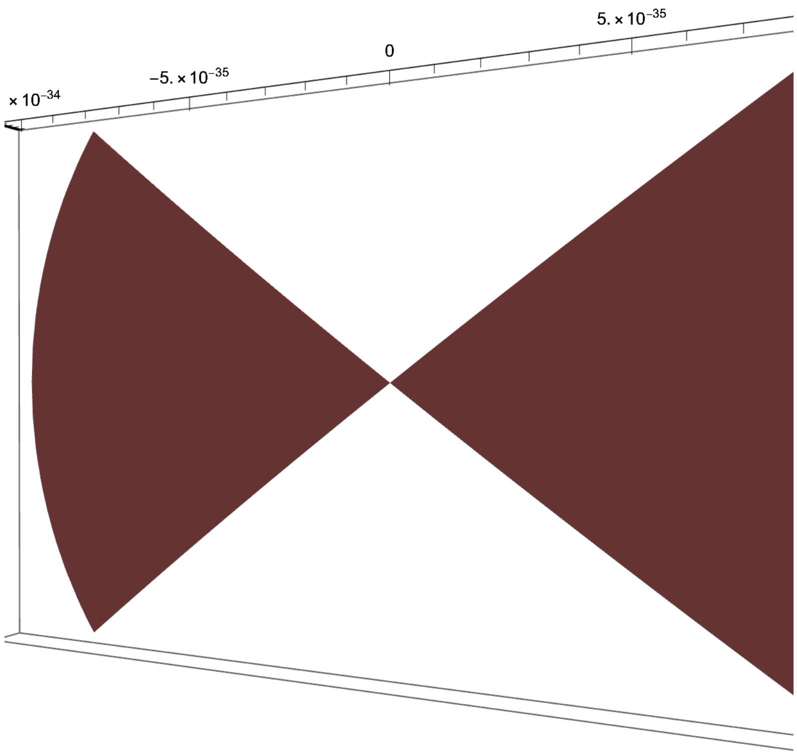


This piece is made entirely of lines,
as are all the pieces of this section. We experience both actual and virtual contour in this diagram.This comes from the meshing of individual lines and the foreshortening of their contextual meaning to the space through being placed at different depths and different angles. Because of the individual foreshortening of each line,
we are capable of detecting the non - rigid gradient when the object rotates,
or when we rotate with regard to the object. The object of perception in this situation is a graphing of a single wavelngth of external stimulus energy (radiant energy, i.e. light). The idea of compression allows us to understand the meaning of the perceived creases created from darker,
denser areas of the gradient. The relationship between the external stimulus energy and the perceived non - rigid motion through visualizing this stimulus energy existing objectively in space through the angular transition of β and θ elucidates how actual contour is perceived through the combination of individual stimuli on the retina.In relation to the more straightforward example of perceiving rigid motion,
Gibson has said that, "In general, the greater the slant of a physical surface the steeper will be all of these retinal gradients, and the steeper they are, we may postulate, the greater will be the impression of slant" (The Visual World, 174). It could also be noted that gradients of shading yield the illusion of depth on two dimensional depictions. We can also tell that there is three dimensional information of depth within a single external stimuli (wavelength of light). With actual three dimensional visualizations of radiant energy,
we find that the idea of illusory contour is extremely important,
and that the idea of a projective plane can be defined by the inherent structure of light stimulus. That in essence, the absence of line is the positive presence of depth perception. Gibson has also noted that,
"The illumination of a given surface, then, is a function of the orientation of the surface toward or away from the source of light" (The Visual World, 94). This suggests that an object has a real contour,
but if all the information received by the visual system alone is delivered through virtual contour,
we cannot say that anything but virtual contour is actually perceived.

$$\texttt{SphericalPlot3D}\left[\frac{h\,(4\,\pi-\theta)\,\left(c^2+\frac{c^2\,\theta}{4\,\pi-\theta}\right)}{2\,c^2\,\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)},\ \{\beta,\ -.1\,\pi,\ .1\,\pi\},\ \{\theta,\ -.2\,\pi,\ .2\,\pi\}\right]$$

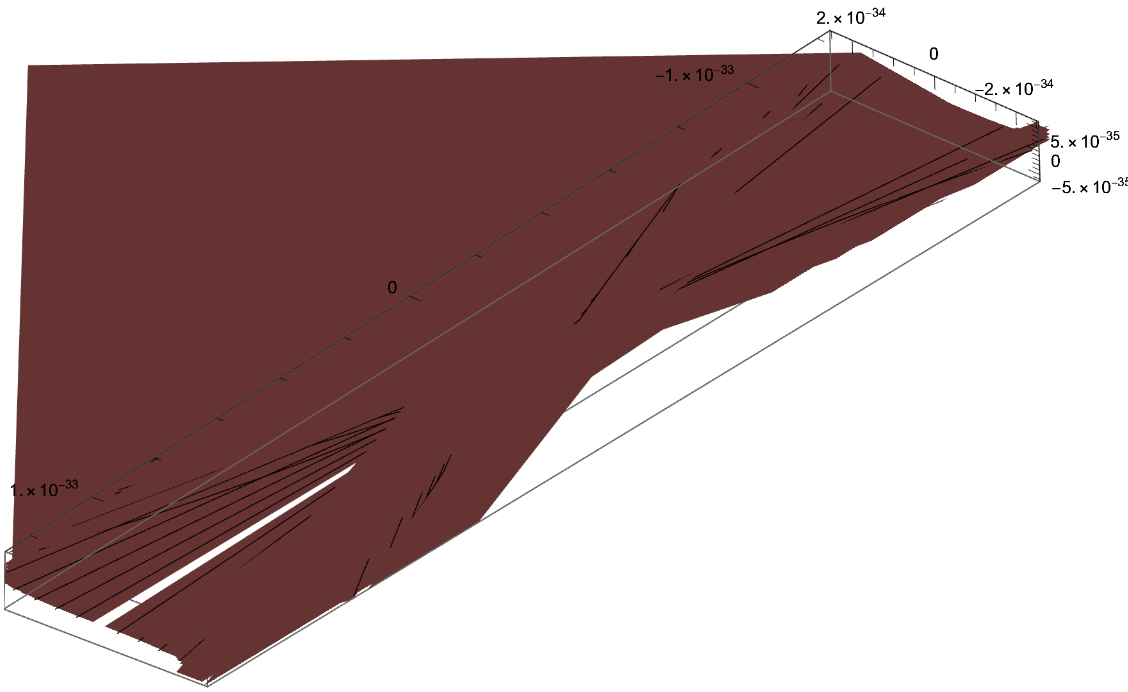


$$\text{SphericalPlot3D}\left[\frac{h\,(4\,\pi-\theta)\,\left(c^2+\frac{c^2\,\theta}{4\,\pi-\theta}\right)}{2\,c^2\,2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\ \{\beta,\ -.1\,\pi,\ .1\,\pi\},\ \{\theta,\ -.2\,\pi,\ .2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{h\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\left(c^2+\frac{c^2\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\pi-\theta}\right)}{2\,c^2\,\theta},\right.$$

$$\left.\{\beta,-.1\pi,.1\pi\},\{\theta,-.2\pi,.2\pi\}\right]$$



$$\text{Solve}\left[\frac{h\,(4\pi-\theta)\left(c^2+\frac{c^2\,\theta}{4\pi-\theta}\right)}{2\,c^2\,\theta}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{2\,h\,\pi}{c^2\,\theta}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(c^2+r^2\right)}{2\,r^2}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,k^2\,\pi\,r^2}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}==\frac{2\,h\,\pi}{c^2\,\theta},\ r\right]$$

$$\left\{\left\{r\to-\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right\},\ \left\{r\to\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right\}\right\}$$

$$r=\frac{\sqrt{-c^2-c^2\,\sqrt{1-\text{Sin}[\beta]^2}}}{\sqrt{-1+\sqrt{1-\text{Sin}[\beta]^2}}}=\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}$$

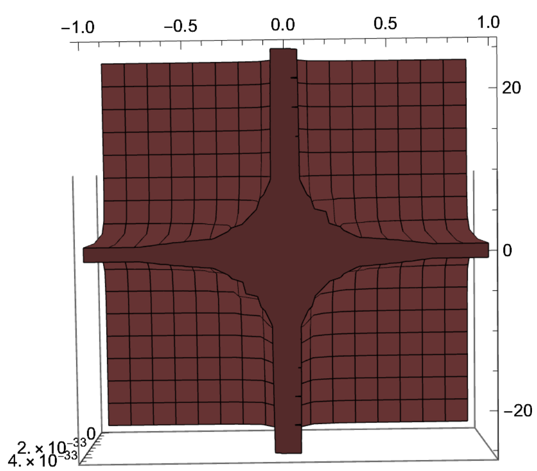
$$\text{Solve}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\left(\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right)^2\right)}{4\,k^2\,\pi\left(\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right)^2}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{h}{c^2\,\theta}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\,c\,\hat{}\,2==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2},\ \{r,-1,1\},\ \{k,-8\,\pi,8\,\pi\}\right]$$




```
c := 2.99792458 * 10^8

h := (6.62606896 * (10^-34))
```

$$\text{Solve}\left[\frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}\,c\,\hat{}\,2 == m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m \to \frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{2\,h\,\pi}{c^2\,\theta} == m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m \to \frac{2\,h\,\pi}{c^4\,\theta}\right\}\right\}$$

$$h\,\nu = h\,(1/(\theta/k)) = m\,c\,\hat{}\,2 = \frac{h}{c^2\,\theta}\,c\,\hat{}\,2 = \frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\,c\,\hat{}\,2 = \frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}\,c\,\hat{}\,2 = \frac{2\,h\,\pi}{c^2\,\theta}$$

$$\text{Solve}\left[\frac{2\,h\,\pi}{c^2\,\theta} == h\,(1/(\theta/k)),\ r\right]$$

$$\{\{\}\}$$

$$\text{Solve}\left[\frac{2\,h\,\pi}{c^2\,\theta} == h\,(1/(\theta/k)),\ \theta\right]$$

$$\{\{\}\}$$

$$\text{Solve}\left[\frac{2\,h\,\pi}{c^2\,\theta} == h\,(1/(\theta/k)),\ k\right]$$

$$\left\{\left\{k \to \frac{2\,\pi}{c^2}\right\}\right\}$$

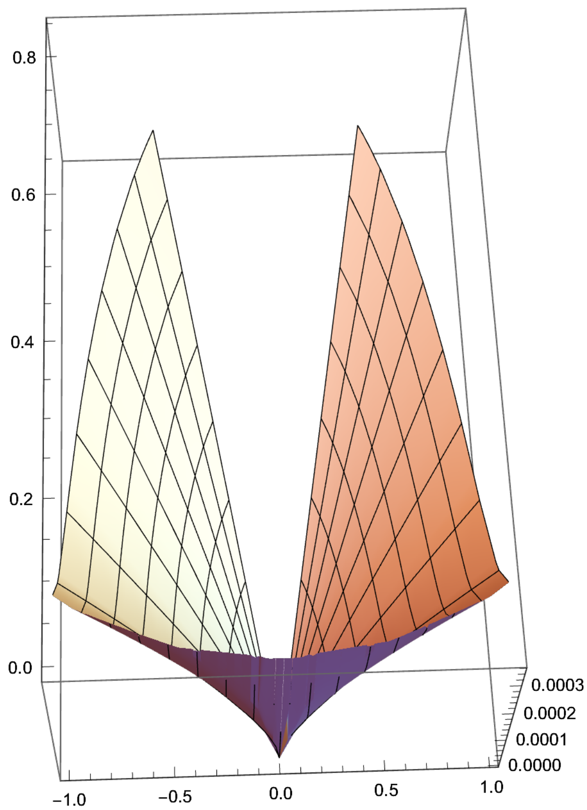
$$\eta == c\left(\frac{\theta}{\frac{2\,\pi}{c^2}}\right) =$$

$$c\left(\frac{\frac{2\,k\,r^2}{c^2+r^2}}{\frac{2\,\pi}{c^2}}\right) = c\left(\frac{\frac{4\,k^3\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2}}{\frac{2\,\pi}{c^2}}\right) = c\left(\frac{\frac{2\,k\,r^2}{c^2\left(c^2+r^2\right)}}{\frac{2\,\pi}{c^2}}\right) = c\left(\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{\frac{2\,\pi}{c^2}}\right) = \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$

$$\text{Solve}\left[\eta == c\left(\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{\frac{2\,\pi}{c^2}}\right),\ \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\sqrt{\frac{\left(2\,c^3-\eta\right)\eta}{c^6}}\right]\right\},\ \left\{\beta \to \text{ArcSin}\left[\sqrt{\frac{\left(2\,c^3-\eta\right)\eta}{c^6}}\right]\right\}\right\}$$

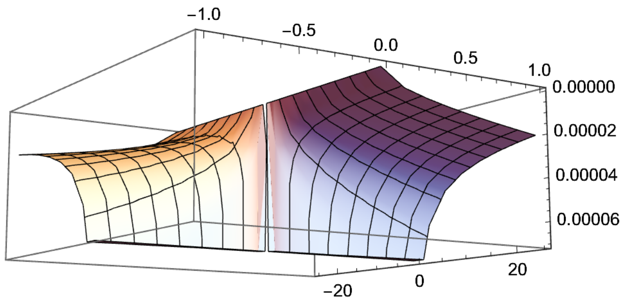
$$\text{RevolutionPlot3D}\left[\frac{c\sqrt{\pi}\sqrt{\eta}}{\sqrt{c^3 k - \pi\eta}}, \{\eta, -1, 1\}, \{k, -1, 1\}\right]$$



$$\text{Solve}\left[\eta == c\left(\frac{\frac{2 k r^2}{c^2+r^2}}{\frac{2\pi}{c^2}}\right), r\right]$$

$$\left\{\left\{r \to -\frac{c\sqrt{\pi}\sqrt{\eta}}{\sqrt{c^3 k - \pi\eta}}\right\}, \left\{r \to \frac{c\sqrt{\pi}\sqrt{\eta}}{\sqrt{c^3 k - \pi\eta}}\right\}\right\}$$

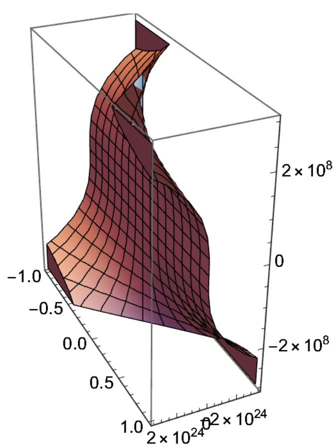
$$\text{Plot3D}\left[\frac{c\sqrt{\pi}\ \sqrt{\eta}}{\sqrt{c^3\,k-\pi\,\eta}},\ \{\eta,\ -1,\ 1\},\ \{k,\ -8\,\pi,\ 8\,\pi\}\right]$$



$$\text{Solve}\left[\frac{c\sqrt{\pi}\ \sqrt{\eta}}{\sqrt{c^3\,k-\pi\,\eta}} == \frac{2\,c\,\pi\,\sqrt{\eta}}{\sqrt{2\,c^3\,k^3-k^2\,\eta}},\ \eta\right]$$

$$\left\{\{\eta\to 0\},\ \left\{\eta\to\frac{2\left(c^3\,k^3-2\,c^3\,k\,\pi\right)}{k^2-4\,\pi^2}\right\}\right\}$$

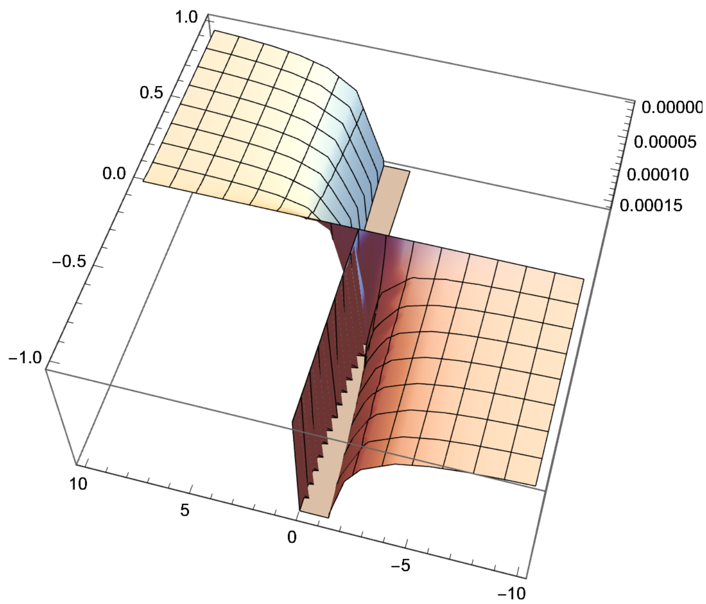
$$\text{Plot3D}\left[\frac{2\left(c^3\,k^3-2\,c^3\,k\,\pi\right)}{k^2-4\,\pi^2},\ \{k,\ -1,\ 1\},\ \{c,\ -2.99792458*10\hat{}8,\ 2.99792458*10\hat{}8\}\right]$$



$$\text{Solve}\left[\eta == c\left(\frac{\frac{4\,k^3\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2}}{\frac{2\,\pi}{c^2}}\right),\ r\right]$$

$$\left\{\left\{r\to-\frac{2\,c\,\pi\,\sqrt{\eta}}{\sqrt{2\,c^3\,k^3-k^2\,\eta}}\right\},\ \left\{r\to\frac{2\,c\,\pi\,\sqrt{\eta}}{\sqrt{2\,c^3\,k^3-k^2\,\eta}}\right\}\right\}$$

$$\texttt{Plot3D}\left[\frac{2\,c\,\pi\,\sqrt{\eta}}{\sqrt{2\,c^3\,k^3 - k^2\,\eta}},\ \{k, -10, 10\},\ \{\eta, -1, 1\}\right]$$



$$\texttt{Solve}\left[\eta == c\left(\frac{\frac{2\,k\,r^2}{c^2\,(c^2+r^2)}}{\frac{2\,\pi}{c^2}}\right),\ r\right]$$

$$\left\{\left\{r \to -\frac{c\,\sqrt{\pi}\,\sqrt{\eta}}{\sqrt{c\,k - \pi\,\eta}}\right\},\ \left\{r \to \frac{c\,\sqrt{\pi}\,\sqrt{\eta}}{\sqrt{c\,k - \pi\,\eta}}\right\}\right\}$$

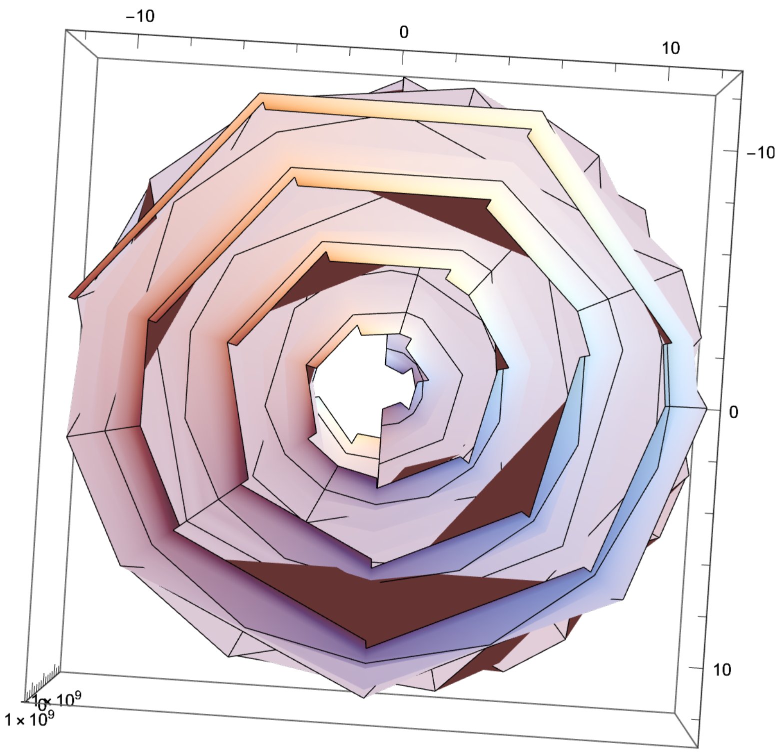
$$\texttt{Solve}\left[\eta == c\left(\frac{\theta}{\frac{2\,\pi}{c^2}}\right),\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,\pi\,\eta}{c^3}\right\}\right\}$$

$$\texttt{Solve}\left[\frac{h\,(c^2 + r^2)}{2\,c^2\,r^2}\,c\,\hat{}\,2 == h\,(1\,/\,(\theta\,/\,k)),\ r\right]$$

$$\left\{\left\{r \to -\frac{i\,c\,\sqrt{\theta}}{\sqrt{-2\,k + \theta}}\right\},\ \left\{r \to \frac{i\,c\,\sqrt{\theta}}{\sqrt{-2\,k + \theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\mathrm{i}\, c\, \sqrt{\theta}}{\sqrt{-2\,k+\theta}}, \{k, -4\,\pi, 4\,\pi\}, \{\theta, -8\,\pi, 8\,\pi\}\right]$$



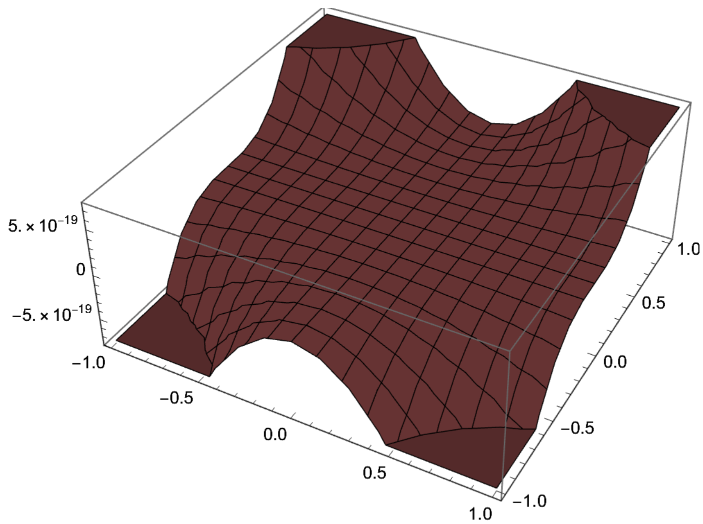
$$\text{Solve}\left[\frac{h\left(c^2+r^2\right)}{2\,c^2\,r^2}\,c\,\hat{}\,2 == h\,(1\,/\,(\theta\,/\,k)),\,\theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,k\,r^2}{c^2+r^2}\right\}\right\}$$

$$\text{Solve}\left[h\,(1\,/\,(\theta\,/\,k)) == \frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\,c\,\hat{}\,2,\,\theta\right]$$

$$\left\{\left\{\theta \to \frac{4\,k^3\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{4\,k^3\,\pi\,r^2}{4\,c^2\,\pi^2 + k^2\,r^2}, \{r, -1, 1\}, \{k, -1, 1\}\right]$$

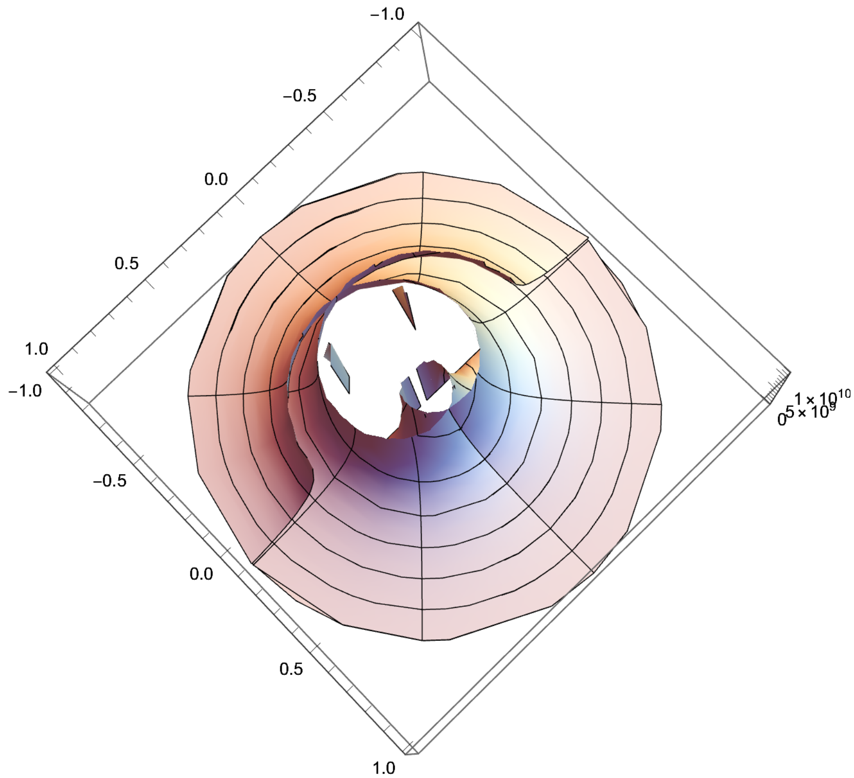


$$\text{Solve}\left[h\,(1/(\theta/k)) == \frac{h\left(4\,c^2\,\pi^2 + k^2\,r^2\right)}{4\,c^2\,k^2\,\pi\,r^2}\,c\,\hat{}\,2, r\right]$$

$$\left\{\left\{r \to -\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^3\,\pi - k^2\,\theta}}\right\}, \left\{r \to \frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^3\,\pi - k^2\,\theta}}\right\}\right\}$$

```
RevolutionPlot3D[(2 c π Sqrt[θ])/Sqrt[4 k^3 π - k^2 θ], {k, -1, 1}, {θ, -2 π, 2 π}]
```

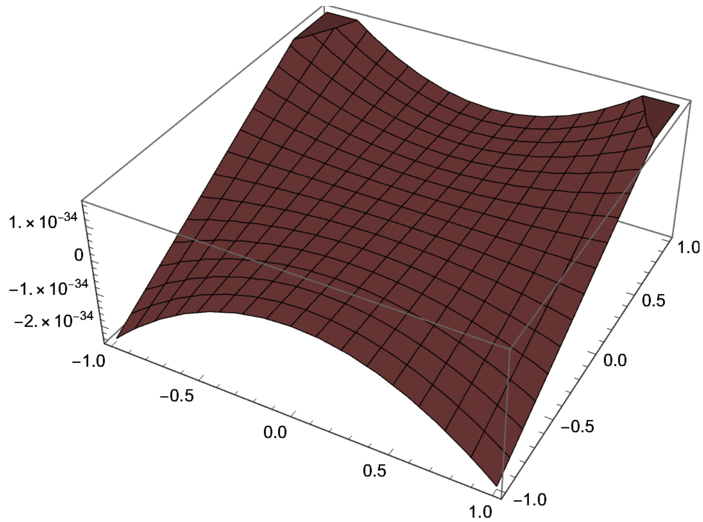
$$\text{RevolutionPlot3D}\left[\frac{2\, c\, \pi\, \sqrt{\theta}}{\sqrt{4\, k^3\, \pi - k^2\, \theta}}, \{k, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{Solve}\left[h\,(1/(\theta/k)) == \frac{h\,(c^2 + r^2)}{2\, c^2\, r^2}\, c\,\hat{}\,2\, c\,\hat{}\,2, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\, k\, r^2}{c^2\, (c^2 + r^2)}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{2\,k\,r^2}{c^2\,\left(c^2+r^2\right)},\ \{r,-1,1\},\ \{k,-1,1\}\right]$$



$$\theta = \frac{4\,k^2\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2} = \frac{4\,k^3\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2} = \frac{2\,k\,r^2}{c^2\,\left(c^2+r^2\right)}$$

$$\text{Solve}\left[\frac{2\,k\,r^2}{c^2\,\left(c^2+r^2\right)} == \frac{4\,k^2\,\pi\,r^2}{4\,c^2\,\pi^2+k^2\,r^2},\ r\right]$$

$$\left\{\{r\to 0\},\ \{r\to 0\},\ \left\{r\to -\frac{\sqrt{2\,\pi}\ \sqrt{-c^4\,k+2\,c^2\,\pi}}{\sqrt{-k^2+2\,c^2\,k\,\pi}}\right\},\ \left\{r\to \frac{\sqrt{2\,\pi}\ \sqrt{-c^4\,k+2\,c^2\,\pi}}{\sqrt{-k^2+2\,c^2\,k\,\pi}}\right\}\right\}$$

r =

$$\text{Solve}\left[\frac{1}{\theta} == (1/(\theta/k)),\ k\right]$$

$$\{\{k\to 1\}\}$$

$$\text{Solve}\left[\frac{\square}{c^2\,\theta}\,c\,\hat{}\,2 == (1/(\theta/k)),\ c\right]$$

$$\{\{\}\}$$

$$\text{Solve}\left[\frac{h}{c^2\,\theta}\,c\,\hat{}\,2 == h\,(1/(\theta/2\,\pi)),\ h\right]$$

$$\{\{h\to 0\}\}$$

$$\text{Solve}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\,(r)^2\right)}{4\,k^2\,\pi\left(\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right)^2}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)\,(4\,\pi-\theta)}{16\,c^4\,\pi^3\,\theta}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(4\,c^2\,\pi^2+k^2\left(\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right)^2\right)}{4\,k^2\,\pi\,r^2}==m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m\to\frac{4\,h\,\pi^2}{k^2\,r^2\,(4\,\pi-\theta)}\right\}\right\}$$

$$\frac{h\left(4\,c^2\,\pi^2+k^2\,r^2\right)}{4\,k^2\,\pi\,r^2}=E$$

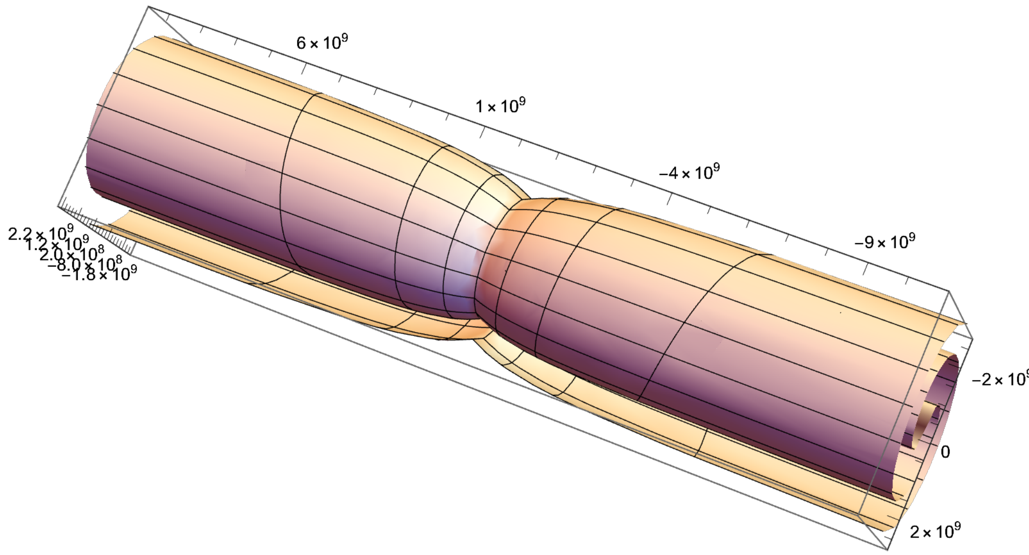
$$\frac{h\left(c^2+r^2\right)}{2\,r^2}$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}==c\,(\theta\,/\,(k)),\ r\right]$$

$$\left\{\left\{r\to-\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right\},\ \left\{r\to\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi-k^2\,\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\times 1^2\,\pi - 1^2\times 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}},\ \{\beta, -\pi, \pi\},\ \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{4\,\pi\,r^2}{c^2 + r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2}{c^2 + r^2} == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right),\ r\right]$$

$$\left\{\left\{r \to -\frac{\sqrt{-c^2 - c^2\,\sqrt{1 - \text{Sin}[\beta]^2}}}{\sqrt{-1 + \sqrt{1 - \text{Sin}[\beta]^2}}}\right\},\ \left\{r \to \frac{\sqrt{-c^2 - c^2\,\sqrt{1 - \text{Sin}[\beta]^2}}}{\sqrt{-1 + \sqrt{1 - \text{Sin}[\beta]^2}}}\right\}\right\}$$

"Conic" Relativity: Expositions of Relativity through Difference in Circumferences of Two Circles

In this paper,
I will perform a "limited" exposition of the general principle, $\theta\, r =$

$$2\,\pi\,r\ -2\,\pi\,x\ =\ 2\,\pi\,r\ -2\,\pi\,r'\ =\ 2\,\pi\,r\ -2\,\pi\,r\,\sqrt{1 - \frac{(v)^2}{c^2}}\ == 2\,\pi\,r\ -2\,\pi\,\sqrt{r^2 - \eta^2},$$

from the algebraicized geometry of a cone combined with the

relativistic length contraction first suggested by Einstein' s application of the Lorentz transformation in his theory of relativity. The exposition is limited. I will only solve equations for expressions of velocity and expressions of angle measure. I will not make substitutions. The system is multi – variant in the sense that there are so many different possible combinations of algebraic forms that one would have to take a very long extended exposition in order to visualize all of them.

"The language of matter expresses the same quality of motion as the meaning of the creative thought/idea field. In order to perceive motion, one must set aside certain quantifiable characteristics of the existence of transformation. This leads to insight into a relationship and mutual interpenetration of mathematics and ethics." - Emmerson

For more information about how Einstein applied the Lorentz transformation to describe length contraction, see :

Einstein, Albert.Relativity : The Special and the General Theory (Classic Reprint). Forgotten Books, 2010. Print.

This is an original interpretation of the notion of a length contraction as it would relate to the difference in circumferences of two circles.

Table of Contents :

Height of the cone equals the length contracted initial radius :

$$\eta = r' = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} = r\sqrt{1 - \frac{(v)^2}{c^2}} =$$

$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$2\pi\eta - 2\pi r' = \phi\,\eta$, where ϕ is an angle of a similar dimensional kind to theta, but different.

$2\pi\eta - 2\pi r' = \theta\,\eta$

$2\pi r' - 2\pi\eta = \phi\,\eta$, where ϕ is an angle of a similar dimensional kind to theta, but

different. - This section is not visualized in this paper, but implied.

$2\pi r - 2\pi\eta = \theta\eta$ - This section will not be visualized in this paper, but is implied.

Changed radius equals the
length contracted initial radius :

$$x = r' = \frac{2\pi r - r\theta}{2\pi} = r\sqrt{1 - \frac{(v)^2}{c^2}} =$$

$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$2\pi x - 2\pi r' = \vartheta\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different.

$2\pi x - 2\pi r' = \theta\eta$

$2\pi r' - 2\pi x = \vartheta\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different is implied but not visualized in this paper.

$2\pi r' - 2\pi x = \vartheta\eta$ is implied but not visualized in this paper.

Height of the cone equals the
length contracted "changed radius" : $\eta =$

$$x' = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == \frac{2\pi r - r\theta}{2\pi}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$2\pi\eta - 2\pi x' = \omega\eta$, where ω is an angle of a similar dimensional kind to theta, but different.

Synchronized angles: $2\pi\eta - 2\pi x' = \theta\eta$

Changed radius equals the
length contracted height of the cone :

$$x = \eta' = \frac{2\pi r - r\theta}{2\pi} = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$2\pi x - 2\pi\eta' = \rho\,\eta$, where ρ is an angle of a similar dimensional kind to theta, but different.

$2\pi x - 2\pi\eta' = \theta\,\eta$

There are also the implied forms : $\eta' = r$ and $x' = r$ with their respective

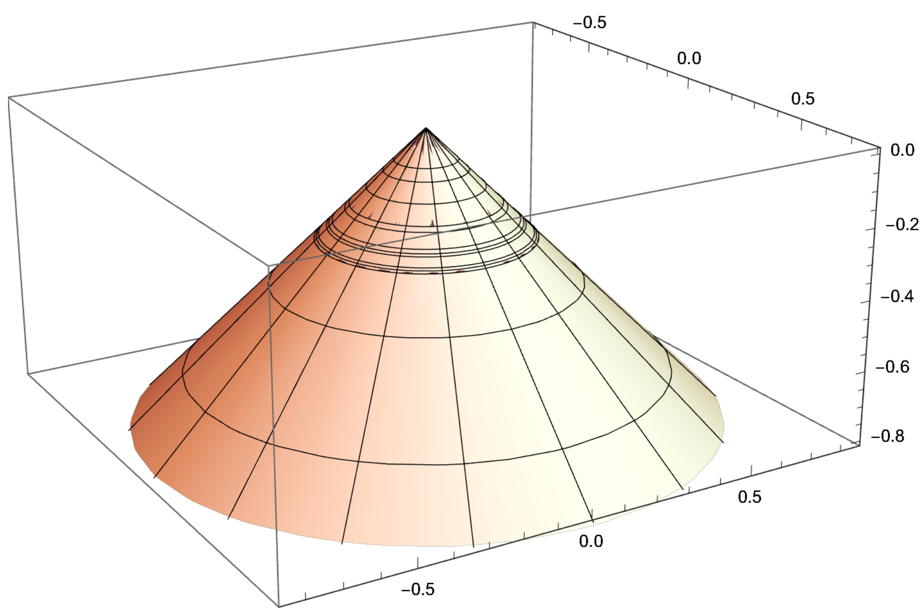
Commentary on the Forms

One commentary on the forms is their semblance to the position at which the instantaneous rate of change of the height of the cone equals the average rate of change of the height of the cone with respect to theta. Please see A Geometric Pattern of Perception (Emmerson, 2009), for more background information regarding the system of the univocal cone transformation. The six potential equalities of the system wind up miming the 30 - 60 - 90 position at which the instantaneous velocity of the height of the cone equals the average velocity of the height of the cone. When plotted, the 45 - 45 - 90 cone is evident within process of solving for this position.

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\Theta + 4\pi\Theta^2 - \Theta^3}}{2\pi\sqrt{-4\pi + \Theta}}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{-4\pi^2\Theta + 4\pi\Theta^2 - \Theta^3}}{2\pi\sqrt{-4\pi + \Theta}}\right]\right\}\right\} \tag{57}$$

RevolutionPlot3D[

$$\left\{\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi + \theta}}\right], -\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi + \theta}}\right]\right\}, \{\theta, -4\pi, 4\pi\}\Big]$$



"General Relativity" Circumferential Cone - Difference Functions

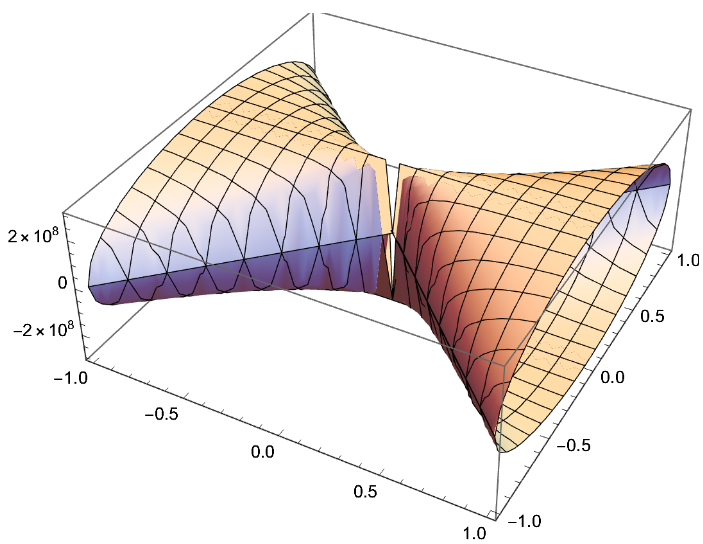
$$\eta = r' = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} = r\,\sqrt{1 - \frac{(v)^2}{c^2}} =$$

$$\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\,\sqrt{1 - \frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[\eta == r\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -1.\,\sqrt{8.98755\times10^{16} - \frac{8.98755\times10^{16}\,\eta^2}{r^2}}\right\},\ \left\{v \to \sqrt{8.98755\times10^{16} - \frac{8.98755\times10^{16}\,\eta^2}{r^2}}\right\}\right\}$$

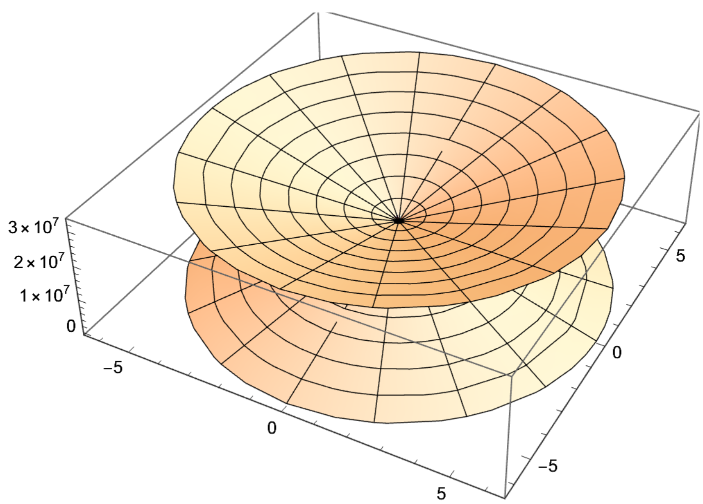
$$\text{Plot3D}\left[\left\{-1.`\,\sqrt{8.987551787368176`*\string^16 - \frac{8.987551787368176`*\string^16\,\eta^2}{r^2}},\right.\right.$$
$$\left.\left.\sqrt{8.987551787368176`*\string^16 - \frac{8.987551787368176`*\string^16\,\eta^2}{r^2}}\right\},\ \{r, -1, 1\},\ \{\eta, -1, 1\}\right]$$



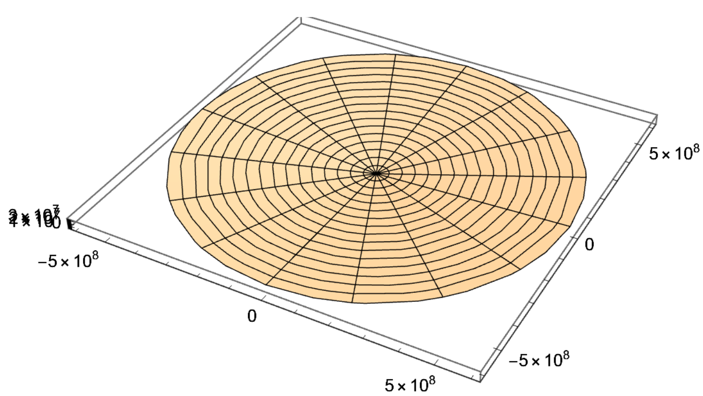
$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == r\,\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -1.05839\times10^{-7}\,\sqrt{8.02317\times10^{30} - 2.55385\times10^{30}\,\theta + 2.03229\times10^{29}\,\theta^2}\right\},\right.$$
$$\left.\left\{v \to 1.05839\times10^{-7}\,\sqrt{8.02317\times10^{30} - 2.55385\times10^{30}\,\theta + 2.03229\times10^{29}\,\theta^2}\right\}\right\}$$

```
RevolutionPlot3D[.0583947067478751`*^-7
  √(8.02317171945391`*^30 - 2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2),
 {θ, -2 π, 2 π}]
```



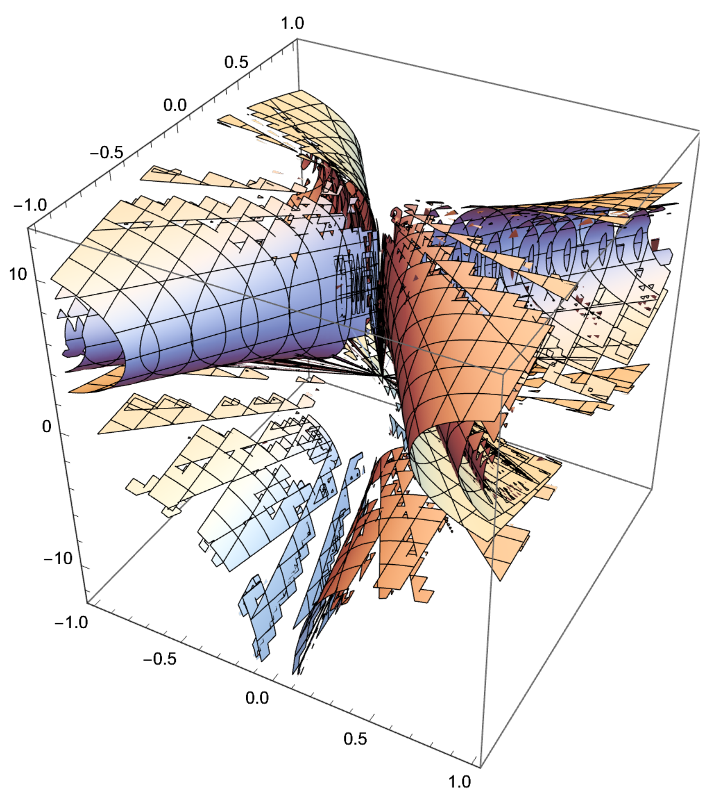

```
RevolutionPlot3D[{-1.0583947067478751`*^-7
   √(8.02317171945391`*^30 - 2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2),
  .0583947067478751`*^-7 √(8.02317171945391`*^30 -
     2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2)}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v\to -1.54328\times10^{-11}\sqrt{\left(3.77356\times10^{38}-\frac{3.82342\times10^{37}\,r^2\,\theta^2}{\eta^2}+\frac{6.08516\times10^{36}\,r^2\,\theta^3}{\eta^2}-\frac{2.42121\times10^{35}\,r^2\,\theta^4}{\eta^2}\right)}\right\},\right.$$
$$\left.\left\{v\to 1.54328\times10^{-11}\sqrt{\left(3.77356\times10^{38}-\frac{3.82342\times10^{37}\,r^2\,\theta^2}{\eta^2}+\frac{6.08516\times10^{36}\,r^2\,\theta^3}{\eta^2}-\frac{2.42121\times10^{35}\,r^2\,\theta^4}{\eta^2}\right)}\right\}\right\}$$

$$\text{ContourPlot3D}\left[-1.5432808288459432\grave{}*\wedge{-11}\sqrt{\left(3.7735619429356124\grave{}*\wedge 38-\frac{3.8234176260591615\grave{}*\wedge 37\,r^2\,\theta^2}{\eta^2}+\frac{6.085158146919955\grave{}*\wedge 36\,r^2\,\theta^3}{\eta^2}-\frac{2.4212074964455716\grave{}*\wedge 35\,r^2\,\theta^4}{\eta^2}\right)},\right.$$
$$\left.\{r,-1,1\},\{\eta,-1,1\},\{\theta,-4\pi,4\pi\}\right]$$



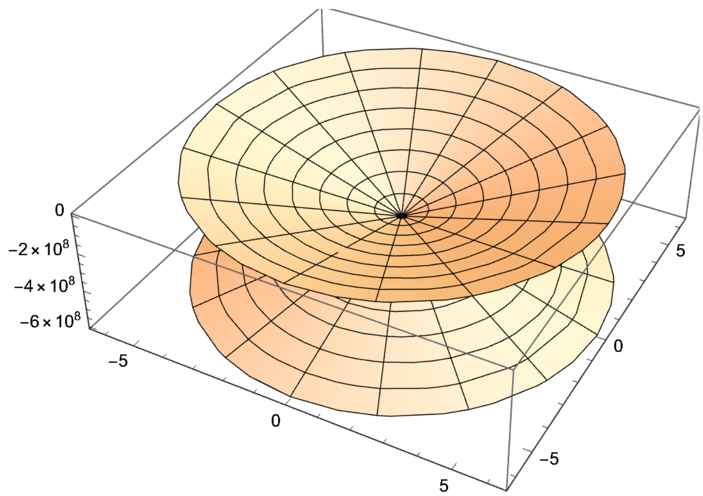

```
c := 2.99792458 (10^8)
```

$$r := \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\mathrm{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == r\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to \frac{2c\pi - c\theta}{2\pi}\right\}, \left\{v \to \frac{-2c\pi + c\theta}{2\pi}\right\}\right\}$$

$$\mathrm{RevolutionPlot3D}\left[\frac{-2c\pi + c\theta}{2\pi}, \{\theta, -2\pi, 2\pi\}\right]$$



$2\pi\eta - 2\pi r' = \phi\eta$, where ϕ is an angle of a similar dimensional kind to theta, but different.

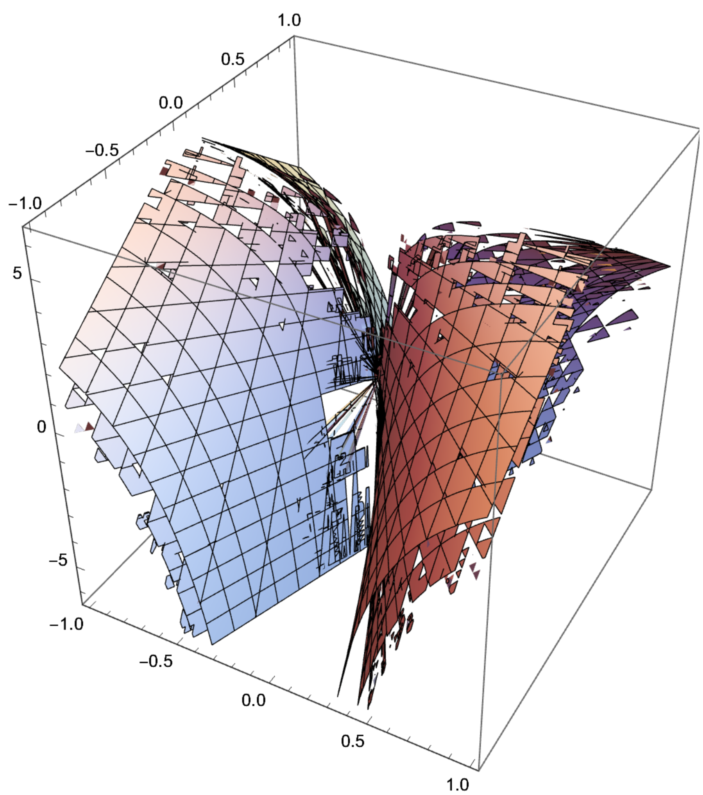
$$\mathrm{Solve}[2\pi\eta - 2\pi r' == \phi\eta, \phi]$$

$$\left\{\left\{\phi \to \frac{2(\pi\eta - \pi r')}{\eta}\right\}\right\}$$

$$\text{Solve}\left[\phi == \frac{2\left(\pi\,\eta - \pi\,r\,\sqrt{1-\frac{(v)^2}{c^2}}\right)}{\eta},\ v\right]$$

$$\left\{\left\{v \to -1.05839\times10^{-7}\sqrt{\left(8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\phi}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\phi^2}{r^2}\right)}\right\},\right.$$
$$\left.\left\{v \to 1.05839\times10^{-7}\sqrt{\left(8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\phi}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\phi^2}{r^2}\right)}\right\}\right\}$$

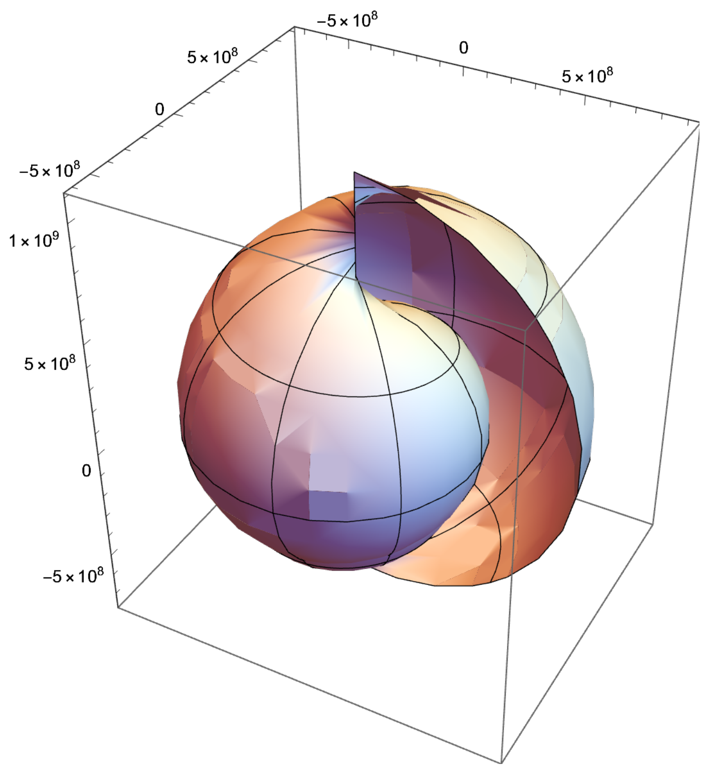
$$\text{ContourPlot3D}\left[1.0583947067478751\text{\`{}}*\text{\^{}}{-7}\sqrt{\left(8.02317171945391\text{\`{}}*\text{\^{}}30 - \frac{8.02317171945391\text{\`{}}*\text{\^{}}30\,\eta^2}{r^2} + \frac{2.5538548768523825\text{\`{}}*\text{\^{}}30\,\eta^2\,\phi}{r^2} - \frac{2.0322931379520014\text{\`{}}*\text{\^{}}29\,\eta^2\,\phi^2}{r^2}\right)},\ \{\eta, -1, 1\},\ \{r, -1, 1\},\ \{\phi, -2\pi, 2\pi\}\right]$$



```
Solve[ϕ == 2 (π (√(4 π (r)^2 θ - (r)^2 θ^2))/(2 π) - π r √(1 - (v)^2/c^2)) / ((√(4 π r^2 θ - (r)^2 θ^2))/(2 π)), v]
```

$$\left\{\left\{v \to -\frac{c\sqrt{16\,\pi^4 - 16\,\pi^3\,\theta + 4\,\pi^2\,\theta^2 + 16\,\pi^2\,\theta\,\phi - 4\,\pi\,\theta^2\,\phi - 4\,\pi\,\theta\,\phi^2 + \theta^2\,\phi^2}}{4\,\pi^2}\right\},\right.$$
$$\left.\left\{v \to \frac{c\sqrt{16\,\pi^4 - 16\,\pi^3\,\theta + 4\,\pi^2\,\theta^2 + 16\,\pi^2\,\theta\,\phi - 4\,\pi\,\theta^2\,\phi - 4\,\pi\,\theta\,\phi^2 + \theta^2\,\phi^2}}{4\,\pi^2}\right\}\right\}$$

```
SphericalPlot3D[c √(16 π^4 - 16 π^3 θ + 4 π^2 θ^2 + 16 π^2 θ ϕ - 4 π θ^2 ϕ - 4 π θ ϕ^2 + θ^2 ϕ^2) / (4 π^2),
 {θ, -2 π, 2 π}, {ϕ, -2 π, 2 π}]
```

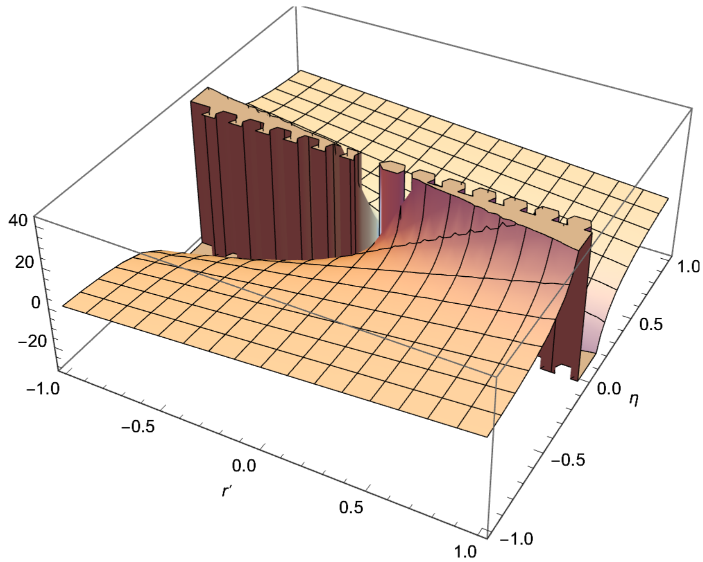


$2\,\pi\,\eta - 2\,\pi\,r' = \theta\,\eta$

```
Solve[2 π η - 2 π r' == θ η, θ]
```

$$\left\{\left\{\theta \to \frac{2\,(\pi\,\eta - \pi\,r')}{\eta}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{2\,(\pi\,\eta - \pi\,r')}{\eta}, \{r', -1, 1\}, \{\eta, -1, 1\}, \text{AxesLabel} \to \text{Automatic}\right]$$



$$r := \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)$$

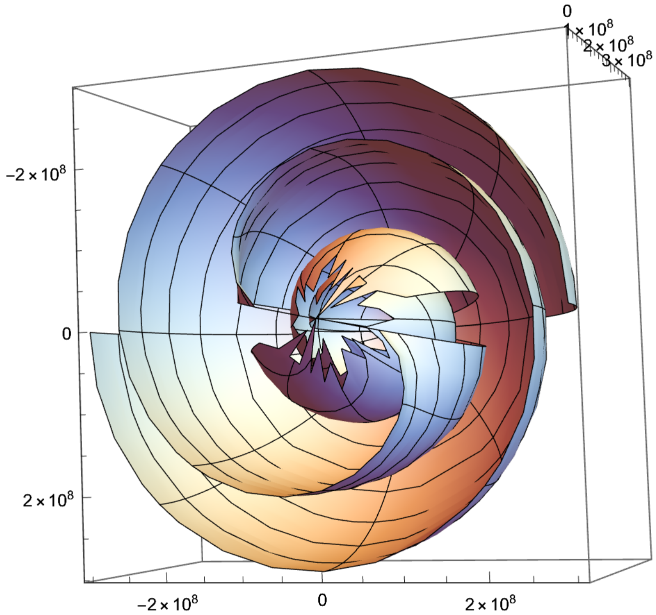
c := 2.99792458 (10^8)

$$\text{Solve}\left[\theta == \frac{2\left(\pi\,\eta - \pi\,r\,\sqrt{1 - \frac{(v)^2}{c^2}}\right)}{\eta}, v\right]$$

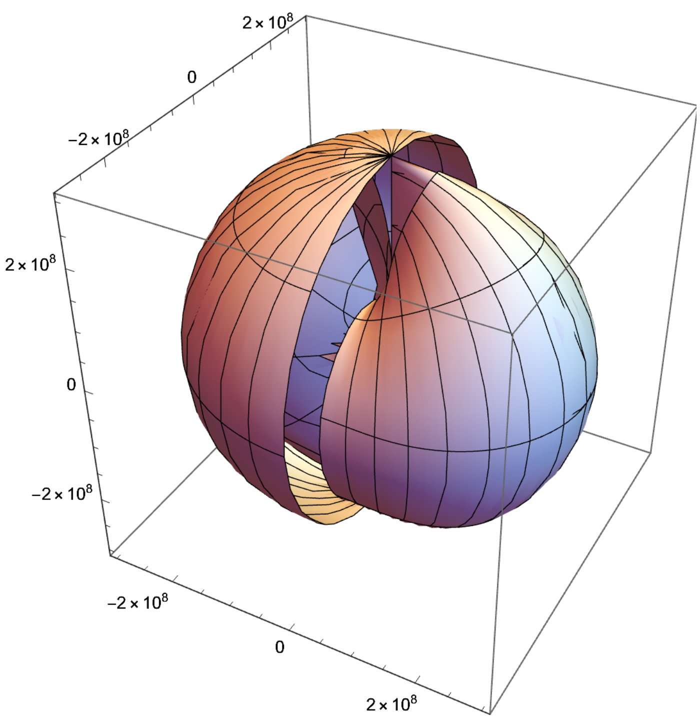
$$\left\{\left\{v \to -\frac{c\,\sqrt{4\,\pi^2 - \frac{4\,\pi^2\,\eta^2}{r^2} + \frac{4\,\pi\,\eta^2\,\theta}{r^2} - \frac{\eta^2\,\theta^2}{r^2}}}{2\,\pi}\right\}, \left\{v \to \frac{c\,\sqrt{4\,\pi^2 - \frac{4\,\pi^2\,\eta^2}{r^2} + \frac{4\,\pi\,\eta^2\,\theta}{r^2} - \frac{\eta^2\,\theta^2}{r^2}}}{2\,\pi}\right\}\right\}$$

η := r Sin[β]

$$\text{SphericalPlot3D}\left[\frac{c\sqrt{4\pi^2-\frac{4\pi^2\eta^2}{r^2}+\frac{4\pi\eta^2\theta}{r^2}-\frac{\eta^2\theta^2}{r^2}}}{2\pi},\{\beta,-\pi/2,\pi/2\},\{\theta,-2\pi,2\pi\}\right]$$

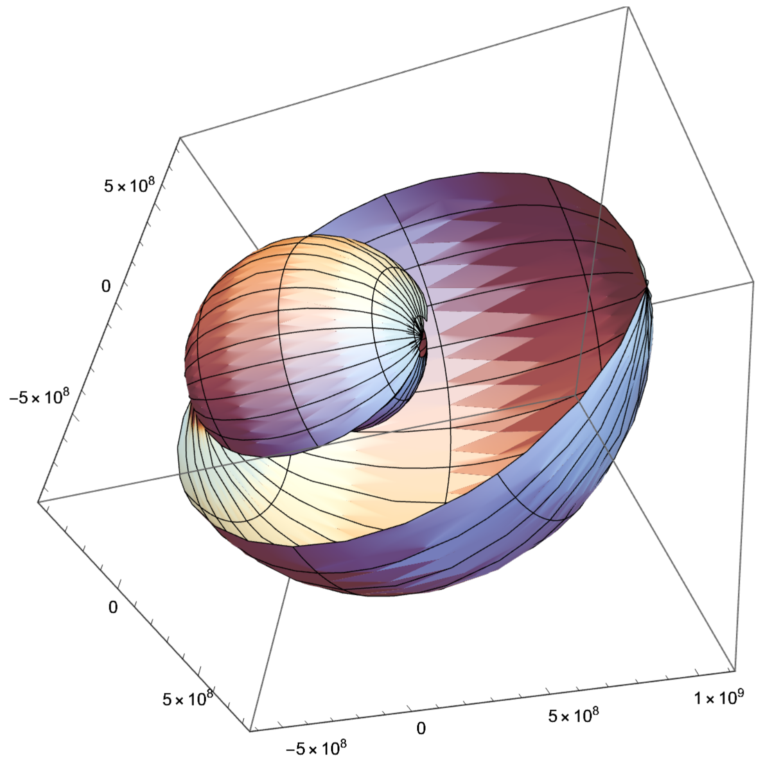


$$\text{SphericalPlot3D}\left[\frac{c\sqrt{4\pi^2-\frac{4\pi^2\eta^2}{r^2}+\frac{4\pi\eta^2\theta}{r^2}-\frac{\eta^2\theta^2}{r^2}}}{2\pi},\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$

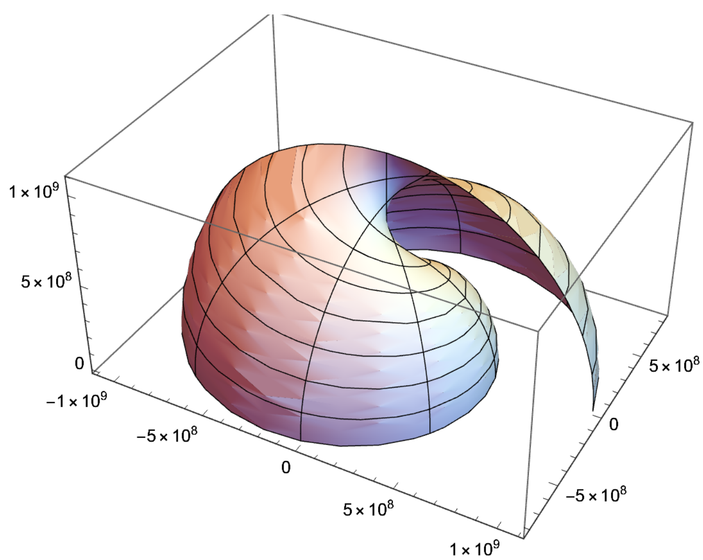


$$\eta := \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

$$\text{SphericalPlot3D}\left[\frac{c\,\sqrt{4\,\pi^2-\frac{4\,\pi^2\,\eta^2}{r^2}+\frac{4\,\pi\,\eta^2\,\theta}{r^2}-\frac{\eta^2\,\theta^2}{r^2}}}{2\,\pi},\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{c\,\sqrt{4\,\pi^2-\frac{4\,\pi^2\,\eta^2}{r^2}+\frac{4\,\pi\,\eta^2\,\theta}{r^2}-\frac{\eta^2\,\theta^2}{r^2}}}{2\,\pi},\ \{\beta,\,-\pi/2,\,\pi/2\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

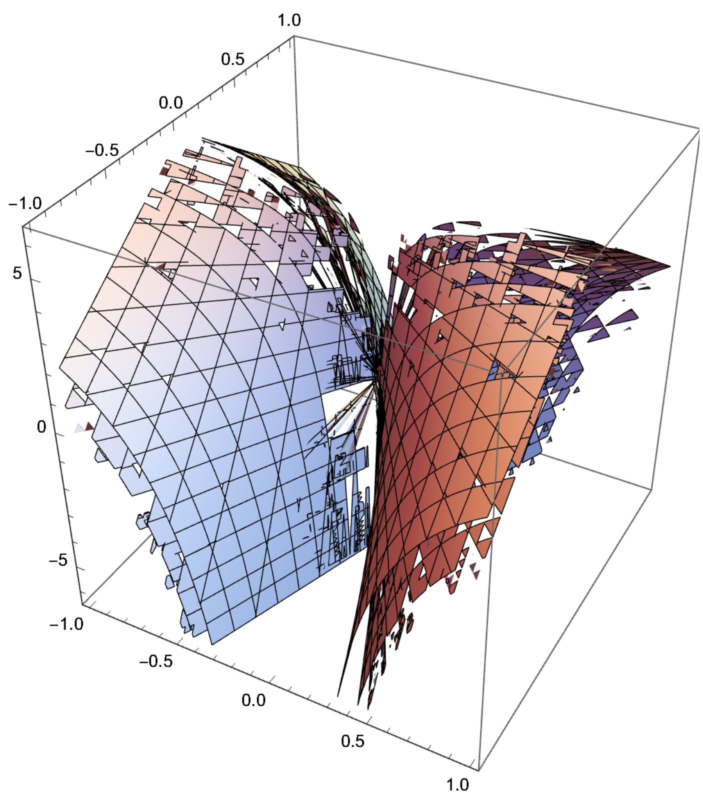


$$\text{Solve}\left[\theta == \frac{2\left(\pi\,\eta - \pi\,r\,\sqrt{1 - \frac{(v)^2}{c^2}}\right)}{\eta}, v\right]$$

$$\left\{\left\{v \to -1.05839\times10^{-7}\sqrt{\left(8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\theta}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\theta^2}{r^2}\right)}\right\},\right.$$

$$\left.\left\{v \to 1.05839\times10^{-7}\sqrt{\left(8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\theta}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\theta^2}{r^2}\right)}\right\}\right\}$$

$$\text{ContourPlot3D}\left[1.0583947067478751\grave{}*\hat{}-7\,\sqrt{\left(8.02317171945391\grave{}*\hat{}30 - \frac{8.02317171945391\grave{}*\hat{}30\,\eta^2}{r^2} + \frac{2.5538548768523825\grave{}*\hat{}30\,\eta^2\,\theta}{r^2} - \frac{2.0322931379520014\grave{}*\hat{}29\,\eta^2\,\theta^2}{r^2}\right)}, \{\eta, -1, 1\}, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$x = r' = \frac{2\pi r - r\theta}{2\pi} = r\sqrt{1 - \frac{(v)^2}{c^2}} =$$

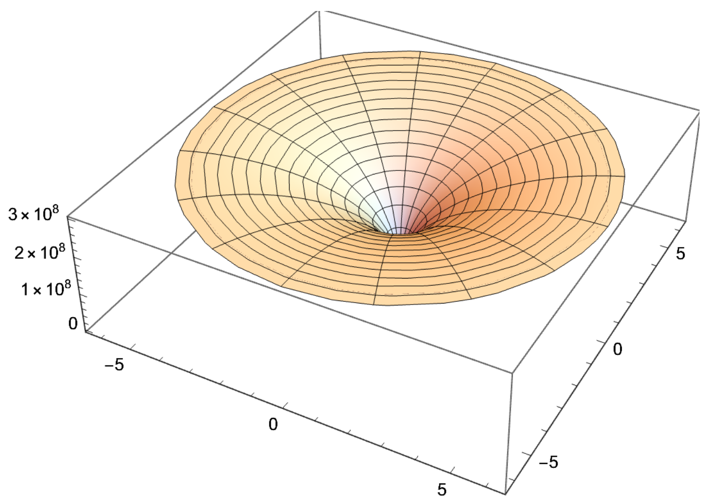
$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == r\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

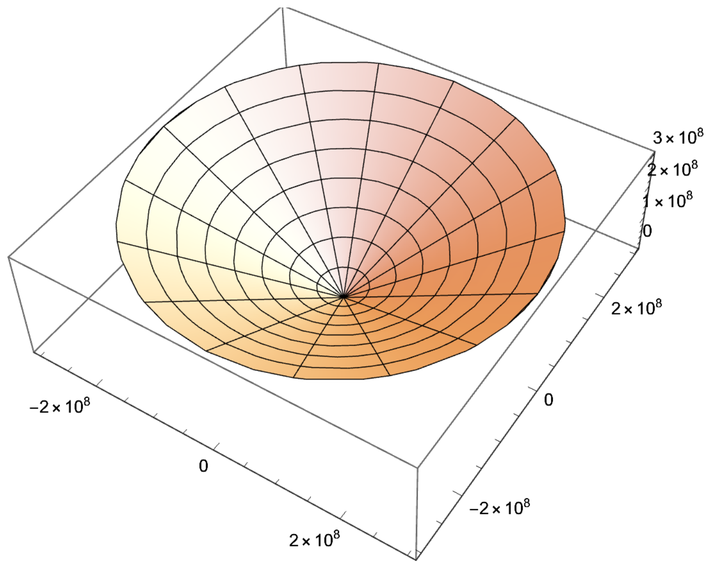
$$\left\{\left\{v \to -\frac{\sqrt{4c^2\pi\theta - c^2\theta^2}}{2\pi}\right\}, \left\{v \to \frac{\sqrt{4c^2\pi\theta - c^2\theta^2}}{2\pi}\right\}\right\}$$

```
c := 2.99792458 (10^8)
```

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4c^2\pi\theta - c^2\theta^2}}{2\pi}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,c^2\,\pi\,2\,\pi - c^2\,(2\,\pi)^2}}{2\,\pi}, \{c, -3.0*10\hat{}8, 3.0*10\hat{}8\}\right]$$



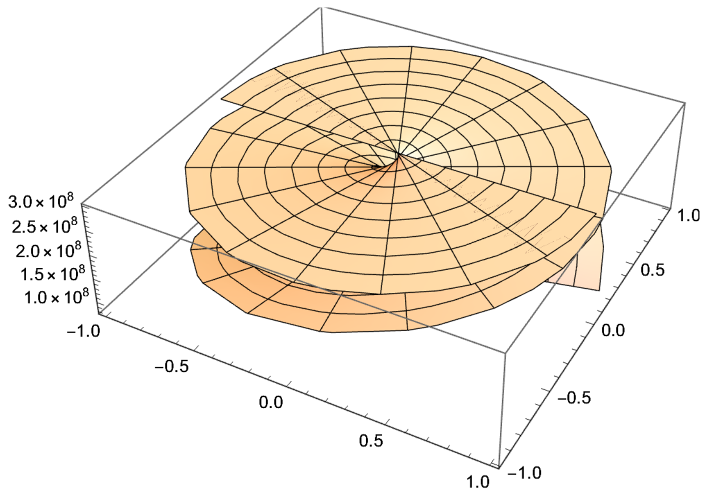
$$\text{Solve}\left[\frac{2\,\pi\,r - r\,\theta}{2\,\pi} == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}}, v\right]$$

$$\left\{\left\{v \to -\frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2}\right\},\right.$$

$$\left.\left\{v \to \frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2}\right\}\right\}$$

$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

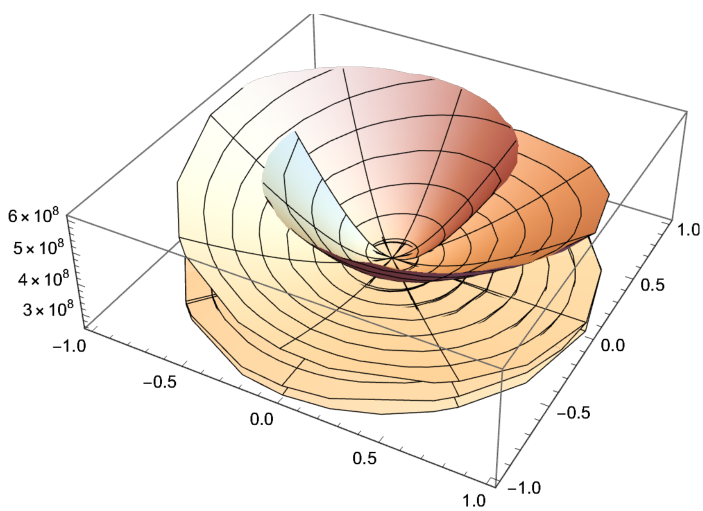
$$\text{RevolutionPlot3D}\left[\frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2},\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{Solve}\left[\frac{2\,\pi\,r - r\,\theta}{2\,\pi} == r\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi}\right\},\ \left\{v \to \frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{c\,\sqrt{16\,\pi^4 - 16\,\pi^3\,r^2\,\theta + 20\,\pi^2\,r^2\,\theta^2 - 8\,\pi\,r^2\,\theta^3 + r^2\,\theta^4}}{4\,\pi^2},\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{Solve}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}} == \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\{\{v \to -c\},\ \{v \to c\}\}$$

2 π x - 2 π r' = $\vartheta\,\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different.

In[∘]:= $c := 2.99792458\,(10^8)$

$$\text{Solve}\left[2\,\pi\,x - 2\,\pi\,\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}} == \vartheta\,\eta,\ \vartheta\right]$$

$$\left\{\left\{\vartheta \to \frac{2\left(-2\,\pi^2\,\sqrt{\frac{c^2 - v^2}{c^2}}\,\eta + \pi\,x\,\sqrt{(4\,\pi - \theta)\,\theta}\right)}{\eta\,\sqrt{(4\,\pi - \theta)\,\theta}}\right\}\right\}$$

In[∘]:= $$\text{Animate}\left[\text{ContourPlot3D}\left[\frac{2\left(-2\,\pi^2\,\sqrt{\frac{c^2 - v^2}{c^2}}\,\eta + \pi\,x\,\sqrt{(4\,\pi - \theta)\,\theta}\right)}{\eta\,\sqrt{(4\,\pi - \theta)\,\theta}},\right.\right.$$
$$\left.\left.\{x, -1, 1\}, \{\eta, -1, 1\}, \{\theta, 0, 4\,\pi\}\right], \{v, -c, c\}\right]$$

v

Out[∘]= $$\text{ContourPlot3D}\left[\frac{2\left(-2\,\pi^2\,\sqrt{\frac{c^2 - \text{FE\`{}v\$\$267}^2}{c^2}}\,\eta + \pi\,x\,\sqrt{(4\,\pi - \theta)\,\theta}\right)}{\eta\,\sqrt{(4\,\pi - \theta)\,\theta}}, \{x, -1, 1\}, \{\eta, -1, 1\}, \{\theta, 0,\right.$$

$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi} - 2\,\pi\,\frac{2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}} == \vartheta\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \vartheta\right]$$

$$\left\{\left\{\vartheta \to -\frac{2\,\pi\left(-2\,\pi\,r + r\,\theta + \frac{2\,\pi\,\sqrt{1 - \frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta - \theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right\}\right\}$$

$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)$$

$$r := \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \right.$$
$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)$$

$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{2\pi\left(-2\pi r + r\theta + \frac{2\pi\sqrt{1-\frac{v^2}{c^2}}\sqrt{4\pi r^2\theta - r^2\theta^2}}{\sqrt{4\pi\theta-\theta^2}}\right)}{\sqrt{4\pi r^2\theta - r^2\theta^2}}, \{v, -c, c\}, \{\theta, -2\pi, 2\pi\}\right]$$

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

∞::indet : Indeterminate expression $(0. + 0.\,i)\,\pi$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

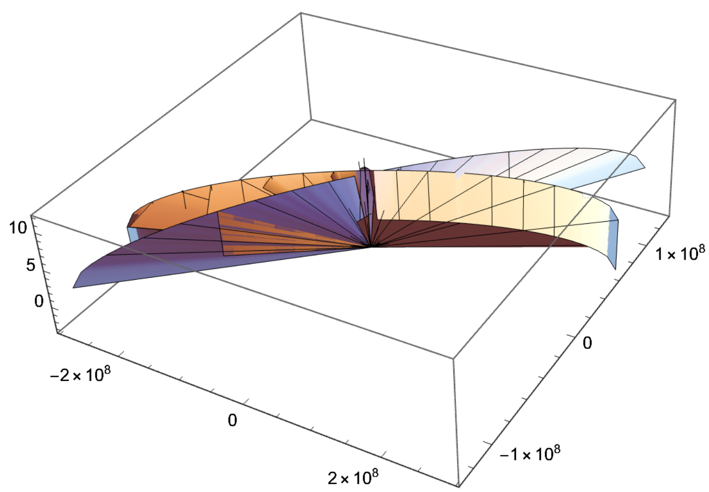
∞::indet : Indeterminate expression $(0. + 0.\,i)\,\pi$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression $(0. + 0.\,i)\,\pi$ ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\frac{2\,\pi\,\sqrt{1-\frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{v,\ -c,\ c\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

∞::indet : Indeterminate expression 0. π ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

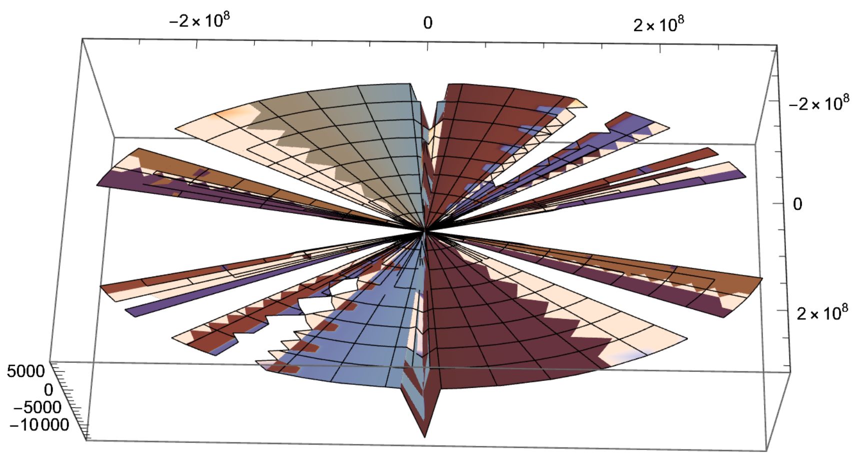
∞::indet : Indeterminate expression 0. π ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

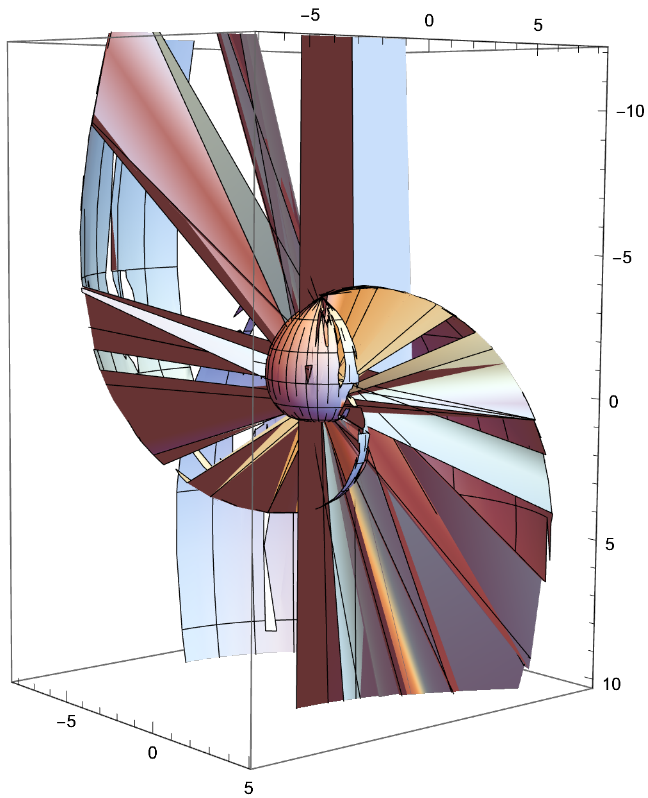
∞::indet : Indeterminate expression 0. π ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



$$v := \left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2}\right)$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\frac{2\,\pi\,\sqrt{1-\frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\right]$$

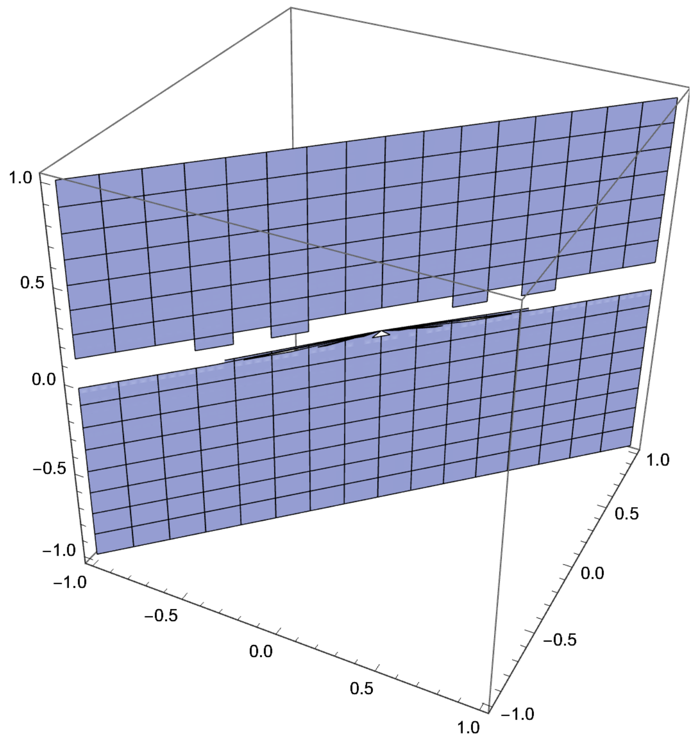


$2\,\pi\,x - 2\,\pi\,r' = \theta\,\eta$

```
Solve[2 π x - 2 π r ' == θ η, θ]
```

$$\left\{\left\{\theta\to\frac{2\,(\pi\,x-\pi\,r')}{\eta}\right\}\right\}$$

```
ContourPlot3D[2 (π x - π r′)/η, {x, -1, 1}, {r', -1, 1}, {η, -1, 1}]
```



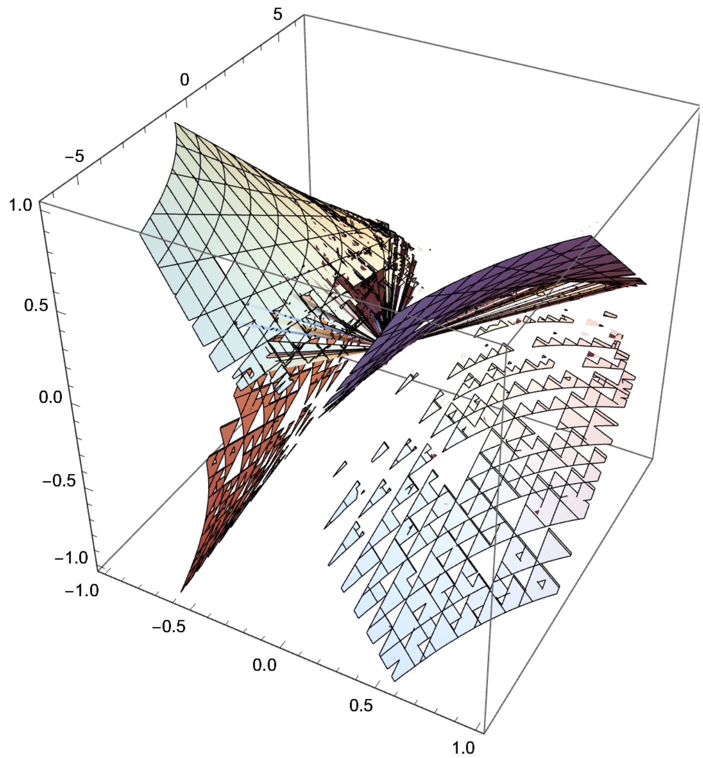
$$\eta = x' = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1 - \frac{(v)^2}{c^2}}$$

```
c := 2.99792458 (10^8)
```

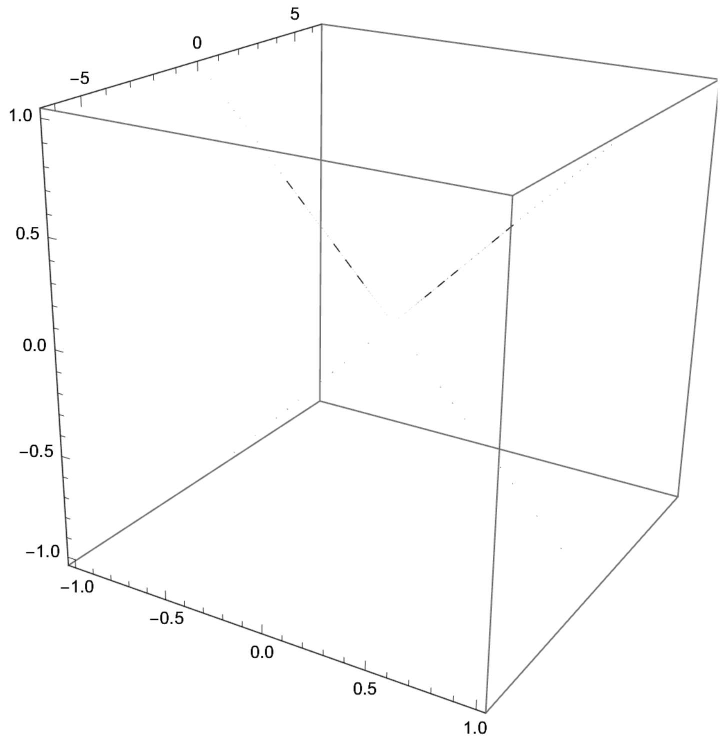
$$\text{Solve}\left[\eta == \frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -\frac{c\,\sqrt{4\,\pi^2\,r^2 - 4\,\pi^2\,\eta^2 - 4\,\pi\,r^2\,\theta + r^2\,\theta^2}}{r\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\},\ \left\{v \to \frac{c\,\sqrt{4\,\pi^2\,r^2 - 4\,\pi^2\,\eta^2 - 4\,\pi\,r^2\,\theta + r^2\,\theta^2}}{r\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[-\frac{c\ \sqrt{4\,\pi^2\,r^2-4\,\pi^2\,\eta^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}{r\ \sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\eta,\ -1,\ 1\}\right]$$



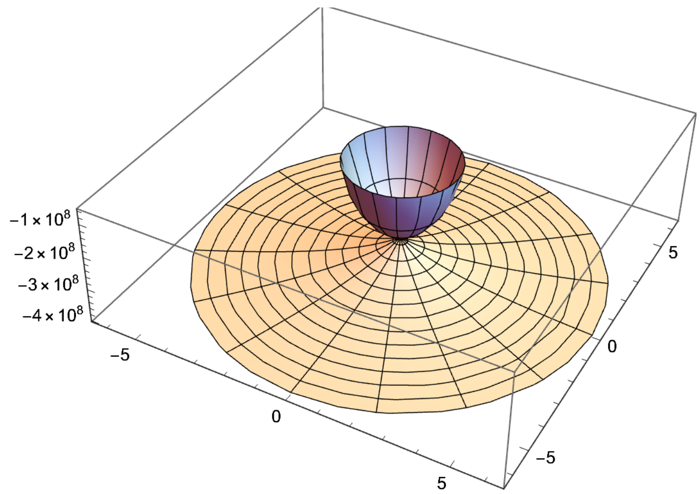
$$\text{ContourPlot3D}\left[\left\{-\frac{c\sqrt{4\pi^2 r^2-4\pi^2\eta^2-4\pi r^2\theta+r^2\theta^2}}{r\sqrt{4\pi^2-4\pi\theta+\theta^2}},\ \frac{c\sqrt{4\pi^2 r^2-4\pi^2\eta^2-4\pi r^2\theta+r^2\theta^2}}{r\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\pi,2\pi\},\{\eta,-1,1\}\right]$$



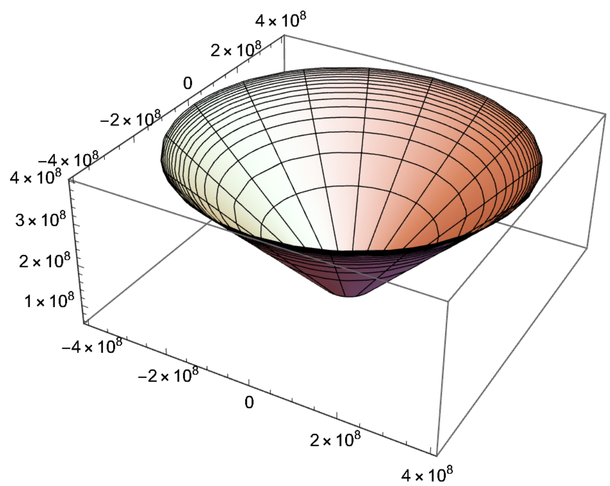
$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}==\frac{2\pi r-r\theta}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v\to-\frac{\sqrt{2}\sqrt{2c^2\pi^2-4c^2\pi\theta+c^2\theta^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\left\{v\to\frac{\sqrt{2}\sqrt{2c^2\pi^2-4c^2\pi\theta+c^2\theta^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\}\right\}$$

$$\texttt{RevolutionPlot3D}\left[-\frac{\sqrt{2}\ \sqrt{2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\,\theta^2}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$

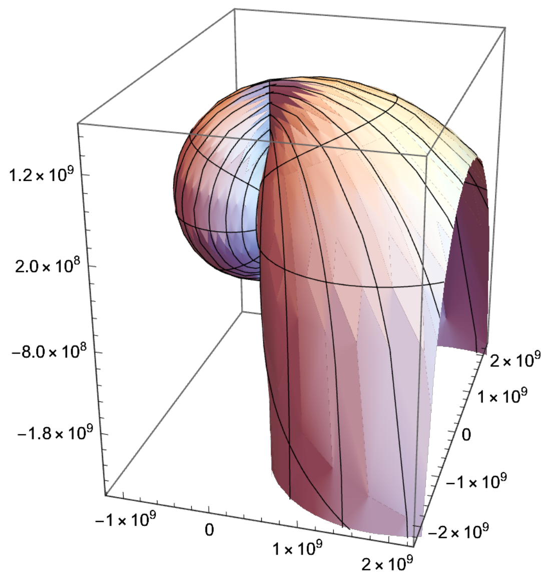


$$\texttt{RevolutionPlot3D}\left[\left\{-\frac{\sqrt{2}\ \sqrt{2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\,\theta^2}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}},\ \frac{\sqrt{2}\ \sqrt{2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\,\theta^2}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



A brief substitution :

```
SphericalPlot3D[-(√2 √(2 c² π² - 4 c² π θ + c² (2 (π + √(π² - π² Sin[β]²)))²))/
  (√(4 π² - 4 π θ + (θ)²)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

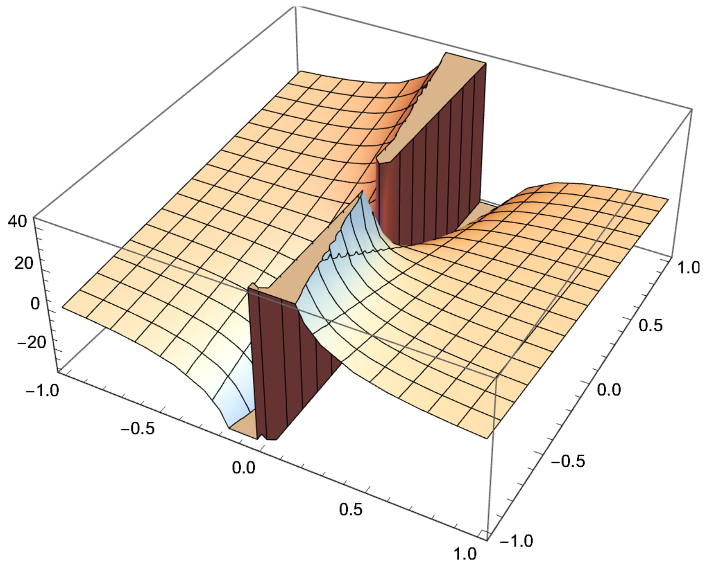


$2\pi\eta - 2\pi x' = \omega\eta$, where ω is an angle of a similar dimensional kind to theta, but different.

```
Solve[2 π η - 2 π x' == ω η, ω]
```

$$\left\{\left\{\omega \to \frac{2\,(\pi\,\eta - \pi\,x')}{\eta}\right\}\right\}$$

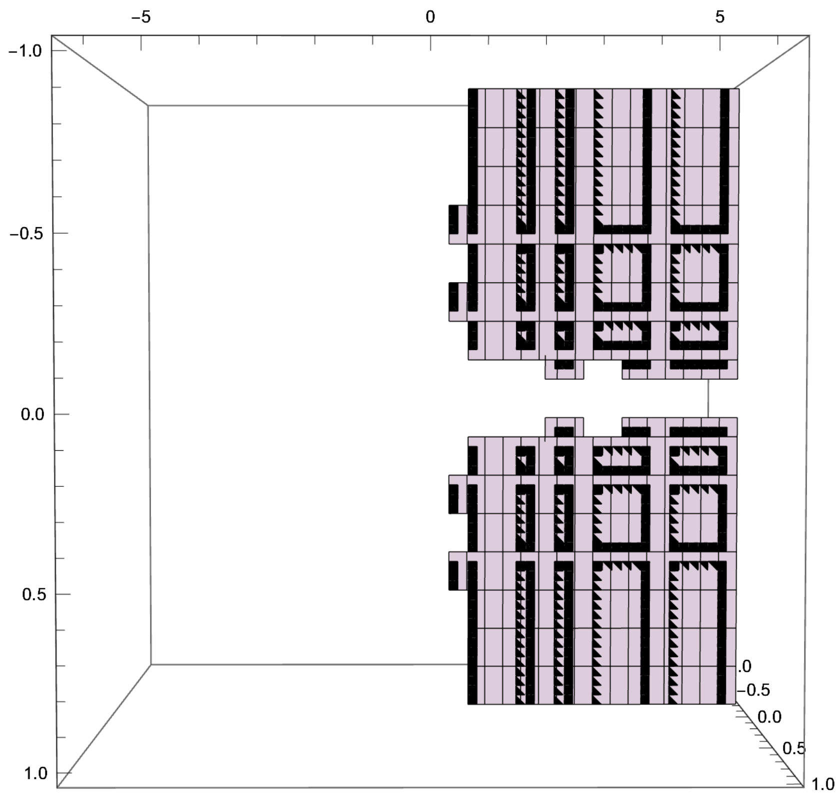
$$\text{Plot3D}\left[\frac{2\,(\pi\,\eta - \pi\,x')}{\eta}, \{\eta, -1, 1\}, \{x', -1, 1\}\right]$$



$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,x' == \omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \omega\right]$$

$$\left\{\left\{\omega \to \frac{2\,\pi\,\left(\sqrt{r^2\,(4\,\pi - \theta)\,\theta} - 2\,\pi\,x'\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}\right\}\right\}$$

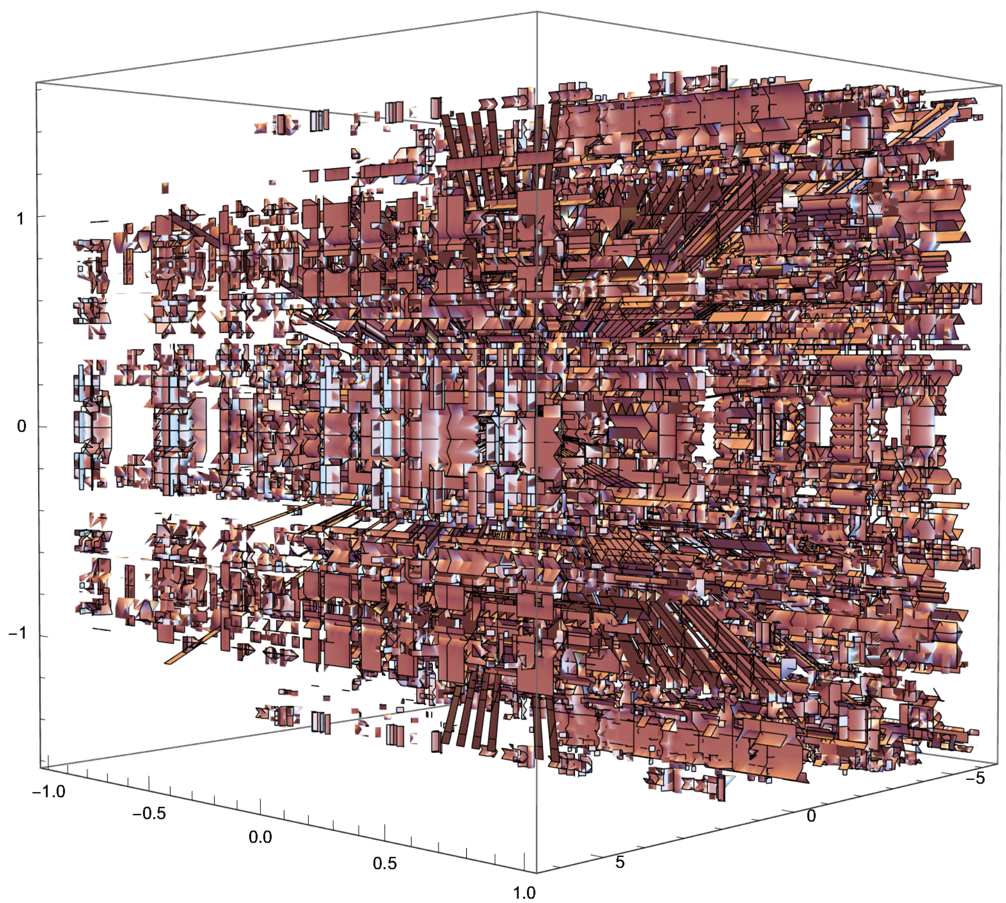
$$\text{ContourPlot3D}\left[\frac{2\pi\left(\sqrt{r^2\ (4\pi-\theta)\ \theta}-2\pi x'\right)}{\sqrt{r^2\ (4\pi-\theta)\ \theta}}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{x', -1, 1\}\right]$$



$$\text{Solve}\left[2\pi\ \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}-2\pi\ \frac{2\pi r-r\theta}{2\pi}\ \sqrt{1-\frac{v^2}{c^2}}==\omega\ \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}, \omega\right]$$

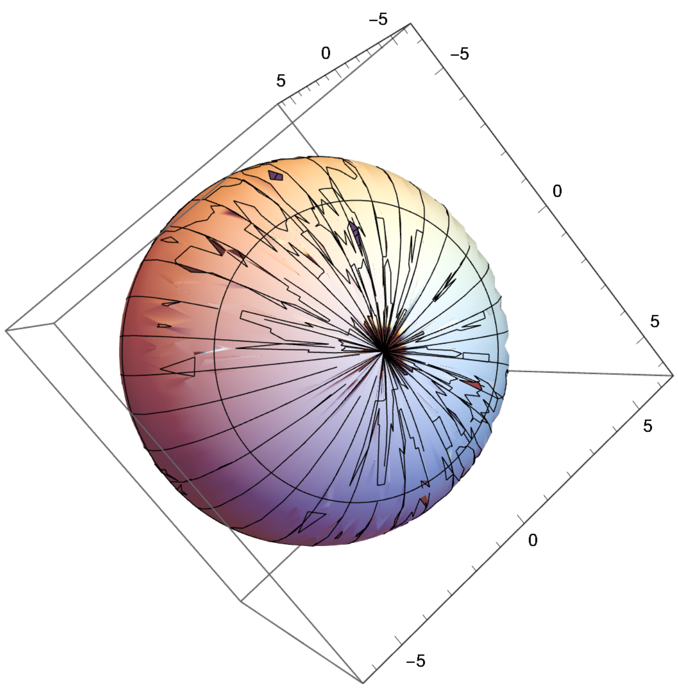
$$\left\{\left\{\omega\to-\left(6.28319\left(1.\ \sqrt{1.-1.11265\times10^{-17}\ v^2}\ (6.28319\ r-1.\ r\,\theta)-1.\ \sqrt{12.5664\ r^2\,\theta-1.\ r^2\,\theta^2}\right)\right)\Big/\left(\sqrt{12.5664\ r^2\,\theta-1.\ r^2\,\theta^2}\right)\right\}\right\}$$

```
ContourPlot3D[-(6.283185307179586`
    (1.` √(1.`-1.1126500560536185`*^-17 ((√(-1.1294090667581471`*^18 θ +
                  8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
              (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
        (6.283185307179586` r - 1.` r θ) - 1.` √(12.566370614359172` r^2 θ - 1.` r^2 θ^2))) /
  (√(12.566370614359172` r^2 θ - 1.` r^2 θ^2)),
 {β,
  -π /
   2, π /
   2}, {θ, -2
   π, 2
   π}, {r, -1, 1}]
```



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

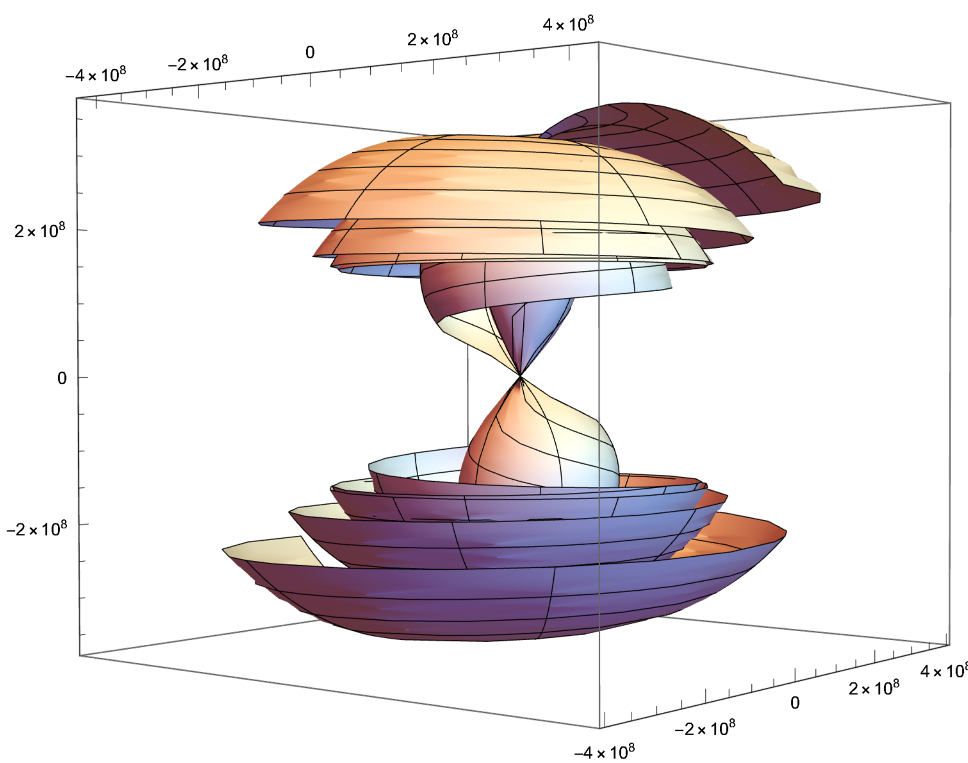
```
SphericalPlot3D[-(6.283185307179586`
    (1.` √(1.`-1.1126500560536185`*^-17 ((√(-1.1294090667581471`*^18 θ +
                    8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
                (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
        (6.283185307179586` r - 1.` r θ) - 1.` √(12.566370614359172` r^2 θ - 1.` r^2 θ^2))/
   (√(12.566370614359172` r^2 θ - 1.` r^2 θ^2)),
 {θ,
  -2
   π, 2
   π}, {β, -π /
   2, π /
   2}]
```



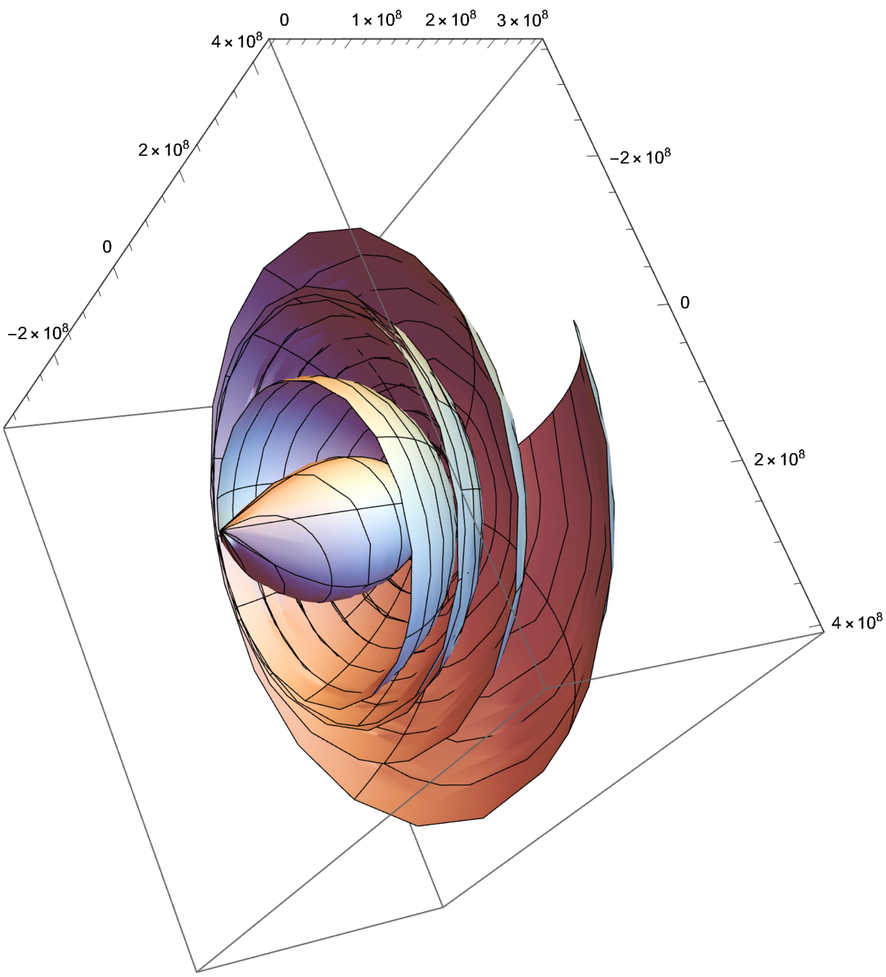
$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{c^2}}==\omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,v\right]$$

$$\Big\{\Big\{v\to-\Big(1.\sqrt{\big(1.49539\times10^{48}-9.51997\times10^{47}\,\theta+7.57575\times10^{46}\,\theta^2+1.51515\times10^{47}\,\theta\,\omega-1.20572\times10^{46}\,\theta^2\,\omega-1.20572\times10^{46}\,\theta\,\omega^2+9.59481\times10^{44}\,\theta^2\,\omega^2\big)}\Big)\Big/\left(\sqrt{1.66385\times10^{31}-5.2962\times10^{30}\,\theta+4.21458\times10^{29}\,\theta^2}\right)\Big\},$$
$$\Big\{v\to\Big(\sqrt{\big(1.49539\times10^{48}-9.51997\times10^{47}\,\theta+7.57575\times10^{46}\,\theta^2+1.51515\times10^{47}\,\theta\,\omega-1.20572\times10^{46}\,\theta^2\,\omega-1.20572\times10^{46}\,\theta\,\omega^2+9.59481\times10^{44}\,\theta^2\,\omega^2\big)}\Big)\Big/\left(\sqrt{1.66385\times10^{31}-5.2962\times10^{30}\,\theta+4.21458\times10^{29}\,\theta^2}\right)\Big\}\Big\}$$

```
SphericalPlot3D[
 {-(1.` √(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46
       θ^2 + 1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
       1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
   (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
       4.2145820905076925`*^29 θ^2)),
  (√(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46 θ^2 +
       1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
       1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
   (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
       4.2145820905076925`*^29 θ^2))}, {θ, -π / 3, π / 3}, {ω, -3 π, 3 π}]
```



```
SphericalPlot3D[
 (√ (1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46 θ^2 +
      1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
      1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
  (√ (1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
      4.2145820905076925`*^29 θ^2)), {θ, -π / 3, π / 3}, {ω, -3 π, 3 π}]
```



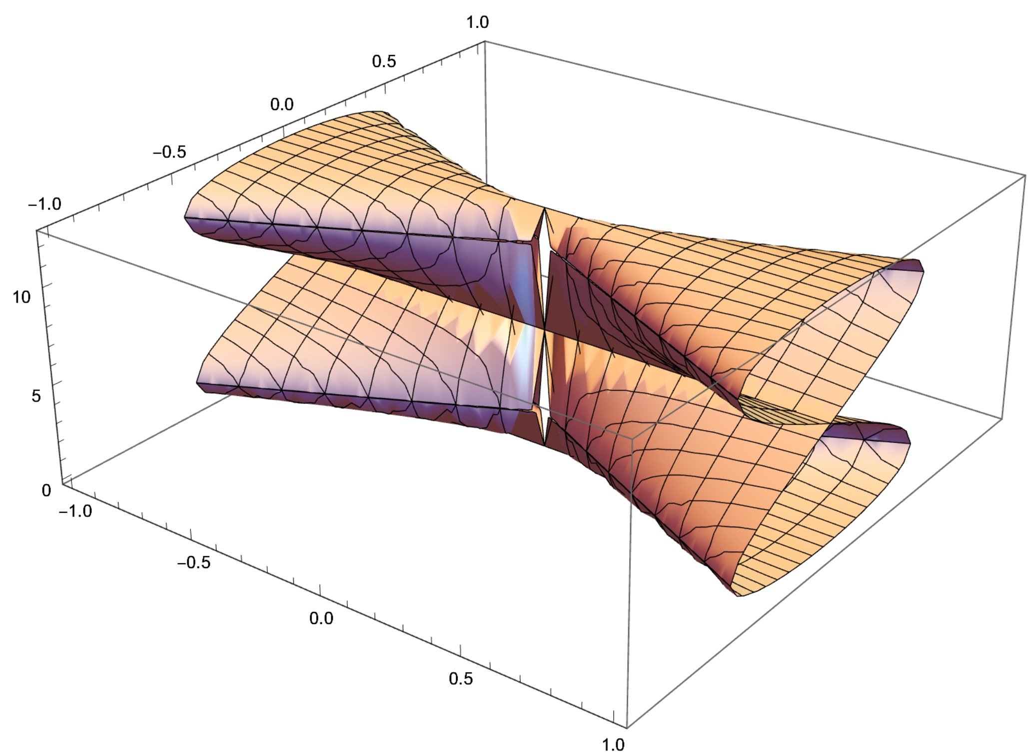
Synchronized angles: $2\pi\eta - 2\pi x' = \theta\eta$

```
Solve[2 π η - 2 π x' == θ η, θ]
```

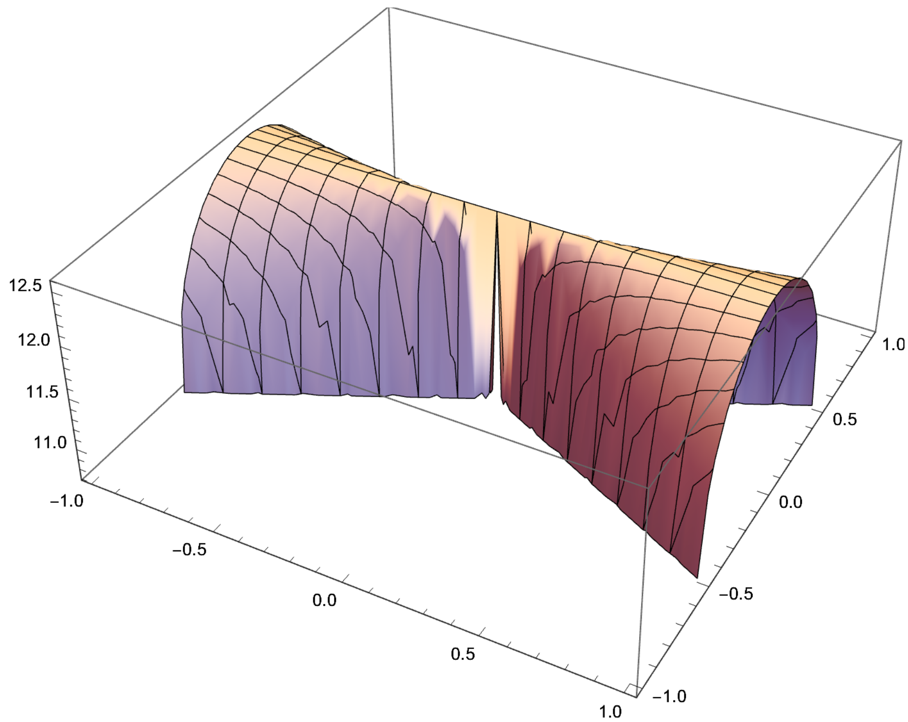
$$\text{Solve}\left[2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi x' == \theta\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}, \left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}, \left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}, \left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}\right\}$$

$$\text{Plot3D}\left[\left\{\frac{2\pi r^2 - \sqrt{2}\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}, \frac{2\pi r^2 - \sqrt{2}\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}, \frac{2\pi r^2 + \sqrt{2}\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}, \frac{2\pi r^2 + \sqrt{2}\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}, \{r, -1, 1\}, \{x', -1, 1\}\right]$$



$$\text{Plot3D}\left[\frac{2\,\pi\,r^2 + \sqrt{2}\,\pi\,\sqrt{r^4 + r^2\,\sqrt{r^2\,\left(r^2 - 4\,(x')^2\right)}}}{r^2}, \{r, -1, 1\}, \{x', -1, 1\}\right]$$

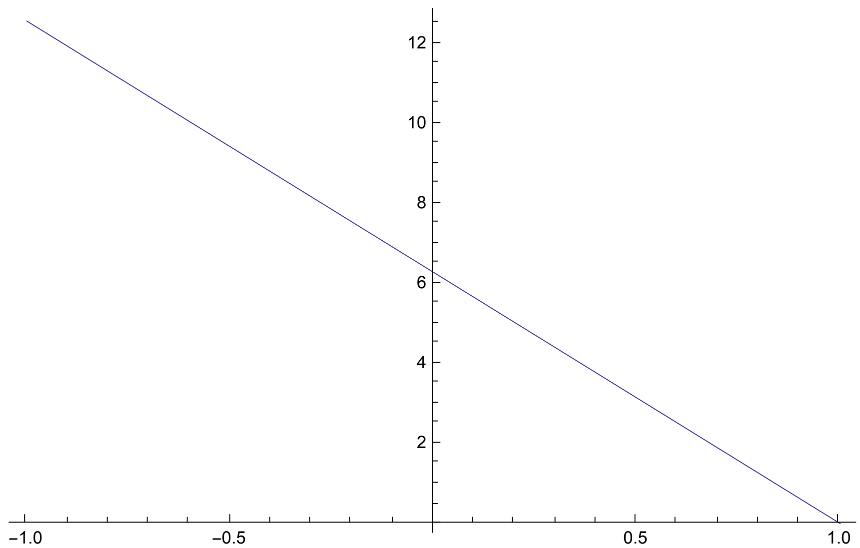


$$r := \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,x' == \theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

$$\{\{\theta \to -2\,\pi\,(-1 + x')\}\}$$

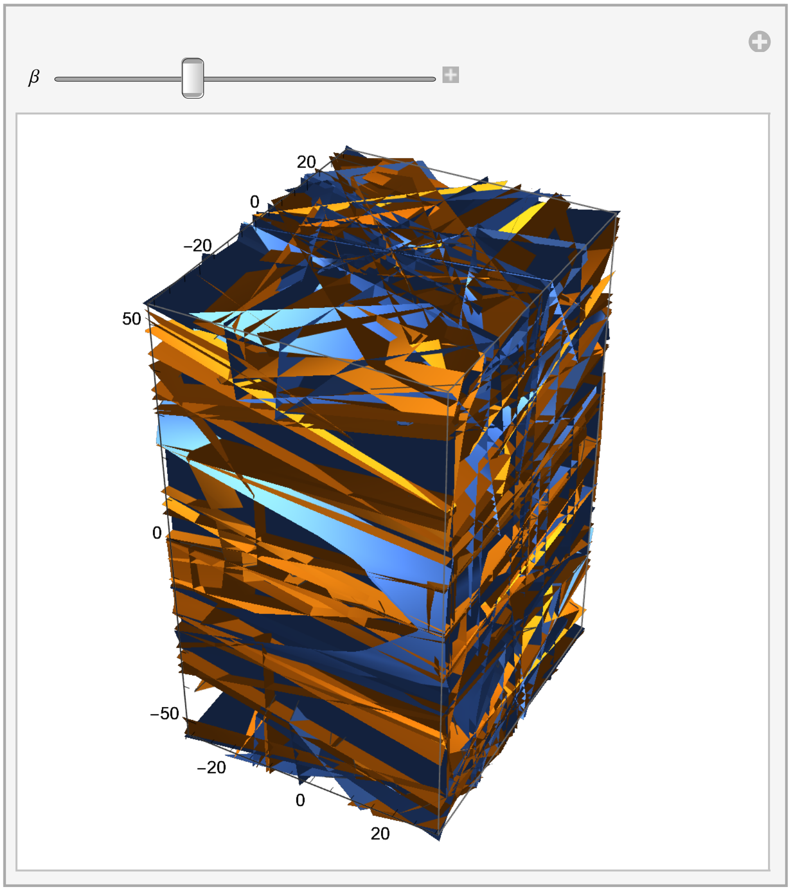
```
Plot[-2 π (-1 + x'), {x', -1, 1}]
```



$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\,\sqrt{1-\frac{v^2}{c^2}} == \theta\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\left\{\{\theta \to 2\pi\},\ \left\{\theta \to \frac{2\,(c\,\pi - \pi\,v)}{c}\right\},\ \left\{\theta \to \frac{2\,(c\,\pi + \pi\,v)}{c}\right\}\right\}$$

$$\begin{aligned}&\text{Manipulate}\Big[\text{SphericalPlot3D}\Big[\\
&\quad\Big\{\frac{1}{c}\,2\,\Big(c\,\pi + \pi\,\Big(\sqrt{}\Big(-1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\,\theta^2 +\\
&\qquad\qquad 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\Big)\Big)\Big/\\
&\qquad\quad \Big(\sqrt{}\Big(-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2\Big)\Big)\Big),\\
&\quad\ \frac{1}{c}\,2\,\Big(c\,\pi - \pi\,\Big(\sqrt{}\Big(-1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\,\theta^2 +\\
&\qquad\qquad 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\Big)\Big)\Big/\\
&\qquad\quad \Big(\sqrt{}\Big(-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2\Big)\Big)\Big)\Big\},\\
&\quad \{\theta,\ -2\pi,\ 2\pi\},\ \{c,\ -3*10\text{^}8,\ 3*10\text{^}8\}\Big],\ \{\beta,\\
&\quad -4\\
&\quad\ \pi,\ 4\\
&\quad\ \pi\}\Big]\end{aligned}$$



General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::stop : Further output of General::ivar will be suppressed during this calculation. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::stop : Further output of General::ivar will be suppressed during this calculation. ≫

General: 2.99792458`*^8 is not a valid variable.

General: 2.99792458`*^8 is not a valid variable.

General: 2.99792458`*^8 is not a valid variable.

General: Further output of General::ivar will be suppressed during this calculation.

General: 2.99792458`*^8 is not a valid variable.

General: 2.99792458`*^8 is not a valid variable.

General: 2.99792458`*^8 is not a valid variable.

General: Further output of General::ivar will be suppressed during this calculation.

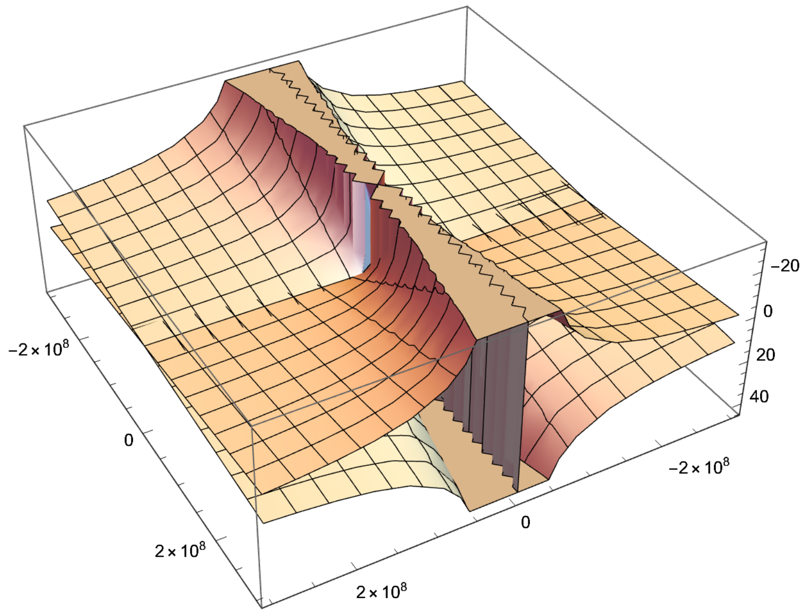
General: 2.99792458`*^8 is not a valid variable.

General: 2.99792458`*^8 is not a valid variable.

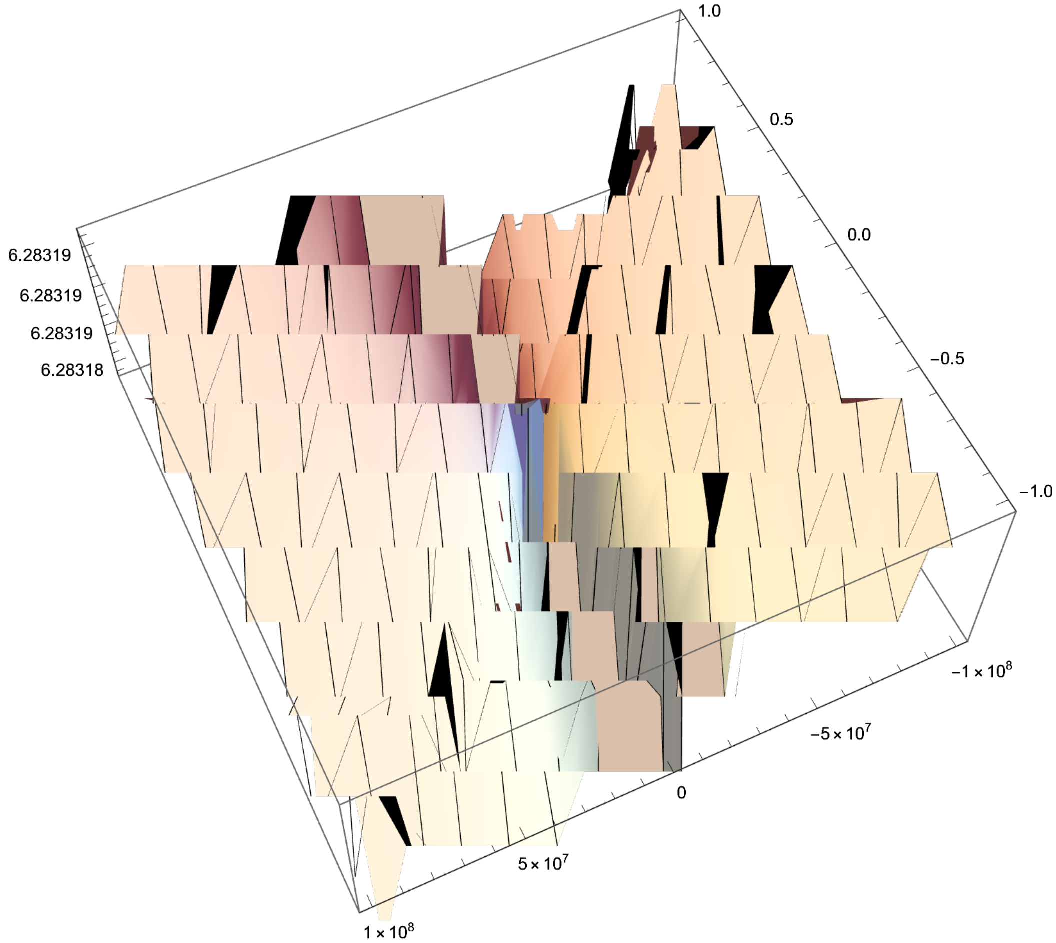
General: 2.99792458`*^8 is not a valid variable.

General: Further output of General::ivar will be suppressed during this calculation.

$$\text{Plot3D}\left[\left\{\frac{2\ (c\,\pi + \pi\,v)}{c}, \frac{2\ (c\,\pi - \pi\,v)}{c}\right\}, \{v, -3*10^8, 3*10^8\}, \{c, -3*10^8, 3*10^8\}\right]$$



$$\text{Plot3D}\left[\frac{2\,(c\,\pi+\pi\,v)}{c},\ \{v,-1,1\},\ \{c,-10\text{^}8,10\text{^}8\}\right]$$

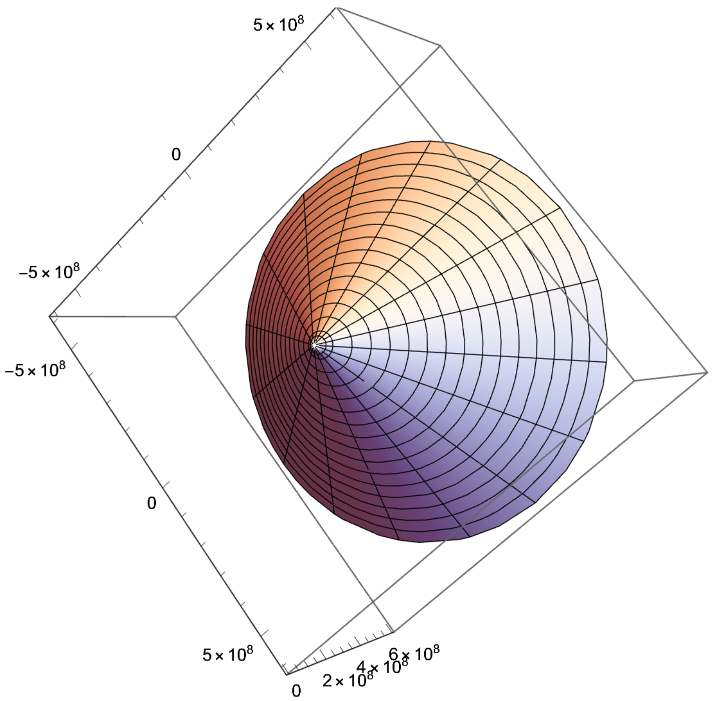


$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{c^2}}==\theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ v\right]$$

$$\left\{\left\{v\to-\left(1.\,\sqrt{\left(9.41587\times10^{45}-5.99433\times10^{45}\,\theta+1.43104\times10^{45}\,\theta^2-1.51838\times10^{44}\,\theta^3+6.04145\times10^{42}\,\theta^4\right)}\right)\Big/\left(\sqrt{1.04766\times10^{29}-3.33479\times10^{28}\,\theta+2.65375\times10^{27}\,\theta^2}\right)\right\},\right.$$

$$\left.\left\{v\to\left(\sqrt{\left(9.41587\times10^{45}-5.99433\times10^{45}\,\theta+1.43104\times10^{45}\,\theta^2-1.51838\times10^{44}\,\theta^3+6.04145\times10^{42}\,\theta^4\right)}\right)\Big/\left(\sqrt{1.04766\times10^{29}-3.33479\times10^{28}\,\theta+2.65375\times10^{27}\,\theta^2}\right)\right\}\right\}$$

```
RevolutionPlot3D[
 {-(1.` √(9.415867378162551`*^45 - 5.99432734692918`*^45 θ + 1.431040241662059`*^45
        θ^2 - 1.5183808548262475`*^44 θ^3 + 6.04144546354237`*^42 θ^4)) /
    (√(1.0476565366106001`*^29 - 3.3347943292822445`*^28 θ +
        2.653745008500455`*^27 θ^2)),
   (√(9.415867378162551`*^45 - 5.99432734692918`*^45 θ + 1.431040241662059`*^45 θ^2 -
        1.5183808548262475`*^44 θ^3 + 6.04144546354237`*^42 θ^4)) /
    (√(1.0476565366106001`*^29 - 3.3347943292822445`*^28 θ +
        2.653745008500455`*^27 θ^2))}, {θ, -2 π, 2 π}]
```

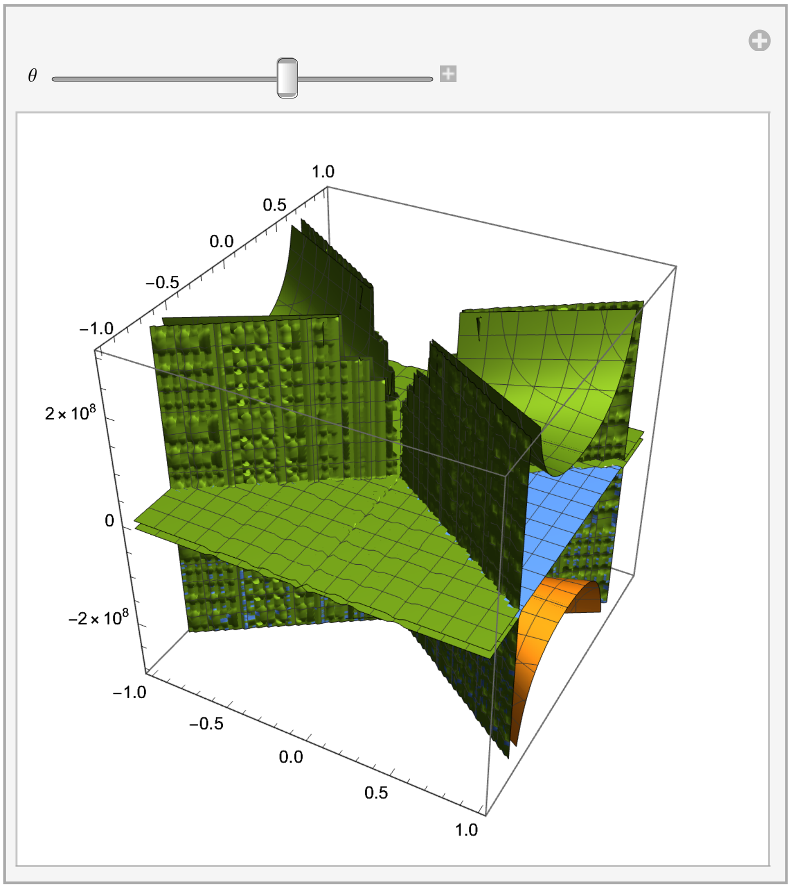


$$x = \eta\,' = \frac{2\,\pi\,r - r\,\theta}{2\,\pi} = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\sqrt{1 - \frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[x == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -c\,\sqrt{1 - \frac{\pi\,x^2}{r^2\,(4\,\pi - \theta)} - \frac{\pi\,x^2}{r^2\,\theta}}\right\},\ \left\{v \to c\,\sqrt{1 - \frac{\pi\,x^2}{r^2\,(4\,\pi - \theta)} - \frac{\pi\,x^2}{r^2\,\theta}}\right\}\right\}$$

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[c\,\sqrt{1 - \frac{\pi\,x^2}{r^2\,(4\,\pi - \theta)} - \frac{\pi\,x^2}{r^2\,\theta}},\right.\right.$$
$$\left.\left.\{r, -1, 1\}, \{x, -1, 1\}, \{c, -3*10^8, 3*10^8\}\right], \{\theta, -2\,\pi, 2\,\pi\}\right]$$



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... General: Further output of Infinity::indet will be suppressed during this calculation.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... General: Further output of Power::infy will be suppressed during this calculation.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... General: Further output of Infinity::indet will be suppressed during this calculation.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

... Power: Infinite expression $\frac{1}{0.}$ encountered.

... General: Further output of Power::infy will be suppressed during this calculation.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

... General: Further output of Infinity::indet will be suppressed during this calculation.

θ

```
$Aborted
```

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

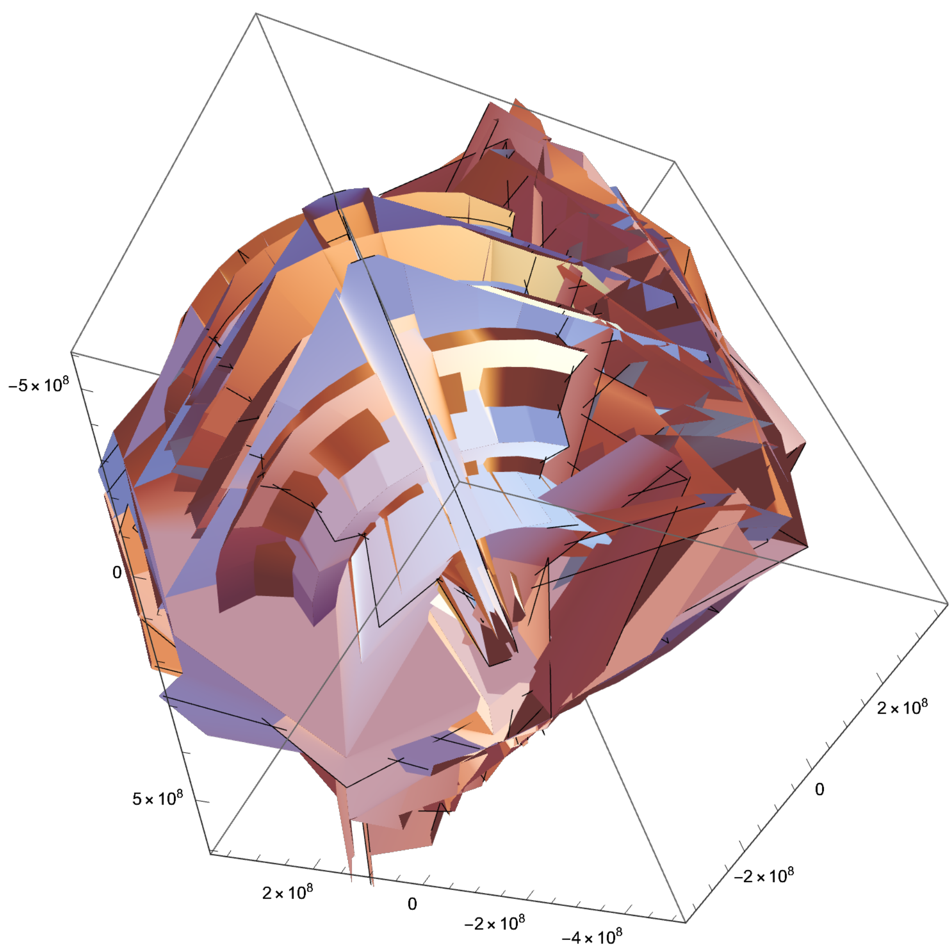
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Solve}\left[\frac{2\,\pi\,r-r\,\theta}{2\,\pi}==\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\sqrt{1-\frac{(v)^2}{c^2}},\,v\right]$$

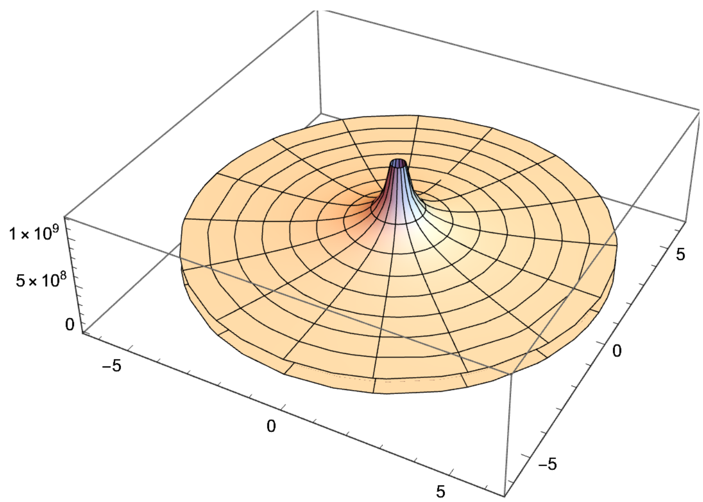
$$\left\{\left\{v\to -c\,\sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{\theta}}\right\},\,\left\{v\to c\,\sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[c\,\sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{\theta}},\right.$$
$$\left.\{c,\,-2.99792458\,(10\,\hat{}\,8),\,2.99792458\,(10\,\hat{}\,8)\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



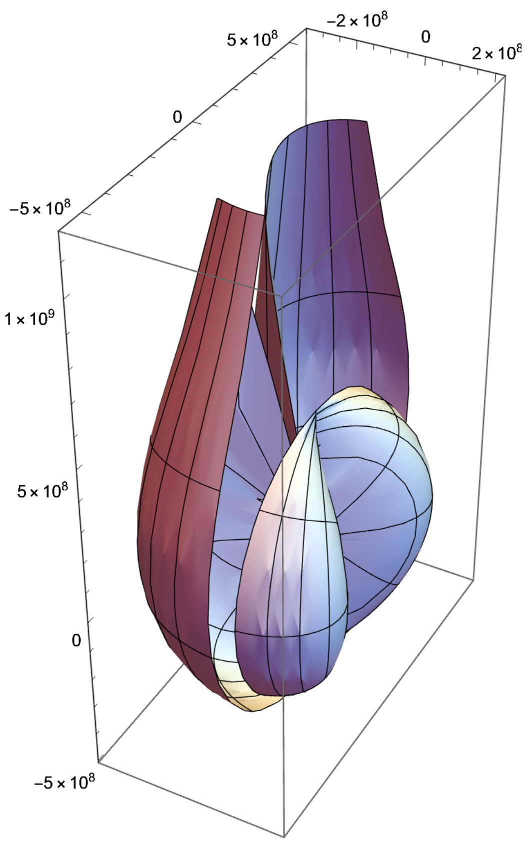

```
c := 2.99792458 (10^8)
```

$$\texttt{RevolutionPlot3D}\left[c\ \sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{\theta}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



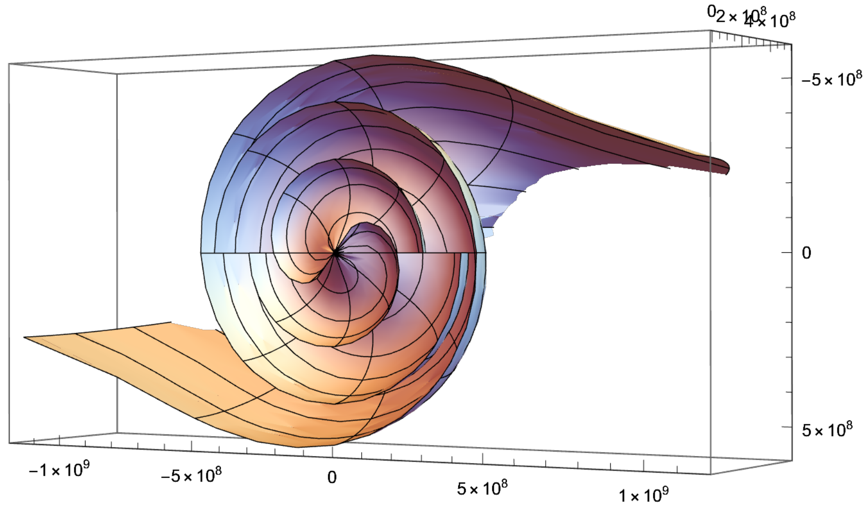
$$\texttt{SphericalPlot3D}\left[c\ \sqrt{2-\frac{\pi}{4\,\pi-2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}-\frac{\pi}{\theta}},\right.$$

$$\left.\{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$

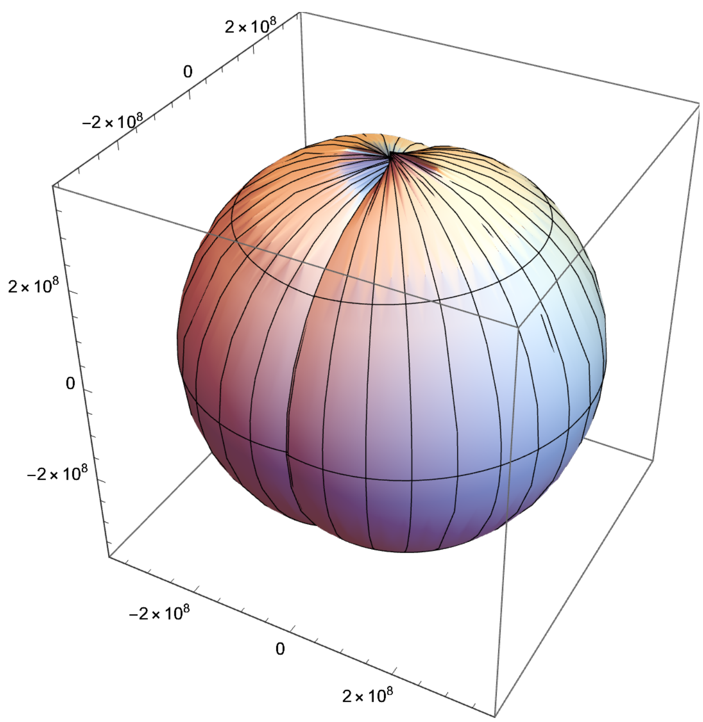


```
SphericalPlot3D[c Sqrt[2 - π/(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - π/θ],
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

$$\text{SphericalPlot3D}\left[c \sqrt{2 - \frac{\pi}{4\,\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)} - \frac{\pi}{\theta}},\ \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$

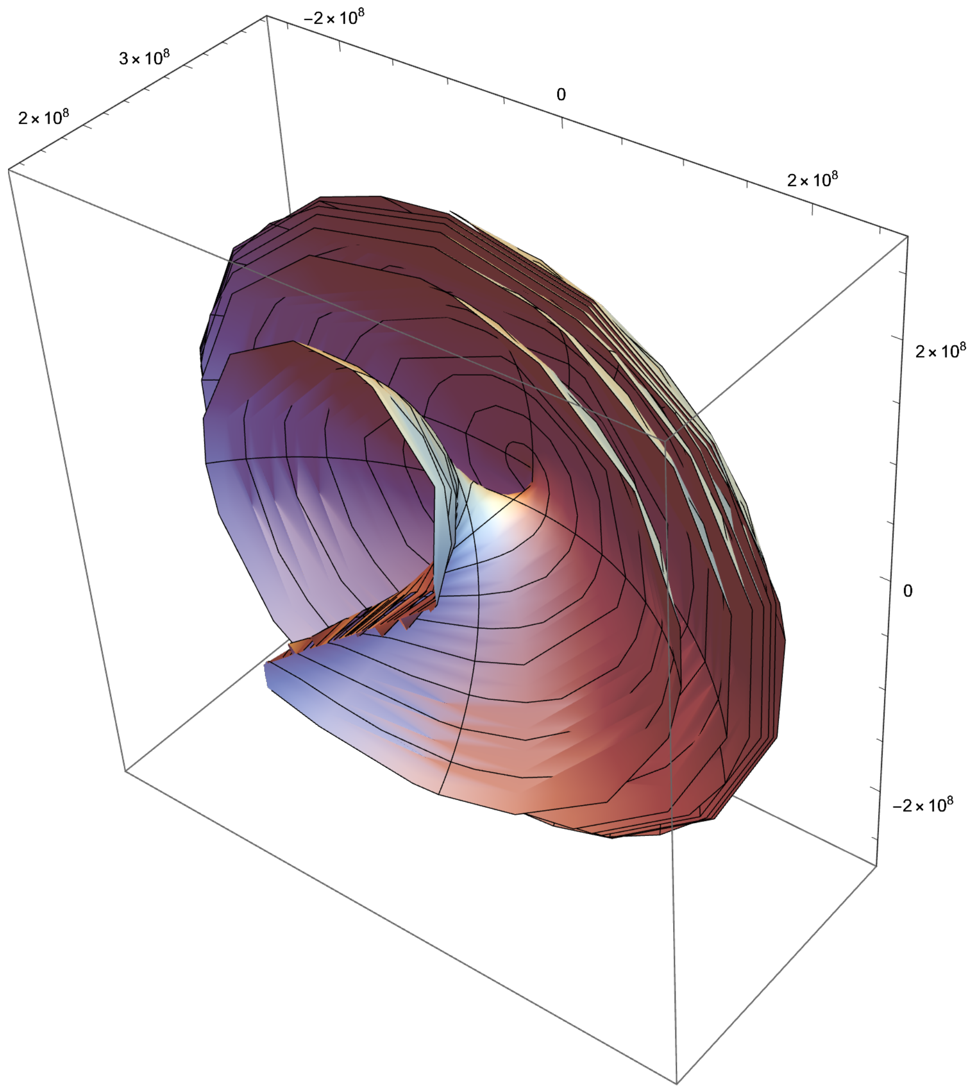


$$\text{SphericalPlot3D}\left[c \sqrt{2 - \frac{\pi}{4\,\pi - \theta} - \frac{\pi}{2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}},\ \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



```
SphericalPlot3D[c Sqrt[2 - π/(4 π - θ) - π/(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))],
 {β, -π / 4, π / 4}, {θ, -4 π, 4 π}]
```

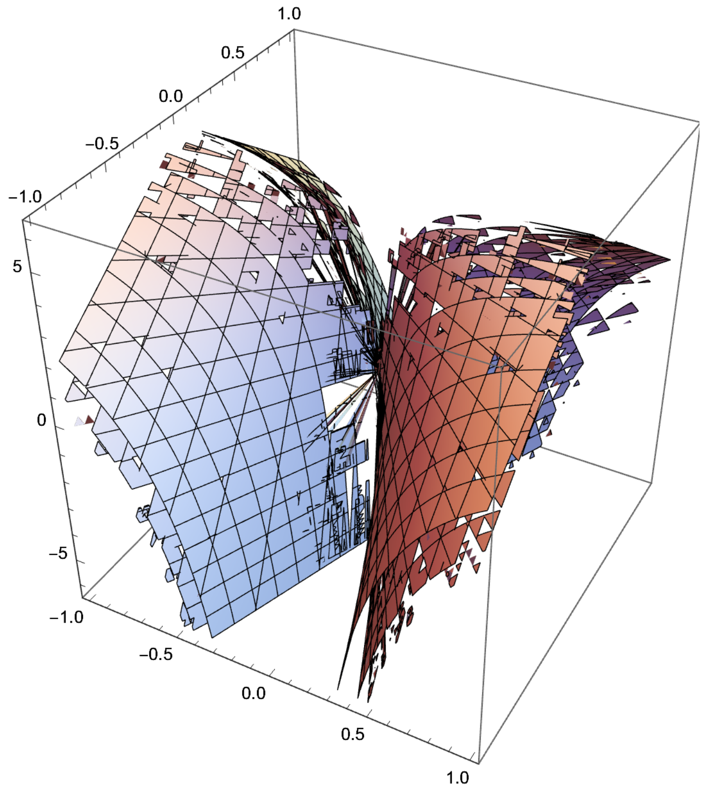
$$\texttt{SphericalPlot3D}\left[c\sqrt{2-\frac{\pi}{4\pi-\theta}-\frac{\pi}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}},\ \{\beta,-\pi/4,\pi/4\},\{\theta,-4\pi,4\pi\}\right]$$



$$\texttt{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == \eta\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v\to-\frac{c\sqrt{4\pi^2-\frac{4\pi^2 r^2}{\eta^2}+\frac{4\pi r^2\theta}{\eta^2}-\frac{r^2\theta^2}{\eta^2}}}{2\pi}\right\},\left\{v\to\frac{c\sqrt{4\pi^2-\frac{4\pi^2 r^2}{\eta^2}+\frac{4\pi r^2\theta}{\eta^2}-\frac{r^2\theta^2}{\eta^2}}}{2\pi}\right\}\right\}$$

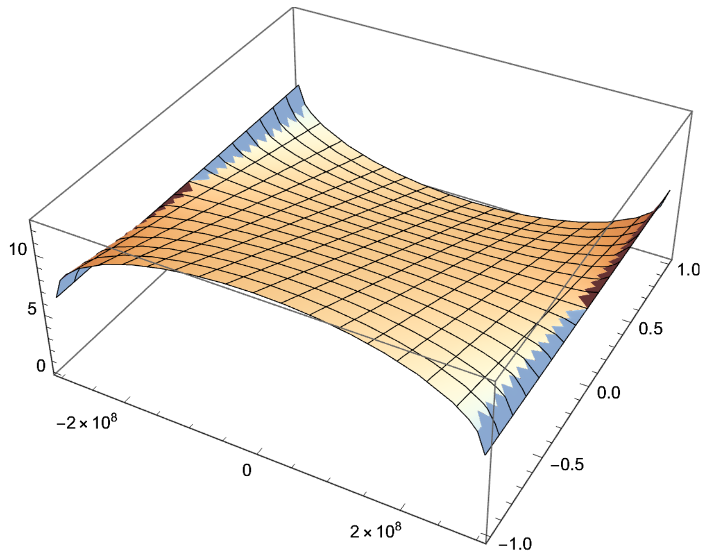
$$\text{ContourPlot3D}\left[\frac{c\sqrt{4\pi^2-\frac{4\pi^2 r^2}{\eta^2}+\frac{4\pi r^2\theta}{\eta^2}-\frac{r^2\theta^2}{\eta^2}}}{2\pi},\{r,-1,1\},\{\eta,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi r-r\theta}{2\pi}==\eta\sqrt{1-\frac{(v)^2}{c^2}},\theta\right]$$

$$\left\{\left\{\theta\to-6.28319\left(-1.+1.\sqrt{1.-1.11265\times10^{-17}v^2}\,\eta\right)\right\}\right\}$$

```
Plot3D[-6.283186703443298`
  (-0.9999997777777779` + 1.` Sqrt[1.` - 1.1126500560536185`*^-17 v^2] η), {v,
  -c, c}, {η, -1, 1}]
```



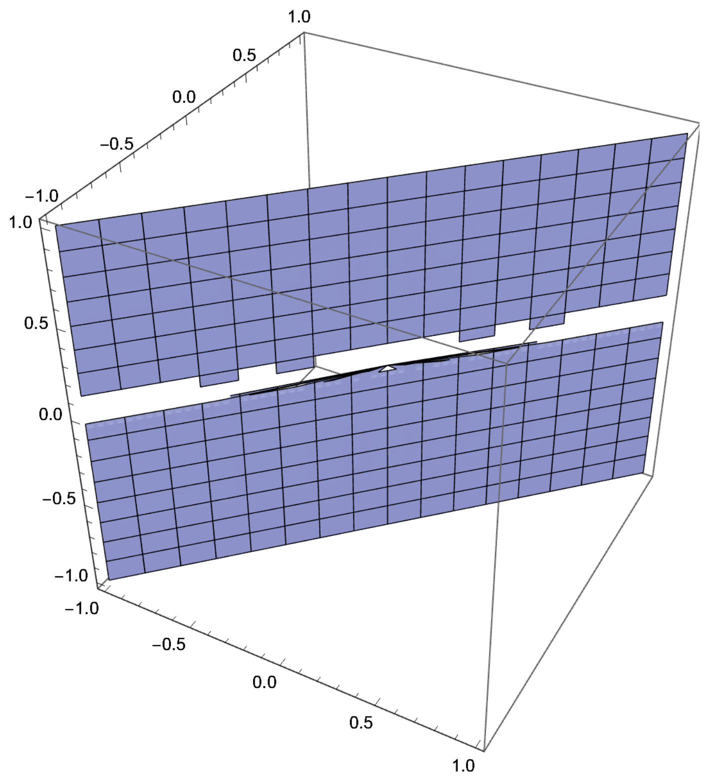
$2\,\pi\,x - 2\,\pi\,\eta' = \rho\,\eta$, where ρ is an angle of a similar dimensional kind to theta, but different.

```
Solve[2 π x - 2 π η ' == ρ η, ρ]
```

$$\left\{\left\{\rho \to \frac{2\,(\pi\,x - \pi\,\eta')}{\eta}\right\}\right\}$$

```
η′ = p
```

$$\text{ContourPlot3D}\left[\frac{2\,(\pi\,x-\pi\,p)}{\eta},\ \{x,-1,1\},\ \{p,-1,1\},\ \{\eta,-1,1\}\right]$$



$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\eta' == \rho\,\eta,\ \rho\right]$$

$$\left\{\left\{\rho\to\frac{2\,\pi\,r-r\,\theta-2\,\pi\,\eta'}{\eta}\right\}\right\}$$

$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}} == \rho\,\eta,\ \rho\right]$$

$$\left\{\left\{\rho\to\frac{2\,\pi\,r-r\,\theta-\sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{\eta}\right\}\right\}$$

$$c := 2.99792458\,\left(10^8\right)$$

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{2\,\pi\,r - r\,\theta - \sqrt{\frac{c^2-v^2}{c^2}}\;\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{\eta},\right.\right.$$
$$\left.\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{\eta,-1,1\}\right],\{v,-c,c\}\right]$$

v

$$\text{ContourPlot3D}\left[\frac{(2\,\pi)\,r - r\,\theta - \sqrt{\frac{c^2-\text{FE`v\$\$275}^2}{c^2}}\;\sqrt{\left(r^2\,(4\,\pi-\theta)\right)\,\theta}}{\eta},\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{\eta,-1,1\}\right]$$

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

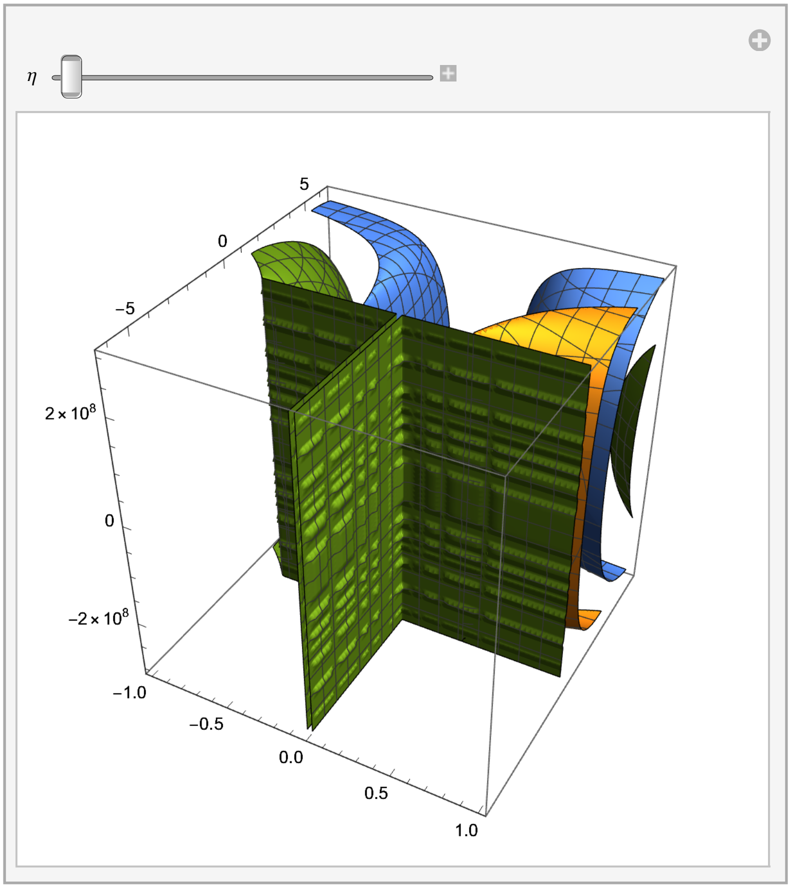
General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{2\,\pi\,r - r\,\theta - \sqrt{\frac{c^2-v^2}{c^2}}\ \sqrt{r^2\ (4\,\pi-\theta)\ \theta}}{\eta},\right.\right.$$
$$\left.\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{v, -c, c\}\right], \{\eta, -1, 1\}\right]$$



ContourPlot3D::valuef : $\frac{(2\,\pi)\,r - r\,\theta - \sqrt{\frac{\text{Power}[\ll 2\gg]+\ll 1\gg}{\text{Power}[\ll 2\gg]}}\ \sqrt{(\ll 1\gg)\,\theta}}{\text{FE`}\eta\$\$12}$ must be a numerical function. ≫

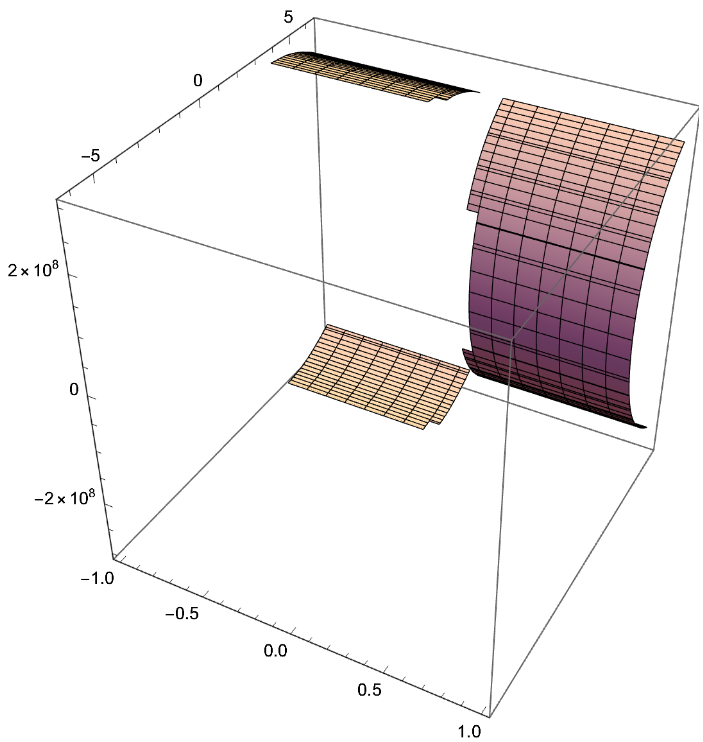
ContourPlot3D::valuef : $\frac{(2\,\pi)\,r - r\,\theta - \sqrt{\frac{\text{Power}[\ll 2\gg]+\ll 1\gg}{\text{Power}[\ll 2\gg]}}\ \sqrt{(\ll 1\gg)\,\theta}}{\text{FE`}\eta\$\$12}$ must be a numerical function. ≫

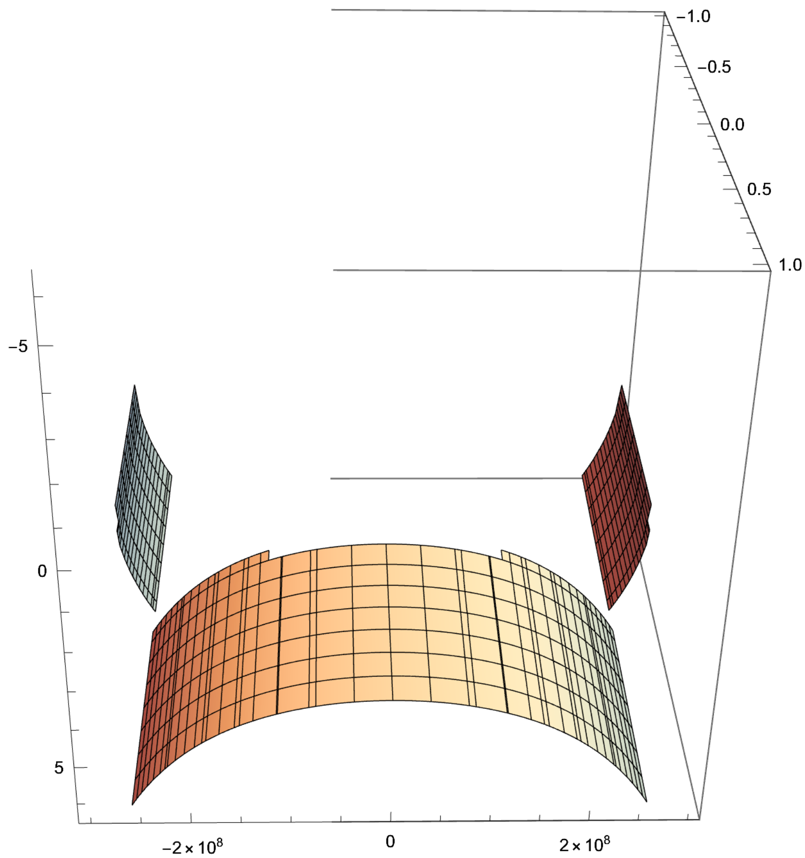
$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi} - 2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \sqrt{1 - \frac{v^2}{(c)^2}} == \rho\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \rho\right]$$

$$\left\{\left\{\rho \to -\frac{2\,\pi\left(-2\,\pi\,r + r\,\theta + \sqrt{\frac{c^2-v^2}{c^2}}\ \sqrt{r^2\ (4\,\pi-\theta)\ \theta}\right)}{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}}\right\}\right\}$$

$$\texttt{ContourPlot3D}\left[-\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\sqrt{\frac{c^2-v^2}{c^2}}\ \sqrt{r^2\ (4\,\pi-\theta)\ \theta}\right)}{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\right.$$

$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{v,-c,c\}\right]$$

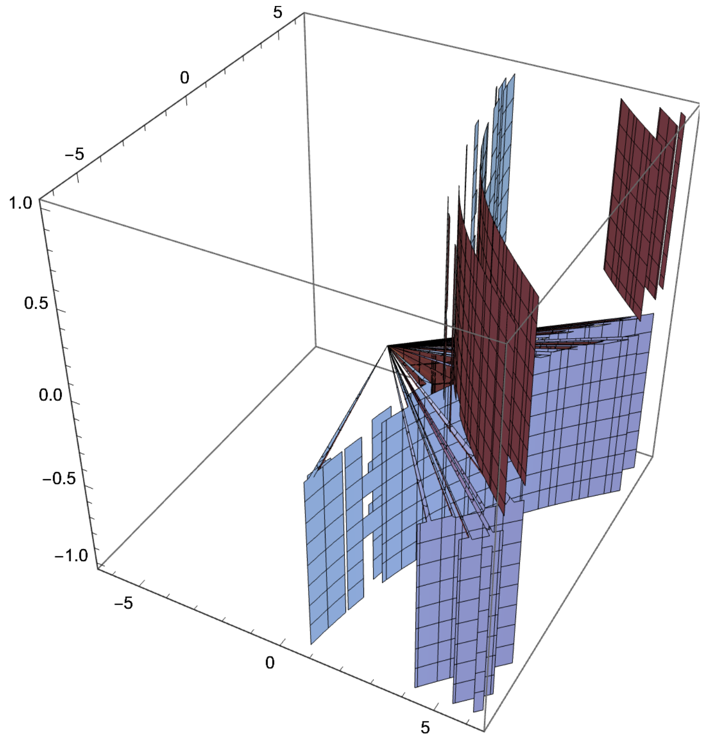




$$\text{Solve}\left[2\pi\frac{2\pi r - r\theta}{2\pi} - 2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1-\frac{v^2}{(c)^2}} == \rho\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, v\right]$$

$$\left\{\left\{v \to -\frac{1}{2\pi}\left(\sqrt{\left(8c^2\pi^2 - \frac{4c^2\pi^3}{4\pi-\theta} - \frac{4c^2\pi^3}{\theta} - \frac{2c^2\pi\sqrt{r^2(4\pi-\theta)\theta}\,\rho}{r(4\pi-\theta)} + \frac{2c^2\pi\sqrt{r^2(4\pi-\theta)\theta}\,\rho}{r\theta} - c^2\rho^2\right)}\right)\right\}, \left\{v \to \frac{1}{2\pi}\left(\sqrt{\left(8c^2\pi^2 - \frac{4c^2\pi^3}{4\pi-\theta} - \frac{4c^2\pi^3}{\theta} - \frac{2c^2\pi\sqrt{r^2(4\pi-\theta)\theta}\,\rho}{r(4\pi-\theta)} + \frac{2c^2\pi\sqrt{r^2(4\pi-\theta)\theta}\,\rho}{r\theta} - c^2\rho^2\right)}\right)\right\}\right\}$$

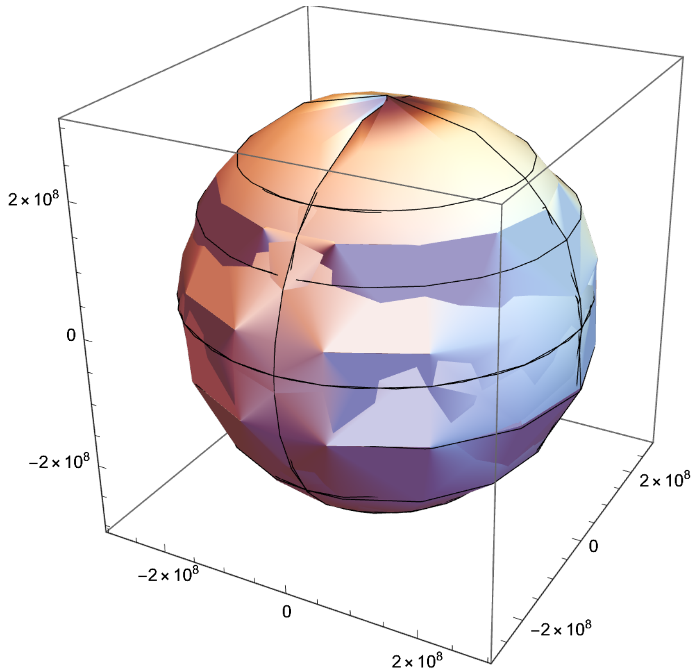
$$\text{ContourPlot3D}\left[\frac{\sqrt{8\,c^2\,\pi^2-\frac{4\,c^2\,\pi^3}{4\,\pi-\theta}-\frac{4\,c^2\,\pi^3}{\theta}-\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,(4\,\pi-\theta)}+\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,\theta}-c^2\,\rho^2}}{2\,\pi},\right.$$
$$\left.\{\theta,-2\,\pi,2\,\pi\},\{\rho,-2\,\pi,2\,\pi\},\{r,-1,1\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{8\,c^2\,\pi^2-\frac{4\,c^2\,\pi^3}{4\,\pi-\theta}-\frac{4\,c^2\,\pi^3}{\theta}-\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,(4\,\pi-\theta)}+\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,\theta}-c^2\,\rho^2}}{2\,\pi},\right.$$

$$\left.\{\theta,-4\,\pi,4\,\pi\},\{\rho,-4\,\pi,4\,\pi\}\right]$$



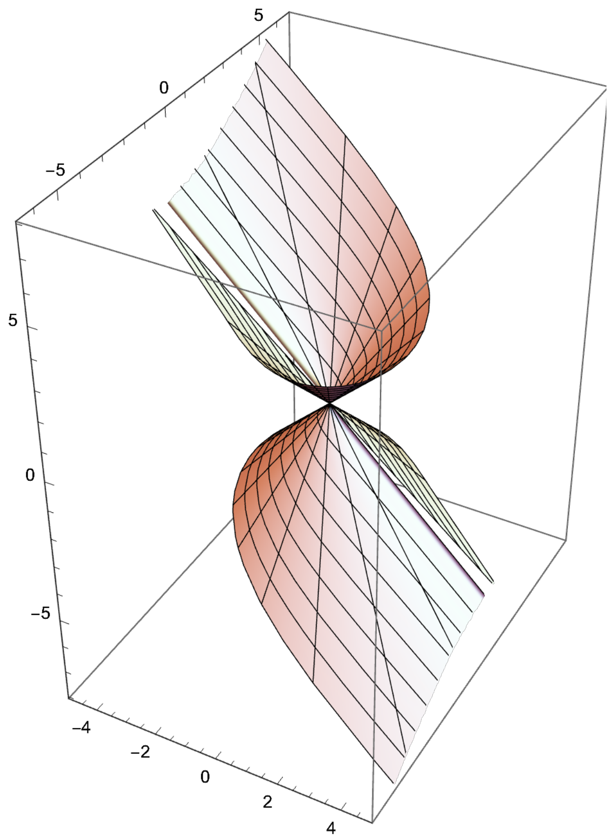
$2\,\pi\,\eta-2\,\pi\,x'=\theta\,\eta$

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,x'==\theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},r\right]$$

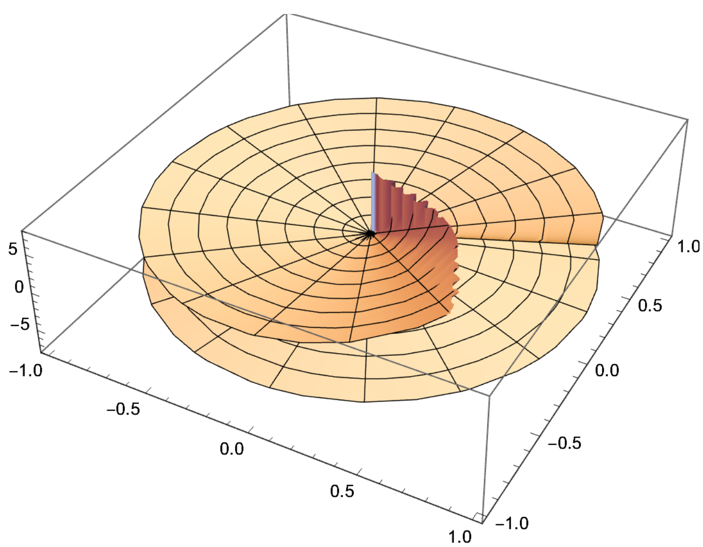
$$\left\{\left\{r\to-\frac{4\,\pi^2\,x'}{\sqrt{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4}}\right\},\left\{r\to\frac{4\,\pi^2\,x'}{\sqrt{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4}}\right\}\right\}$$

```
RevolutionPlot3D[{-4 π² x′/Sqrt[16 π³ θ - 20 π² θ² + 8 π θ³ - θ⁴], 4 π² x′/Sqrt[16 π³ θ - 20 π² θ² + 8 π θ³ - θ⁴]},
 {x', -1, 1}, {θ, -2 π, 2 π}]
```

$$\text{RevolutionPlot3D}\left[\left\{-\frac{4\pi^2 x'}{\sqrt{16\pi^3\theta-20\pi^2\theta^2+8\pi\theta^3-\theta^4}},\frac{4\pi^2 x'}{\sqrt{16\pi^3\theta-20\pi^2\theta^2+8\pi\theta^3-\theta^4}}\right\},\{x',-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{4\pi^2 x'}{\sqrt{16\pi^3\theta-20\pi^2\theta^2+8\pi\theta^3-\theta^4}},\{x',-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\,\sqrt{1-\frac{v^2}{(c)^2}} == \theta\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\Big\{\Big\{\theta \to 6.28319 - 0.5\sqrt{\Big(-78.9568 + 4.39257\times10^{-16}\,v^2 + 3.4741\times10^{-46}\,\big(2.27273\times10^{47} - 4.21458\times10^{29}\,v^2\big) + \big(4.37709\times10^{-46}\,\big(3.03199\times10^{62} + 6.55503\times10^{60}\,v^2 + 1.77627\times10^{59}\,v^4\big)\big)\Big/ \Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3} + 2.7574\times10^{-46}\,\Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3}\Big)} - 0.5\sqrt{\Big(78.9568 + 4.39257\times10^{-16}\,v^2 - 3.4741\times10^{-46}\,\big(2.27273\times10^{47} - 4.21458\times10^{29}\,v^2\big) - \big(4.37709\times10^{-46}\,\big(3.03199\times10^{62} + 6.55503\times10^{60}\,v^2 + 1.77627\times10^{59}\,v^4\big)\big)\Big/ \Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3} - 2.7574\times10^{-46}\,\Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3} - \big(0.25\,\big(15\,875.2 - 100.531\,\big(236.871 - 4.39257\times10^{-16}\,v^2\big) - 8.\,\big(-992.201 + 5.51986\times10^{-15}\,v^2\big)\big)\big)\Big/ \Big(\sqrt{\Big(-78.9568 + 4.39257\times10^{-16}\,v^2 + 3.4741\times10^{-46}\,\big(2.27273\times10^{47} - 4.21458\times10^{29}\,v^2\big) + \big(4.37709\times10^{-46}\,\big(3.03199\times10^{62} + 6.55503\times10^{60}\,v^2 + 1.77627\times10^{59}\,v^4\big)\big)\Big/ \Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3} + 2.7574\times10^{-46}\,\Big(8.27465\times10^{109} - 1.3805\times10^{93}\,v^2 - 8.28801\times10^{90}\,v^4 - 1.49725\times10^{89}\,v^6 + \sqrt{\big(6.84699\times10^{219} - 2.28463\times10^{203}\,v^2 - 1.37161\times10^{201}\,v^4 - 2.47784\times10^{199}\,v^6 + 2.75697\times10^{182}\,v^8 + 0.\,v^{10} + 0.\,v^{12}\big)}\Big)^{1/3}\Big)}\Big)}\Big\},$$

$$\Big\{\theta \to 6.28319 - 0.5\sqrt{\Big(-78.9568 + 4.39257\times10^{-16}\,v^2 + 3.4741\times10^{-46}}$$

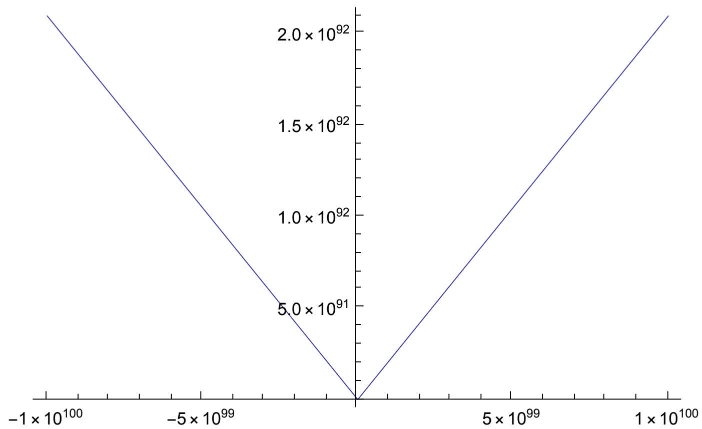
$$\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)+$$
$$\left(4.37709\times10^{-46}\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}+$$
$$2.7574\times10^{-46}\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}\Big)+$$
$$0.5\sqrt{\Big(78.9568+4.39257\times10^{-16}\,v^2-3.4741\times10^{-46}\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)-}$$
$$\left(4.37709\times10^{-46}\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}-$$
$$2.7574\times10^{-46}\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}-$$
$$\Big(0.25\Big(15\,875.2-100.531\left(236.871-4.39257\times10^{-16}\,v^2\right)-$$
$$8.\left(-992.201+5.51986\times10^{-15}\,v^2\right)\Big)\Big)\Big/\Big(\sqrt{\Big(-78.9568+}$$
$$4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)+$$
$$\left(4.37709\times10^{-46}\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}+$$
$$2.7574\times10^{-46}\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times$$
$$10^{89}\,v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}\Big)\Big)\Big)\Big\},$$
$$\Big\{\theta\to6.28319+0.5\sqrt{\Big(-78.9568+4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}}$$
$$\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)+$$
$$\left(4.37709\times10^{-46}\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$

$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}+$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}\Big)-$$
$$0.5\sqrt{}\Big(78.9568+4.39257\times10^{-16}\,v^2-3.4741\times10^{-46}\,(2.27273\times10^{47}-4.21458\times10^{29}\,v^2)-$$
$$(4.37709\times10^{-46}\,(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4))\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}-$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}+$$
$$\Big(0.25\,(15\,875.2-100.531\,(236.871-4.39257\times10^{-16}\,v^2)-$$
$$8.\,(-992.201+5.51986\times10^{-15}\,v^2))\Big)\Big/\Big(\sqrt{}\Big(-78.9568+$$
$$4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}\,(2.27273\times10^{47}-4.21458\times10^{29}\,v^2)+$$
$$(4.37709\times10^{-46}\,(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4))\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}+$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times$$
$$10^{89}\,v^6+\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}\Big)\Big)\Big)\Big\},$$
$$\Big\{\theta\to6.28319+0.5\sqrt{}\Big(-78.9568+4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}$$
$$(2.27273\times10^{47}-4.21458\times10^{29}\,v^2)+$$
$$(4.37709\times10^{-46}\,(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4))\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12})\Big)^{1/3}+$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{}\,(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-$$

$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\Big)\Big)^{1/3}\Big)+$$
$$0.5\sqrt{\Big(78.9568+4.39257\times10^{-16}\,v^2-3.4741\times10^{-46}\,(2.27273\times10^{47}-4.21458\times10^{29}\,v^2)-}$$
$$\big(4.37709\times10^{-46}\,(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4)\big)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\big(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-}$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\big)\Big)^{1/3}-$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{\big(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-}$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\big)\Big)^{1/3}+$$
$$\Big(0.25\,\big(15\,875.2-100.531\,(236.871-4.39257\times10^{-16}\,v^2)-$$
$$8.\,(-992.201+5.51986\times10^{-15}\,v^2)\big)\Big)\Big/\Big(\sqrt{\Big(-78.9568+}$$
$$4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}\,(2.27273\times10^{47}-4.21458\times10^{29}\,v^2)+$$
$$\big(4.37709\times10^{-46}\,(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4)\big)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\big(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-}$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\big)\Big)^{1/3}+$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times$$
$$10^{89}\,v^6+\sqrt{\big(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-}$$
$$2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\big)\Big)^{1/3}\Big)\Big)\Big)\Big\}\Big\}$$

```
Plot[6.283185307179586`+
  0.5` √(-78.95683520871486` + 4.392566356039645`*^-16 v^2 + 3.474101948670718`*^-46
       (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) +
      (4.377094174611036`*^-46 (3.0319879916202416`*^62 +
            6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
       (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
          8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
          √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
             1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
             2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3) +
      2.7573965439823348`*^-46 (8.274653940104402`*^109 - 1.3805000153057876`*^93
          v^2 - 8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
          √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
             1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
```

```
2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3)) +
0.5` √(78.95683520871488` + 4.392566356039645`*^-16 v^2 -
    3.474101948670718`*^-46
     (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) -
    (4.377094174611036`*^-46 (3.0319879916202416`*^62 +
          6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
     (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
        8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
        √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
           1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
           2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3) -
    2.7573965439823348`*^-46 (8.274653940104402`*^109 - 1.3805000153057876`*^93
          v^2 - 8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
        √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
           1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
           2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3) +
    (0.25` (15875.213660313508` - 100.53096491487338`
           (236.8705056261446` - 4.392566356039645`*^-16 v^2) -
          8.` (-992.2008537695941` + 5.519861677815934`*^-15 v^2))) /
     (√(-78.95683520871486` + 4.392566356039645`*^-16 v^2 +
          3.474101948670718`*^-46
           (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) +
          (4.377094174611036`*^-46 (3.0319879916202416`*^62 +
                6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
           (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
              8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
              √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
                 1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
                 2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3) +
          2.7573965439823348`*^-46 (8.274653940104402`*^109 -
              1.3805000153057876`*^93 v^2 - 8.288007545727168`*^90 v^4 -
              1.497247331222908`*^89 v^6 + √(6.846989782848531`*^219 -
                 2.2846319781928445`*^203 v^2 - 1.371607885877325`*^201 v^4 -
                 2.477840705722886`*^199 v^6 + 2.7569696001145084`*^182 v^8 +
                 0.` v^10 + 0.` v^12))^(1/3)))), {v, -10^100, 10^100}]
```

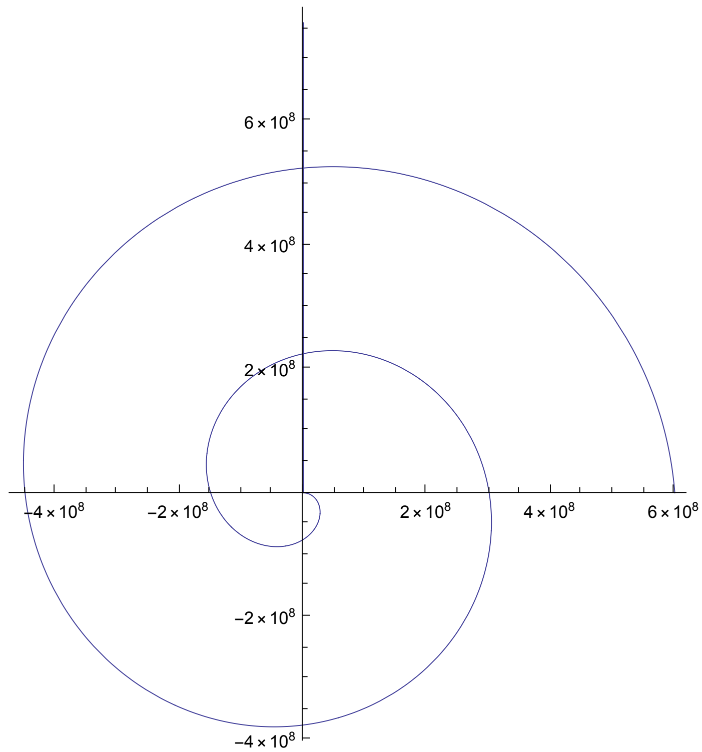


$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1 - \frac{v^2}{(c)^2}} == \theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ v\right]$$

$$\left\{\left\{v \to -\left(1.\sqrt{\left(1.49539\times10^{48} - 9.51997\times10^{47}\,\theta + 2.27273\times10^{47}\,\theta^2 - 2.41144\times10^{46}\,\theta^3 + 9.59481\times10^{44}\,\theta^4\right)}\right)\Big/\left(\sqrt{1.66385\times10^{31} - 5.2962\times10^{30}\,\theta + 4.21458\times10^{29}\,\theta^2}\right)\right\},\right.$$

$$\left.\left\{v \to \left(\sqrt{\left(1.49539\times10^{48} - 9.51997\times10^{47}\,\theta + 2.27273\times10^{47}\,\theta^2 - 2.41144\times10^{46}\,\theta^3 + 9.59481\times10^{44}\,\theta^4\right)}\right)\Big/\left(\sqrt{1.66385\times10^{31} - 5.2962\times10^{30}\,\theta + 4.21458\times10^{29}\,\theta^2}\right)\right\}\right\}$$

```
PolarPlot[
 (√(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 2.2727264880331392`*^47 θ^2 -
      2.4114376991090496`*^46 θ^3 + 9.594805744283795`*^44 θ^4)) /
  (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
      4.2145820905076925`*^29 θ^2)), {θ, -2 π, 2 π}]
```



Light

$2\pi r - 2\pi x == \theta r$

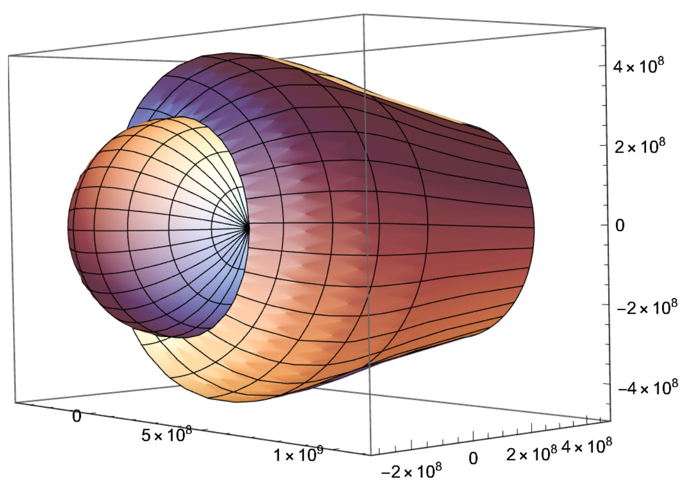
$\text{Solve}\left[2\pi r - 2\pi r\sqrt{1 - \frac{(v)^2}{c^2}} == \theta r, v\right]$

$$\left\{\left\{v \to -\frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2\pi}\right\}, \left\{v \to \frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2\pi}\right\}\right\}$$

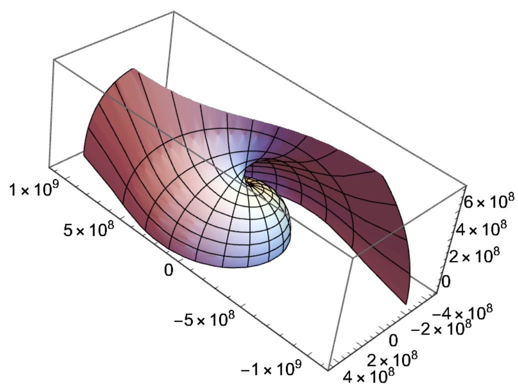
$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi} == \left(\sqrt{\left(-1.1294090667581471\text{`*}^\wedge 18\,\theta + 8.987551787368176\text{`*}^\wedge 16\,\theta^2 + 3.5481432270250993\text{`*}^\wedge 18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right), c\right]$$

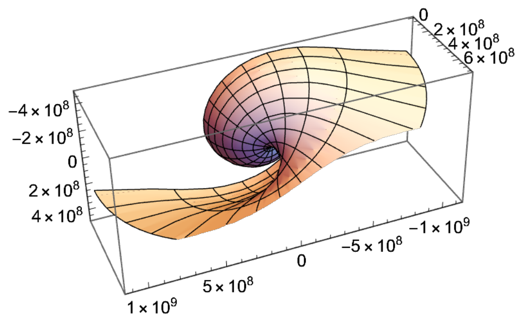
$$\left\{\left\{c \to -\left(1.\ \sqrt{2.02015\times10^{40}\,\theta - 1.60758\times10^{39}\,\theta^2 - 6.34649\times10^{40}\,\text{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{\theta}\,\sqrt{\left(7.15472\times10^{22}\,\theta - 1.13871\times10^{22}\,\theta^2 + 4.53078\times10^{20}\,\theta^3 - 2.24772\times10^{23}\,\text{Sin}[\beta]^2 + 1.78868\times10^{22}\,\theta\,\text{Sin}[\beta]^2\right)}\right)\right\},\right.$$
$$\left.\left\{c \to \left(\sqrt{2.02015\times10^{40}\,\theta - 1.60758\times10^{39}\,\theta^2 - 6.34649\times10^{40}\,\text{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{\theta}\,\sqrt{\left(7.15472\times10^{22}\,\theta - 1.13871\times10^{22}\,\theta^2 + 4.53078\times10^{20}\,\theta^3 - 2.24772\times10^{23}\,\text{Sin}[\beta]^2 + 1.78868\times10^{22}\,\theta\,\text{Sin}[\beta]^2\right)}\right)\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\left(\sqrt{\left(2.0201505625374124\text{`*}^\wedge 40\,\theta - 1.607584739088511\text{`*}^\wedge 39\,\theta^2 - 6.346490166412822\text{`*}^\wedge 40\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{\theta}\,\sqrt{\left(7.154717000231094\text{`*}^\wedge 22\,\theta - 1.138708577010396\text{`*}^\wedge 22\,\theta^2 + 4.530777469308567\text{`*}^\wedge 20\,\theta^3 - 2.2477206366440006\text{`*}^\wedge 23\,\text{Sin}[\beta]^2 + 1.7886792500577734\text{`*}^\wedge 22\,\theta\,\text{Sin}[\beta]^2\right)}\right), \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



```
SphericalPlot3D[(√(2.0201505625374124`*^40 θ -
      1.607584739088511`*^39 θ^2 - 6.346490166412822`*^40 Sin[β]^2)) /
   (√θ √(7.154717000231094`*^22 θ - 1.138708577010396`*^22 θ^2 +
       4.530777469308567`*^20 θ^3 - 2.2477206366440006`*^23 Sin[β]^2 +
       1.7886792500577734`*^22 θ Sin[β]^2)), {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



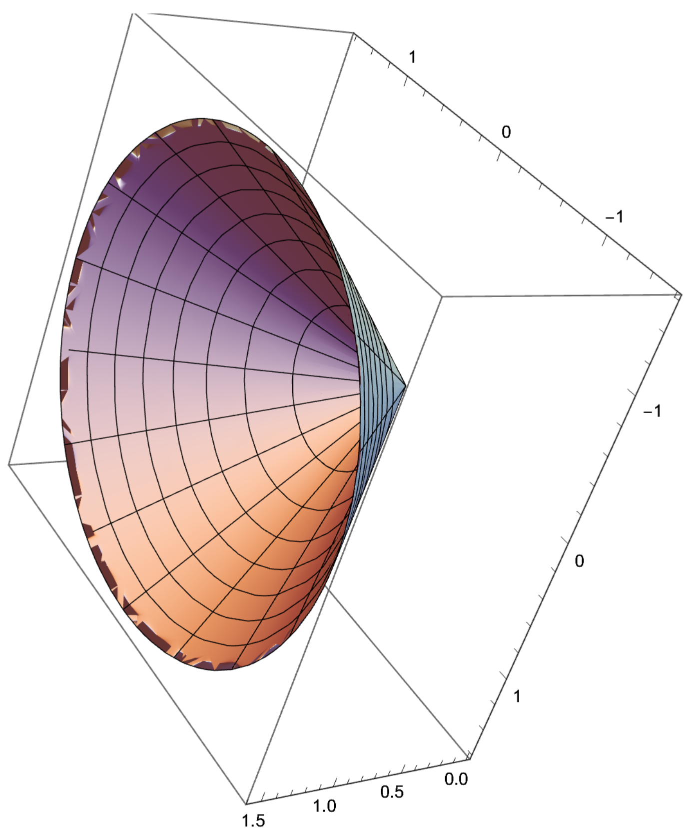



```
c := 2.99792458 (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi} == \left(\sqrt{\left(-1.1294090667581471\text{`*}^\wedge 18\,\theta + 8.987551787368176\text{`*}^\wedge 16\,\theta^2 + 3.5481432270250993\text{`*}^\wedge 18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -1.\,\text{ArcSin}\left[\left(\sqrt{\theta}\,\sqrt{\left(6.43991\times10^{46} - 2.56236\times10^{46}\,\theta + 3.2625\times10^{45}\,\theta^2 - 1.29811\times10^{44}\,\theta^3\right)}\right)\Big/\left(\sqrt{2.02316\times10^{47} - 6.43991\times10^{46}\,\theta + 5.12472\times10^{45}\,\theta^2}\right)\right]\right\},\right.$$
$$\left.\left\{\beta \to \text{ArcSin}\left[\left(\sqrt{\theta}\,\sqrt{\left(6.43991\times10^{46} - 2.56236\times10^{46}\,\theta + 3.2625\times10^{45}\,\theta^2 - 1.29811\times10^{44}\,\theta^3\right)}\right)\Big/\left(\sqrt{2.02316\times10^{47} - 6.43991\times10^{46}\,\theta + 5.12472\times10^{45}\,\theta^2}\right)\right]\right\}\right\}$$

```
RevolutionPlot3D[
 {-1.` ArcSin[(√θ √(6.439907533884034`*^46 - 2.562357792680954`*^46 θ +
          3.2624952694016945`*^45 θ^2 - 1.298105622348011`*^44 θ^3)) /
     (√(2.0231566198247644`*^47 - 6.439907533884035`*^46 θ +
          5.124715585361908`*^45 θ^2))],
  ArcSin[(√θ √(6.439907533884034`*^46 - 2.562357792680954`*^46 θ +
          3.2624952694016945`*^45 θ^2 - 1.298105622348011`*^44 θ^3)) /
    (√(2.0231566198247644`*^47 - 6.439907533884035`*^46 θ +
          5.124715585361908`*^45 θ^2))]}, {θ, -4 π, 4 π}]
```



$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-c^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}==\right.$$

$$\left(\sqrt{}\left(-1.1294090667581471\text{`}{*}\text{^}18\,\theta+8.987551787368176\text{`}{*}\text{^}16\,\theta^2+3.5481432270250993\text{`}{*}\text{^}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right),\ \beta\right]$$

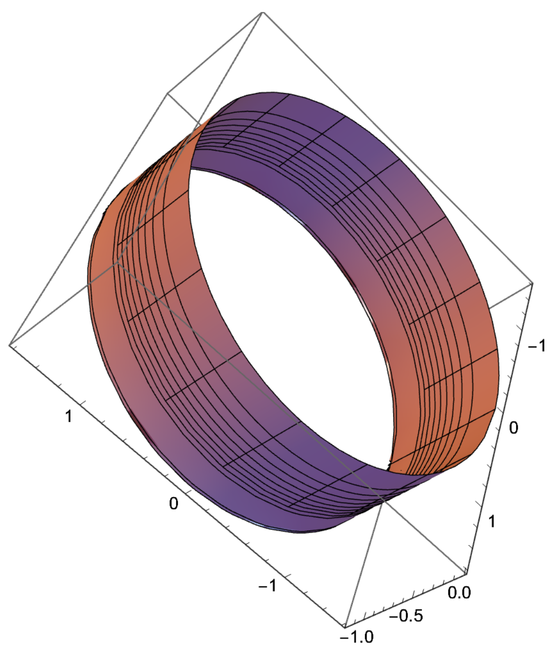
$$\Big\{\Big\{\beta\to-1.\,\text{ArcSin}\Big[0.5\sqrt{\left(-2.\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)-2.\sqrt{\left(-8.09397\times10^{-41}\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\right)}\right)}\Big]\Big\},$$

$$\Big\{\beta\to\text{ArcSin}\Big[0.5\sqrt{\left(-2.\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)-2.\sqrt{\left(-8.09397\times10^{-41}\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\right)}\right)}\Big]\Big\},$$

$$\Big\{\beta\to-1.\,\text{ArcSin}\Big[0.5\sqrt{\left(-2.\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)+2.\sqrt{\left(-8.09397\times10^{-41}\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\right)}\right)}\Big]\Big\},$$

$$\Big\{\beta\to\text{ArcSin}\Big[0.5\sqrt{\left(-2.\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)+2.\sqrt{\left(-8.09397\times10^{-41}\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\right)}\right)}\Big]\Big\}\Big\}$$

```
RevolutionPlot3D[
 {-1.` ArcSin[0.5` √(-2.` (-0.9999999999999999` - 0.3183098861837907` θ +
          0.025330295910584444` θ^2) +
        2.` √(-8.093971489670607`*^-41 (1.573071447508865`*^40 -
              1.2518104835387941`*^39 θ) θ + (-0.9999999999999999` -
              0.3183098861837907` θ + 0.025330295910584444` θ^2)^2))],
  -1.` ArcSin[0.5` √(-2.` (-0.9999999999999999` - 0.3183098861837907` θ +
          0.025330295910584444` θ^2) - 2.` √(-8.093971489670607`*^-41
           (1.573071447508865`*^40 - 1.2518104835387941`*^39 θ) θ +
          (-0.9999999999999999` - 0.3183098861837907` θ +
              0.025330295910584444` θ^2)^2))]}, {θ, -8 π, 8 π}]
```



"Conic" Relativity: Expositions of Relativity through Difference in Circumferences of Two Circles

In this paper,
I will perform a "limited" exposition of the general principle, θ r =

$$2\pi r - 2\pi x = 2\pi r - 2\pi r' = 2\pi r - 2\pi r\sqrt{1 - \frac{(v)^2}{c^2}} == 2\pi r - 2\pi\sqrt{r^2 - \eta^2},$$

from the algebraicized geometry of a cone combined with the relativistic length contraction first suggested by Einstein' s application of the Lorentz transformation in his theory of relativity. The exposition is limited. I will only solve equations for expressions of velocity and expressions of angle measure. I will not make substitutions. The system is multi - variant in the sense that there are so many different possible combinations of algebraic forms that one would have to take a very long extended exposition in order to visualize all of them.

"The language of matter expresses the same quality of motion as the meaning of the creative thought/idea field. In order to perceive motion, one must set aside certain quantifiable characteristics of the existence of transformation. This leads to insight into a relationship and mutual interpenetration of mathematics and ethics." - Emmerson

For more information about how Einstein applied the Lorentz transformation to describe length contraction, see :

Einstein, Albert.Relativity : The Special and the General Theory (Classic Reprint). Forgotten Books, 2010. Print.

This is an original interpretation of the notion of a length contraction as it would relate to the difference in circumferences of two circles.

Table of Contents :

Height of the cone equals the length contracted initial radius :

$$\eta = r' = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} =$$

$$r\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} =$$

$$\Bigg(\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi - \theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)\Bigg/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)\Bigg)\sqrt{1-\frac{(\mathrm{v})^2}{\mathrm{c}^2}}=$$

$$\Bigg(\Big(-8\,\pi^3+4\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]+8\,\pi^2\,\theta\,\mathrm{Csc}[\beta]^2-2\,\pi\,\theta^2\,\mathrm{Csc}[\beta]^2-4\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]^3+\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]^3\Big)\Big/\Big(4\,\big(8\,\pi^4-4\,\pi^3\,\theta-8\,\pi^3\,\theta\,\mathrm{Csc}[\beta]^2+6\,\pi^2\,\theta^2\,\mathrm{Csc}[\beta]^2-\pi\,\theta^3\,\mathrm{Csc}[\beta]^2\big)\Big)\Bigg)\sqrt{1-\frac{(\mathrm{v})^2}{\mathrm{c}^2}}=$$

$$\Bigg(\Bigg(-4\,\pi^2-4\,\pi\,\gamma-\gamma^2+\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta]+4\,\pi\,\gamma\,\mathrm{Csc}[\beta]^2+\gamma^2\,\mathrm{Csc}[\beta]^2-\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta]^3+\frac{4\,\pi^2\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta]^3}{(2\,\pi+\gamma)^2}\Bigg)\Bigg/\Big(\pi\,\big(-16\,\pi^2-16\,\pi\,\gamma-4\,\gamma^2+16\,\pi\,\gamma\,\mathrm{Csc}[\beta]^2+4\,\gamma^2\,\mathrm{Csc}[\beta]^2\big)\Big)\Bigg)\sqrt{1-\frac{(\mathrm{v})^2}{\mathrm{c}^2}}=$$

$$\Bigg(\Bigg(4\,\pi\,\gamma+\gamma^2-\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Sin}[\beta]-4\,\pi^2\,\mathrm{Sin}[\beta]^2-4\,\pi\,\gamma\,\mathrm{Sin}[\beta]^2-$$

$$\gamma^2 \text{Sin}[\beta]^2 - \frac{\pi \sqrt{\gamma} \sqrt{(2\pi+\gamma)^2} \text{Sin}[\beta]^3}{\sqrt{4\pi+\gamma}} +$$

$$\frac{\pi \sqrt{(2\pi+\gamma)^2} \sqrt{4\pi+\gamma} \text{Sin}[\beta]^3}{\sqrt{\gamma}} +$$

$$\left.\sqrt{\gamma} \sqrt{(2\pi+\gamma)^2} \sqrt{4\pi+\gamma} \text{Sin}[\beta]^3\right) \Big/$$

$$\left(\pi \left(-16\pi\gamma - 4\gamma^2 + 16\pi^2 \text{Sin}[\beta]^2 + 16\pi\gamma\right.\right.$$

$$\left.\left.\text{Sin}[\beta]^2 + 4\gamma^2 \text{Sin}[\beta]^2\right)\right) \sqrt{1 - \frac{(v)^2}{c^2}}$$

$2\pi\eta - 2\pi r' = \phi\eta$, where ϕ is an angle of a similar dimensional kind to theta, but different.

$2\pi\eta - 2\pi r' = \theta\eta$

$2\pi r' - 2\pi\eta = \phi\eta$, where ϕ is an angle of a similar dimensional kind to theta, but different. - This section is not visualized in this paper, but implied.

$2\pi r - 2\pi\eta = \theta\eta$ - This section will not be visualized in this paper, but is implied.

Changed radius equals the length contracted initial radius :

$$x = r' = \frac{2\pi r - r\theta}{2\pi} = r\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}} \sqrt{1 - \frac{(v)^2}{c^2}} =$$

$$\left(\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\theta} \text{Sin}[\beta] +\right.\right.$$

$$4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\theta} \text{Sin}[\beta]^3}{4\pi-\theta} -$$

$$\left.\frac{2\pi^2 \sqrt{(4\pi-\theta)\theta} \text{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 +\right.$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)\Bigg)\,\sqrt{1-\frac{(v)^2}{c^2}} =$$

$$\Bigg(\Big(-8\,\pi^3 + 4\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta] + 8\,\pi^2\,\theta\,\mathrm{Csc}[\beta]^2 - 2\,\pi\,\theta^2\,\mathrm{Csc}[\beta]^2 - 4\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]^3 + \theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]^3\Big)\Big/$$

$$\Big(4\,\Big(8\,\pi^4 - 4\,\pi^3\,\theta - 8\,\pi^3\,\theta\,\mathrm{Csc}[\beta]^2 + 6\,\pi^2\,\theta^2\,\mathrm{Csc}[\beta]^2 - \pi\,\theta^3\,\mathrm{Csc}[\beta]^2\Big)\Big)\Bigg)\,\sqrt{1-\frac{(v)^2}{c^2}} =$$

$$\Bigg(\Bigg(-4\,\pi^2 - 4\,\pi\,\gamma - \gamma^2 + \sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta] + 4\,\pi\,\gamma\,\mathrm{Csc}[\beta]^2 + \gamma^2\,\mathrm{Csc}[\beta]^2 - \sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta]^3 + \frac{4\,\pi^2\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Csc}[\beta]^3}{(2\,\pi+\gamma)^2}\Bigg)\Bigg/$$

$$\Big(\pi\,\Big(-16\,\pi^2 - 16\,\pi\,\gamma - 4\,\gamma^2 + 16\,\pi\,\gamma\,\mathrm{Csc}[\beta]^2 + 4\,\gamma^2\,\mathrm{Csc}[\beta]^2\Big)\Big)\Bigg)\,\sqrt{1-\frac{(v)^2}{c^2}} =$$

$$\Bigg(\Bigg(4\,\pi\,\gamma + \gamma^2 - \sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Sin}[\beta] - 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - 4\,\pi\,\gamma\,\mathrm{Sin}[\beta]^2 - \gamma^2\,\mathrm{Sin}[\beta]^2 - \frac{\pi\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\mathrm{Sin}[\beta]^3}{\sqrt{4\,\pi+\gamma}} + \frac{\pi\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\mathrm{Sin}[\beta]^3}{\sqrt{\gamma}} +$$

$$\left.\sqrt{\gamma}\ \sqrt{(2\pi+\gamma)^2}\ \sqrt{4\pi+\gamma}\ \mathrm{Sin}[\beta]^3\right)\Big/ \left(\pi\left(-16\pi\gamma-4\gamma^2+16\pi^2\,\mathrm{Sin}[\beta]^2+16\pi\gamma\,\mathrm{Sin}[\beta]^2+4\gamma^2\,\mathrm{Sin}[\beta^2]\right)\right)\sqrt{1-\frac{(v)^2}{c^2}}$$

$2\pi x - 2\pi r' = \vartheta\,\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different.

$2\pi x - 2\pi r' = \theta\,\eta$

$2\pi r' - 2\pi x = \vartheta\,\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different is implied but not visualized in this paper.

$2\pi r' - 2\pi x = \vartheta\,\eta$ is implied but not visualized in this paper.

Height of the cone equals the length contracted "changed radius" : $\eta = x' =$

$$\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == \frac{2\pi r - r\theta}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}} = \frac{2\pi r}{2\pi+\gamma}\sqrt{1-\frac{(v)^2}{c^2}}$$

$2\pi\eta - 2\pi x' = \omega\,\eta$, where ω is an angle of a similar dimensional kind to theta, but different.

Synchronized angles: $2\pi\eta - 2\pi x' = \theta\,\eta$

Changed radius equals the length contracted height of the cone :

$$x = \eta' = \frac{2\pi r - r\theta}{2\pi} = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}} =$$

$$\frac{x\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}} = \frac{r\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}}\sqrt{1-\frac{(v)^2}{c^2}}$$

$2\pi x - 2\pi\eta' = \rho\,\eta$, where ρ is an angle of a similar dimensional kind to theta, but different.

$2\pi x - 2\pi\eta' = \theta\,\eta$

There are also the implied forms : $\eta' = r$ and $x' = r$ with their respective

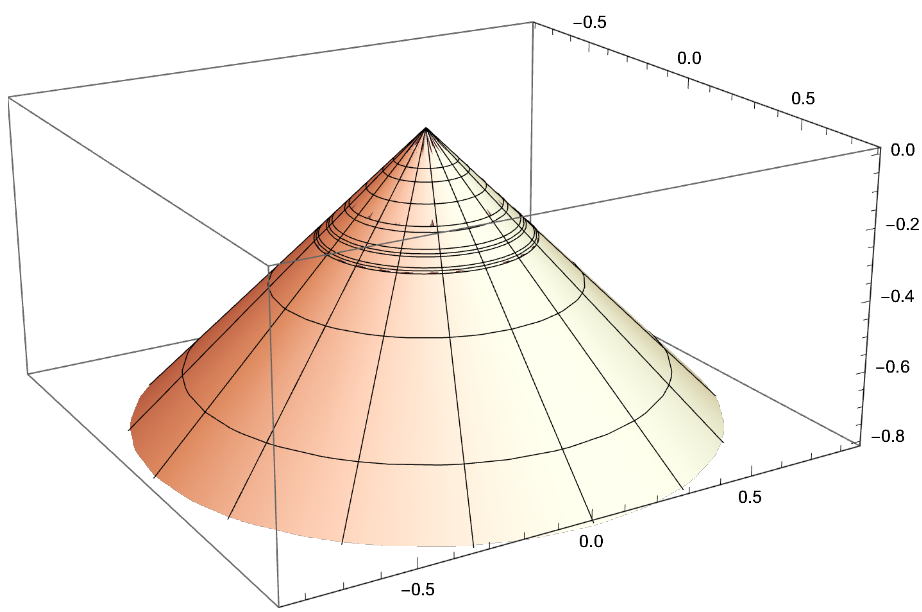
Commentary on the Forms

One commentary on the forms is their semblance to the position at which the instantaneous rate of change of the height of the cone equals the average rate of change of the height of the cone with respect to theta. Please see A Geometric Pattern of Perception (Emmerson, 2009), for more background information regarding the system of the univocal cone transformation. The six potential equalities of the system wind up miming the 30 - 60 - 90 position at which the instantaneous velocity of the height of the cone equals the average velocity of the height of the cone. When plotted, the 45 - 45 - 90 cone is evident within process of solving for this position.

$$\left\{\left\{\beta \to -\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}, \left\{\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}\right\} \tag{58}$$

RevolutionPlot3D[

$$\left\{\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right], -\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}, \{\theta, -4\pi, 4\pi\}\Big]$$



"General Relativity" Circumferential Cone - Difference Functions

$$\eta = r' = \frac{\sqrt{4\,\pi\,r^2\,\Theta - r^2\,\Theta^2}}{2\,\pi} = r\,\sqrt{1 - \frac{(v)^2}{c^2}} =$$

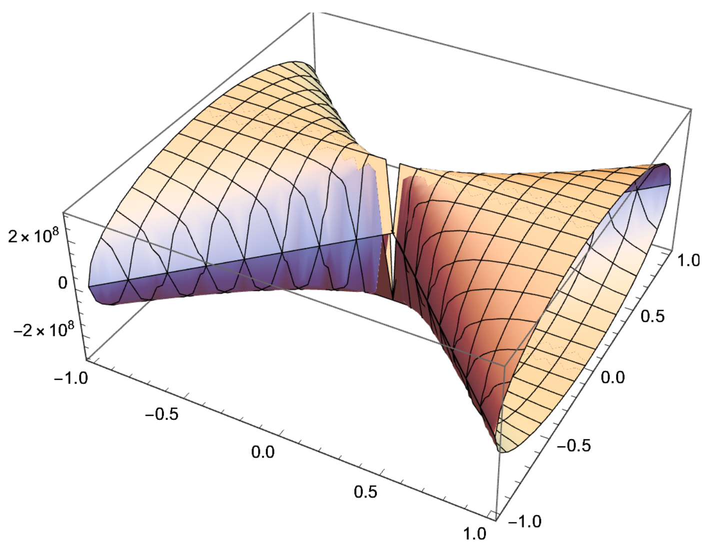
$$\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta - \Theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\,\pi\,\sqrt{(4\,\pi - \Theta)\,\Theta}}{(4\,\pi - \Theta)\,\Theta}\,\sqrt{1 - \frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[\eta == r\,\sqrt{1 - \frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -1.\,\sqrt{8.98755\times10^{16} - \frac{8.98755\times10^{16}\,\eta^2}{r^2}}\right\},\ \left\{v \to \sqrt{8.98755\times10^{16} - \frac{8.98755\times10^{16}\,\eta^2}{r^2}}\right\}\right\}$$

$$\text{Plot3D}\left[\left\{-1.\text{`}\,\sqrt{8.987551787368176\text{`}*\text{^}16 - \frac{8.987551787368176\text{`}*\text{^}16\,\eta^2}{r^2}},\right.\right.$$

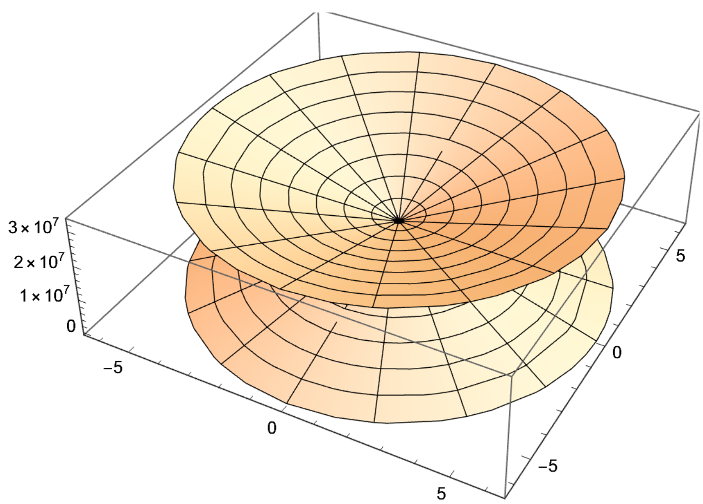
$$\left.\left.\sqrt{8.987551787368176\text{`}*\text{^}16 - \frac{8.987551787368176\text{`}*\text{^}16\,\eta^2}{r^2}}\right\},\ \{r, -1, 1\},\ \{\eta, -1, 1\}\right]$$



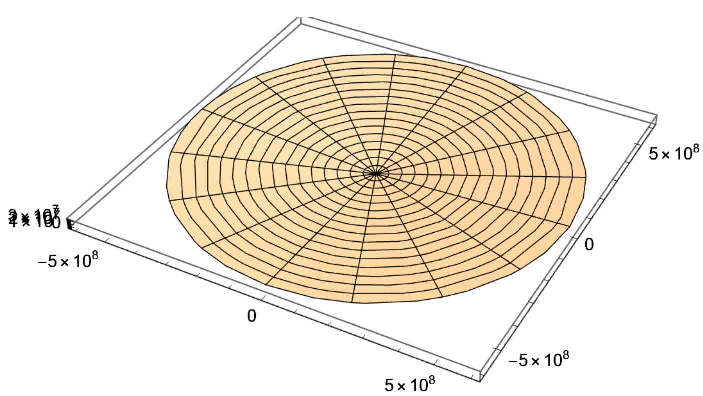
$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == r\,\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v\to -1.05839\times 10^{-7}\ \sqrt{8.02317\times 10^{30} - 2.55385\times 10^{30}\,\theta + 2.03229\times 10^{29}\,\theta^2}\right\},\right.$$
$$\left.\left\{v\to 1.05839\times 10^{-7}\ \sqrt{8.02317\times 10^{30} - 2.55385\times 10^{30}\,\theta + 2.03229\times 10^{29}\,\theta^2}\right\}\right\}$$

```
RevolutionPlot3D[.0583947067478751`*^-7
  √(8.02317171945391`*^30 - 2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2),
 {θ, -2 π, 2 π}]
```



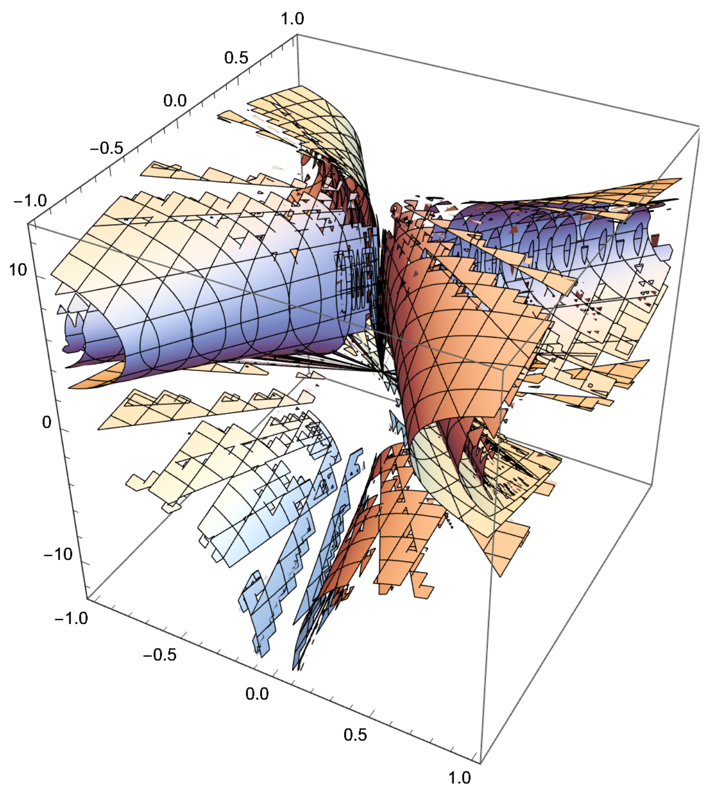

```
RevolutionPlot3D[{-1.0583947067478751`*^-7
   √(8.02317171945391`*^30 - 2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2),
  .0583947067478751`*^-7 √(8.02317171945391`*^30 -
     2.5538548768523825`*^30 θ + 2.0322931379520014`*^29 θ^2)}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\sqrt{1-\frac{(v)^2}{c^2}}, v\right]$$

$$\left\{\left\{v \to -1.54328\times10^{-11}\sqrt{\left(3.77356\times10^{38} - \frac{3.82342\times10^{37}\,r^2\theta^2}{\eta^2} + \frac{6.08516\times10^{36}\,r^2\theta^3}{\eta^2} - \frac{2.42121\times10^{35}\,r^2\theta^4}{\eta^2}\right)}\right\},\right.$$
$$\left.\left\{v \to 1.54328\times10^{-11}\sqrt{\left(3.77356\times10^{38} - \frac{3.82342\times10^{37}\,r^2\theta^2}{\eta^2} + \frac{6.08516\times10^{36}\,r^2\theta^3}{\eta^2} - \frac{2.42121\times10^{35}\,r^2\theta^4}{\eta^2}\right)}\right\}\right\}$$

$$\text{ContourPlot3D}\left[-1.5432808288459432`*\text{^}-11\sqrt{\left(3.7735619429356124`*\text{^}38 - \frac{3.823417626059161`*\text{^}37\,r^2\theta^2}{\eta^2} + \frac{6.085158146919955`*\text{^}36\,r^2\theta^3}{\eta^2} - \frac{2.4212074964455716`*\text{^}35\,r^2\theta^4}{\eta^2}\right)},\right.$$
$$\left.\{r, -1, 1\}, \{\eta, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



From XXI. A Proof for Non-Comprehensiveness of Euclidean Geometry (Due to its Consistency):

$$r = \left(\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)\right)$$

$$\beta := \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$r = \frac{-4\pi\theta + 2(4\pi-\theta)\,\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\,\theta^2}{4\pi}}{16\pi^2\theta - 4\pi(4\pi-\theta)\,\theta - 12\pi\theta^2 + 2(4\pi-\theta)\,\theta^2 + 2\theta^3}$$

$$\mathrm{Solve}\left[\frac{\sqrt{4\pi\left(\frac{-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}}{16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3}\right)^2\theta - \left(\frac{-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}}{16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3}\right)^2\theta^2}}{2\pi} == \frac{-4\pi\theta + 2(4\pi-\theta)\,\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\,\theta^2}{4\pi}}{16\pi^2\theta - 4\pi(4\pi-\theta)\,\theta - 12\pi\theta^2 + 2(4\pi-\theta)\,\theta^2 + 2\theta^3}\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

{{}}

Pure Cancellation Indicating validity.

2 $\pi\eta$ - 2 πr' = $\phi\,\eta$, where ϕ is an angle of a similar dimensional kind to theta, but different.

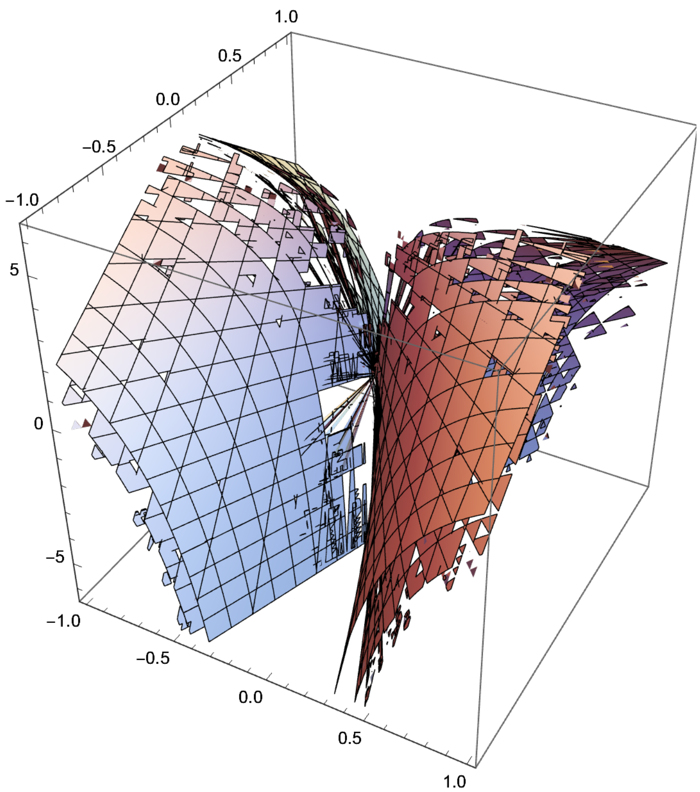
$$\mathrm{Solve}[2\pi\eta - 2\pi r' == \phi\eta, \phi]$$

$$\left\{\left\{\phi \to \frac{2(\pi\eta - \pi r')}{\eta}\right\}\right\}$$

$$\mathrm{Solve}\left[\phi == \frac{2\left(\pi\eta - \pi r\sqrt{1-\frac{(v)^2}{c^2}}\right)}{\eta},\ v\right]$$

$$\left\{\left\{v \to -1.05839\times10^{-7}\sqrt{8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\phi}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\phi^2}{r^2}}\right\}, \left\{v \to 1.05839\times10^{-7}\sqrt{8.02317\times10^{30} - \frac{8.02317\times10^{30}\,\eta^2}{r^2} + \frac{2.55385\times10^{30}\,\eta^2\,\phi}{r^2} - \frac{2.03229\times10^{29}\,\eta^2\,\phi^2}{r^2}}\right\}\right\}$$

$$\text{ContourPlot3D}\Big[1.0583947067478751\text{`*}\wedge\text{-}7\sqrt{\left(8.02317171945391\text{`*}\wedge 30-\frac{8.02317171945391\text{`*}\wedge 30\,\eta^2}{r^2}+\frac{2.5538548768523825\text{`*}\wedge 30\,\eta^2\,\phi}{r^2}-\frac{2.0322931379520014\text{`*}\wedge 29\,\eta^2\,\phi^2}{r^2}\right)},\ \{\eta,-1,1\},\ \{r,-1,1\},\ \{\phi,-2\pi,2\pi\}\Big]$$



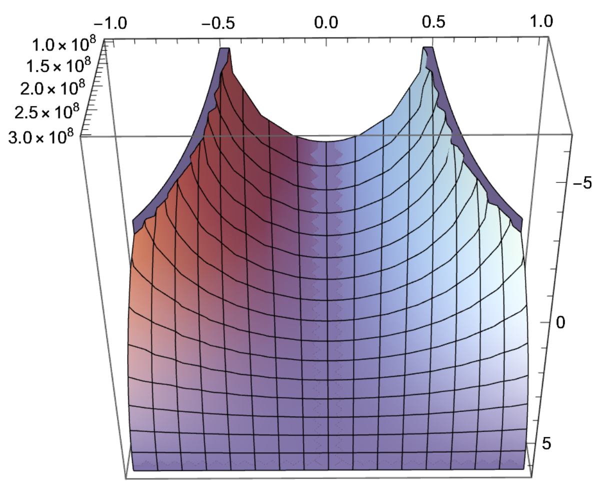
$$\text{Solve}\left[\phi==\frac{2\left(\pi\,\eta-\pi\,\frac{-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}}{16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3}\,\sqrt{1-\frac{(v)^2}{c^2}}\right)}{\eta},\ \phi\right]$$

$$\Big\{\Big\{\phi\to\frac{1}{\eta}2.\ \Big(3.14159\,\eta-\Big(3.14159\,\sqrt{1.-1.11265\times 10^{-17}\,v^2}\,\big(-12.5664\,\theta+2.\,(12.5664-1.\,\theta)\,\theta-0.0795775\,(12.5664-1.\,\theta)^2\,\theta+\theta^2-0.0795775\,(12.5664-1.\,\theta)\,\theta^2\big)\Big)\Big/\Big(157.914\,\theta-12.5664\,(12.5664-1.\,\theta)\,\theta-37.6991\,\theta^2+2.\,(12.5664-1.\,\theta)\,\theta^2+2.\,\theta^3\Big)\Big)\Big\}\Big\}$$

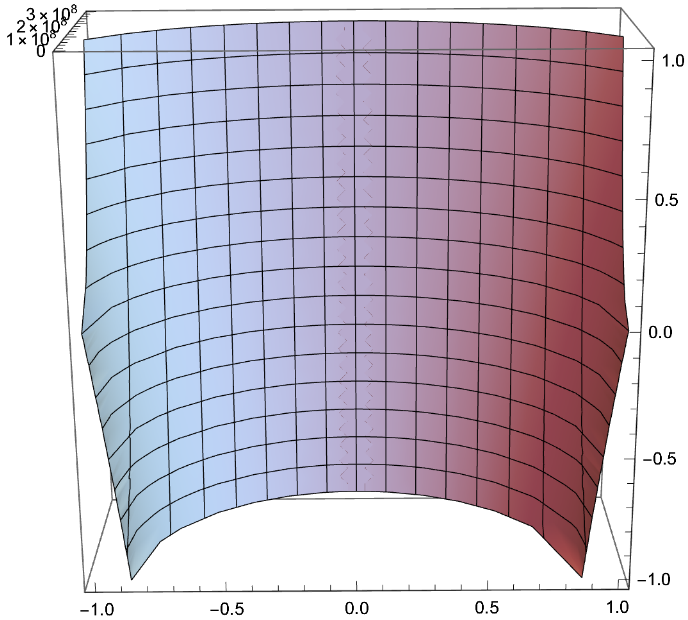
```
Solve[ϕ == 1/η 2.`
  (3.141592653589793` η - (3.141592653589793` Sqrt[1.` - 1.1126500560536185`*^-17 v^2
        (-12.566370614359172` θ + 2.` (12.566370614359172` - 1.` θ) θ -
          0.07957747154594767` (12.566370614359172` - 1.` θ)^2 θ + θ^2 -
          0.07957747154594767` (12.566370614359172` - 1.` θ) θ^2)] /
      (157.91367041742973` θ - 12.566370614359172` (12.566370614359172` - 1.` θ) θ -
        37.69911184307752` θ^2 + 2.` (12.566370614359172` - 1.` θ) θ^2 + 2.` θ^3))), v]
```

$\{\{v \to -3.27644 \times 10^{-13} \sqrt{8.37215 \times 10^{41} - 8.37215 \times 10^{41}\,\eta^2 + 2.66494 \times 10^{41}\,\eta^2\,\phi - 2.12069 \times 10^{40}\,\eta^2\,\phi^2}\}, \{v \to 3.27644 \times 10^{-13} \sqrt{8.37215 \times 10^{41} - 8.37215 \times 10^{41}\,\eta^2 + 2.66494 \times 10^{41}\,\eta^2\,\phi - 2.12069 \times 10^{40}\,\eta^2\,\phi^2}\}\}$

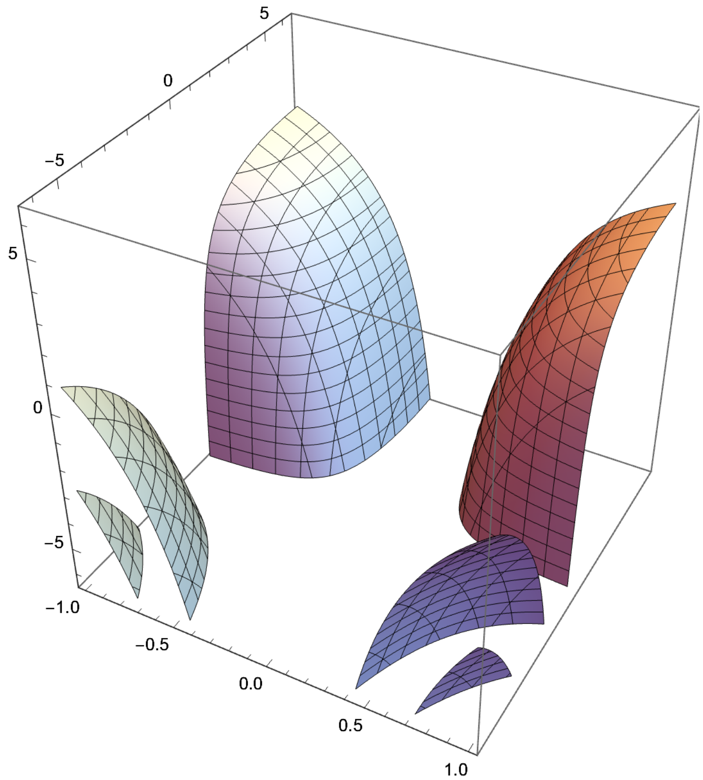
```
Plot3D[3.2764405235343625`*^-13
  √(8.372146677118284`*^41 - 8.372146677118285`*^41 η^2 + 2.6649370559075226`*^41
      η^2 ϕ - 2.1206895273822245`*^40 η^2 ϕ^2), {ϕ, -2 π, 2 π}, {η, -1, 1}]
```



```
Plot3D[3.2764405235343625`*^-13
  √(8.372146677118284`*^41 - 8.372146677118285`*^41 η^2 + 2.6649370559075226`*^41
     η^2 ϕ - 2.1206895273822245`*^40 η^2 ϕ^2), {ϕ, -1, 1}, {η, -1, 1}]
```



```
ContourPlot3D[6.850321210799518`*^-15
  √(1.9152238172564892`*^45 - 6.096346752873982`*^44 η² θ + 4.851318602610598`*^43
      η² θ² + 1.9405274410442392`*^44 η² θ ϕ - 1.544222672238286`*^43 η² θ² ϕ -
      1.544222672238286`*^43 η² θ ϕ² + 1.2288533576064947`*^42 η² θ² ϕ²),
 {η, -1, 1}, {θ, -2 π, 2 π}, {ϕ, -2 π, 2 π}]
```

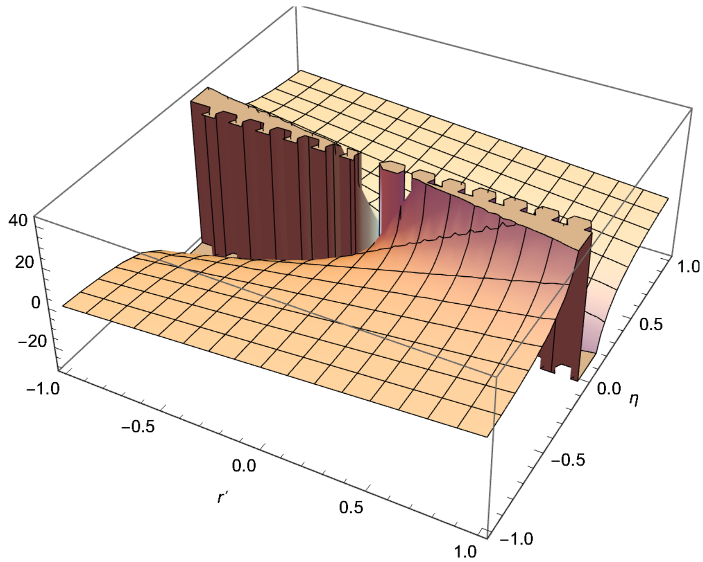


$2\pi\eta - 2\pi r' = \theta\eta$

```
Solve[2 π η - 2 π r' == θ η, θ]
```

$\left\{\left\{\theta \to \frac{2\,(\pi\eta - \pi r')}{\eta}\right\}\right\}$

$$\texttt{Plot3D}\left[\frac{2\,(\pi\,\eta - \pi\,r')}{\eta}, \{r', -1, 1\}, \{\eta, -1, 1\}, \texttt{AxesLabel} \to \texttt{Automatic}\right]$$



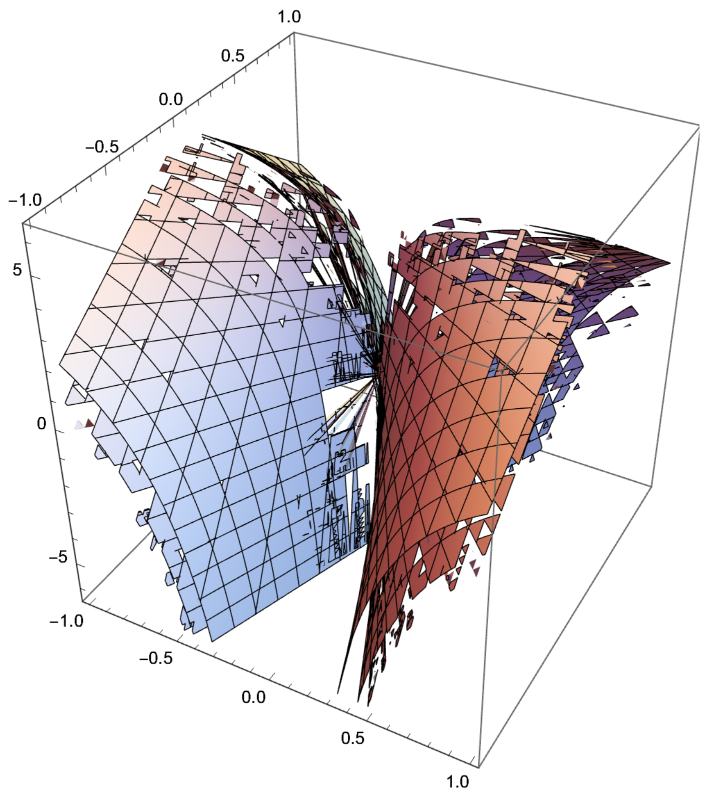
$$\texttt{Solve}\left[\theta == \frac{2\left(\pi\,\eta - \pi\,r\,\sqrt{1 - \frac{(v)^2}{c^2}}\right)}{\eta}, v\right]$$

$$\left\{\left\{v \to -1.05839 \times 10^{-7} \sqrt{\left(8.02317 \times 10^{30} - \frac{8.02317 \times 10^{30}\,\eta^2}{r^2} + \frac{2.55385 \times 10^{30}\,\eta^2\,\theta}{r^2} - \frac{2.03229 \times 10^{29}\,\eta^2\,\theta^2}{r^2}\right)}\right\},\right.$$

$$\left.\left\{v \to 1.05839 \times 10^{-7} \sqrt{\left(8.02317 \times 10^{30} - \frac{8.02317 \times 10^{30}\,\eta^2}{r^2} + \frac{2.55385 \times 10^{30}\,\eta^2\,\theta}{r^2} - \frac{2.03229 \times 10^{29}\,\eta^2\,\theta^2}{r^2}\right)}\right\}\right\}$$

```
ContourPlot3D[1.0583947067478751`*^-7
```

$$\sqrt{\left(8.02317171945391`*^{\wedge}30 - \frac{8.02317171945391`*^{\wedge}30\,\eta^2}{r^2} + \frac{2.5538548768523825`*^{\wedge}30\,\eta^2\,\theta}{r^2} - \frac{2.0322931379520014`*^{\wedge}29\,\eta^2\,\theta^2}{r^2}\right)}, \{\eta, -1, 1\}, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}]$$

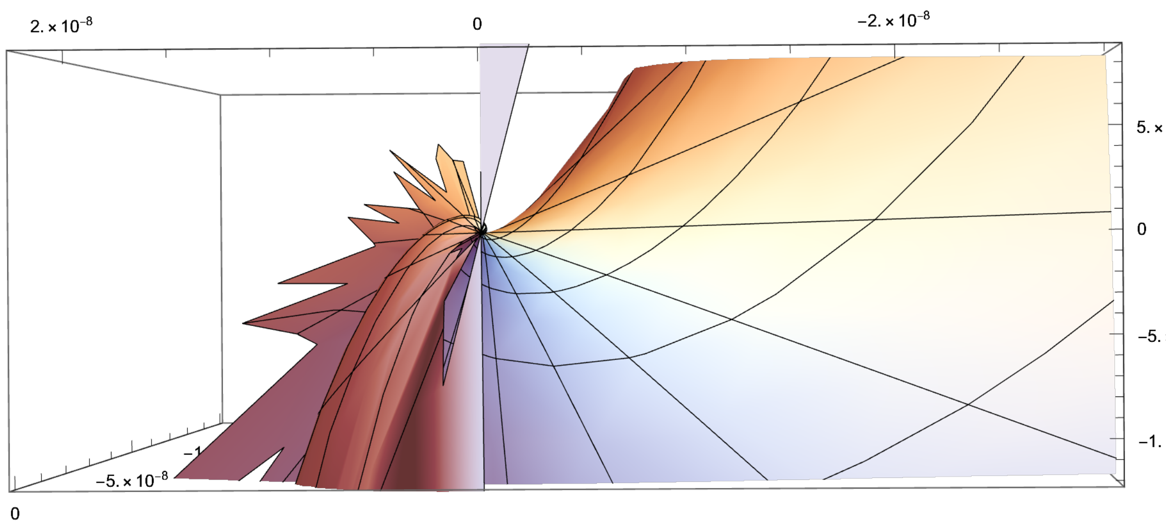



```
c := 2.99792458 (10^8)
```

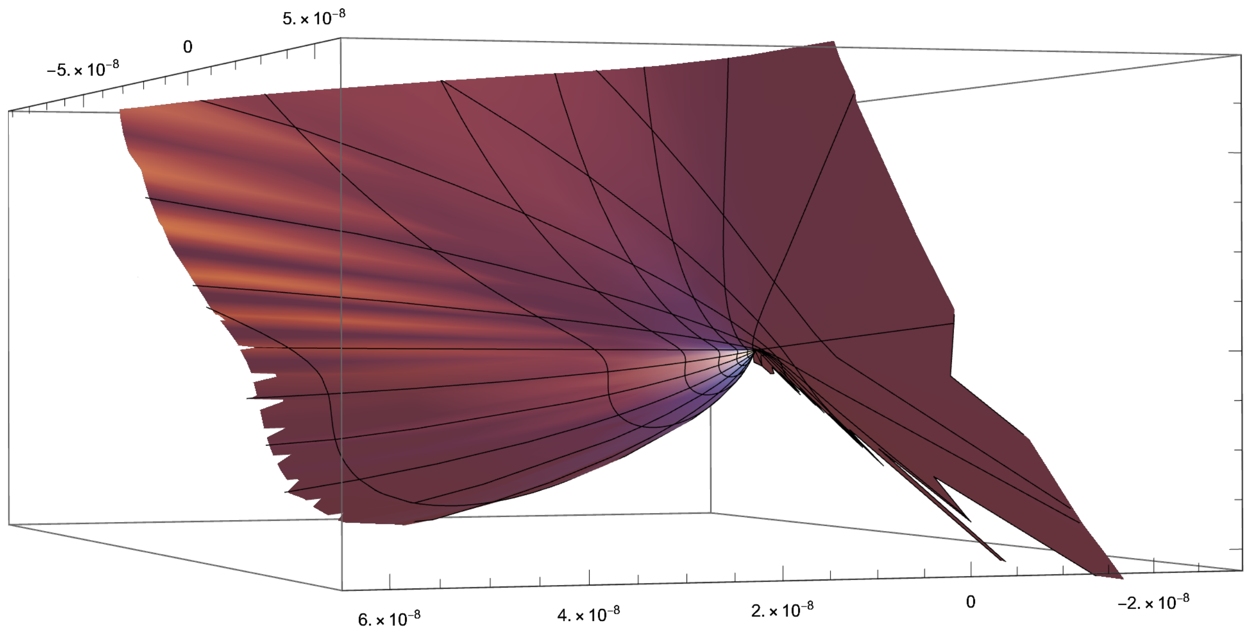
$$\text{Solve}\Bigg[\theta == \frac{1}{\eta}\,2\left(\pi\,\eta-\pi\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)\sqrt{1-\frac{\left(\frac{\sqrt{-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2}}{\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}}\right)^2}{c^2}}\right),\eta\Bigg]$$

$$\Big\{\Big\{\eta\to\Bigg(8.36884\times 10^{9}\,\theta\sqrt{\left(-\frac{3.72447\times 10^{14}\,\theta}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{3.57079\times 10^{14}\,\theta^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{6.58448\times 10^{16}\,\text{Sin}[\beta]^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}\right)}-6.65971\times 10^{8}\,\theta^2\sqrt{\left(-\frac{3.72447\times 10^{14}\,\theta}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{3.57079\times 10^{14}\,\theta^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{6.58448\times 10^{16}\,\text{Sin}[\beta]^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}\right)}-4.18442\times 10^{9}\,\sqrt{12.5664\,\theta-1.\,\theta^2}\,\text{Sin}[\beta]\sqrt{\left(-\frac{3.72447\times 10^{14}\,\theta}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{3.57079\times 10^{14}\,\theta^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}+\frac{6.58448\times 10^{16}\,\text{Sin}[\beta]^2}{4.48719\times 10^{15}\,\theta-3.57079\times 10^{14}\,\theta^2-1.40969\times 10^{16}\,\text{Sin}[\beta]^2}\right)}\Bigg)\Big/\left(\theta\left(-2.22936\times 10^{19}+8.87036\times 10^{18}\,\theta-1.12941\times 10^{18}\,\theta^2+4.49378\times 10^{16}\,\theta^3\right)\right)\Big\}\Big\}$$

```
SphericalPlot3D[
 (8.368843409831769`*^9 θ √(-((3.72446628439707`*^14 θ) / (4.487190804107819`*^15 θ -
          3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) +
       (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
       (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) -
    6.659713983183793`*^8 θ^2 √(-((3.72446628439707`*^14 θ) /
          (4.487190804107819`*^15 θ - 3.57079298535128`*^14 θ^2 -
           1.40969256654408`*^16 Sin[β]^2)) +
       (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
       (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) -
    4.1844217049158845`*^9 √(12.566370614359172` θ - 1.` θ^2) Sin[β]
     √(-((3.72446628439707`*^14 θ) / (4.487190804107819`*^15 θ -
          3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) +
       (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
       (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
         3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2))) /
  (θ (-2.2293641391812866`*^19 + 8.870358067562748`*^18 θ -
      1.1294090667581471`*^18 θ^2 + 4.493775893684088`*^16 θ^3)),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



```
SphericalPlot3D[
 (8.368843409831769`*^9 θ √(-((3.72446628439707`*^14 θ) / (4.487190804107819`*^15 θ -
            3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) +
        (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
        (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) -
    6.659713983183793`*^8 θ^2 √(-((3.72446628439707`*^14 θ) /
          (4.487190804107819`*^15 θ - 3.57079298535128`*^14 θ^2 -
            1.40969256654408`*^16 Sin[β]^2)) +
        (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
        (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) -
    4.1844217049158845`*^9 √(12.566370614359172` θ - 1.` θ^2) Sin[β]
     √(-((3.72446628439707`*^14 θ) / (4.487190804107819`*^15 θ -
            3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2)) +
        (3.57079298535128`*^14 θ^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2) +
        (6.58448430010097`*^16 Sin[β]^2) / (4.487190804107819`*^15 θ -
           3.57079298535128`*^14 θ^2 - 1.40969256654408`*^16 Sin[β]^2))) /
  (θ (-2.2293641391812866`*^19 + 8.870358067562748`*^18 θ -
       1.1294090667581471`*^18 θ^2 + 4.493775893684088`*^16 θ^3)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$x = r' = \frac{2\pi r - r\theta}{2\pi} = r\sqrt{1 - \frac{(v)^2}{c^2}} =$$

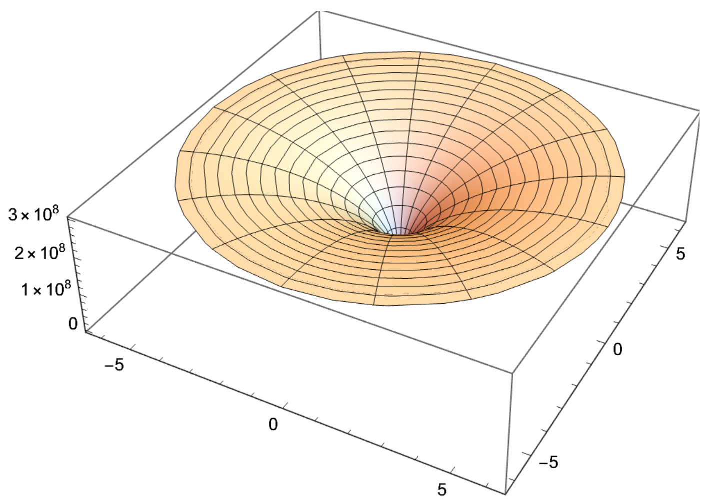
$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} = \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\sqrt{1 - \frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == r\sqrt{1 - \frac{(v)^2}{c^2}}, v\right]$$

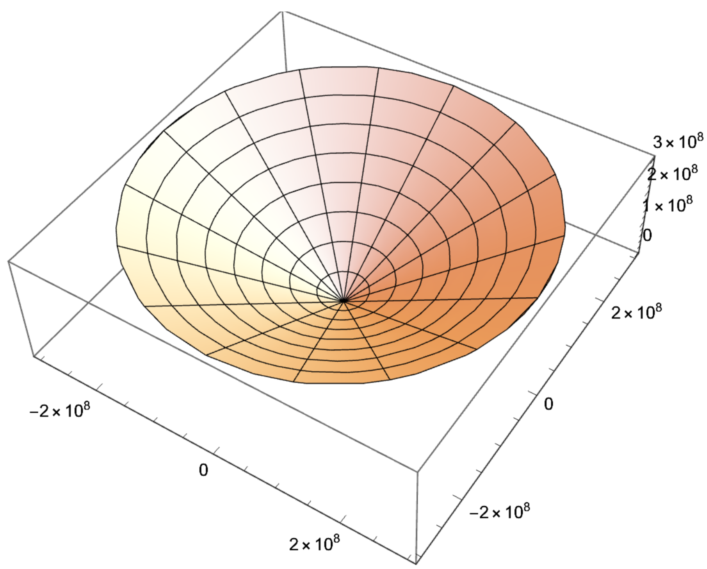
$$\left\{\left\{v \to -\frac{\sqrt{4c^2\pi\theta - c^2\theta^2}}{2\pi}\right\}, \left\{v \to \frac{\sqrt{4c^2\pi\theta - c^2\theta^2}}{2\pi}\right\}\right\}$$

```
c := 2.99792458 (10^8)
```

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,c^2\,\pi\,2\,\pi - c^2\,(2\,\pi)^2}}{2\,\pi}, \{c, -3.0 * 10^{\wedge}8, 3.0 * 10^{\wedge}8\}\right]$$



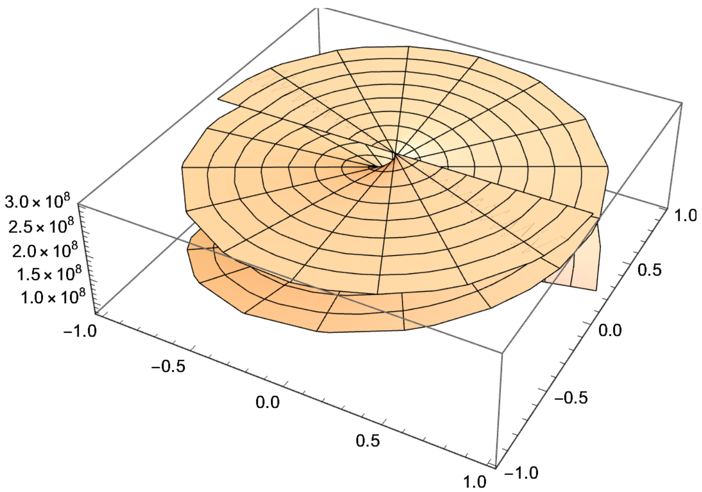
$$\text{Solve}\left[\frac{2\,\pi\,r - r\,\theta}{2\,\pi} == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\sqrt{1 - \frac{(v)^2}{c^2}}, v\right]$$

$$\left\{\left\{v \to -\frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2}\right\},\right.$$

$$\left.\left\{v \to \frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2}\right\}\right\}$$

$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$\text{RevolutionPlot3D}\left[\frac{c\,\sqrt{16\,\pi^4 - \frac{16\,\pi^3\,r^2\,\theta}{\eta^2} + \frac{20\,\pi^2\,r^2\,\theta^2}{\eta^2} - \frac{8\,\pi\,r^2\,\theta^3}{\eta^2} + \frac{r^2\,\theta^4}{\eta^2}}}{4\,\pi^2}, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$

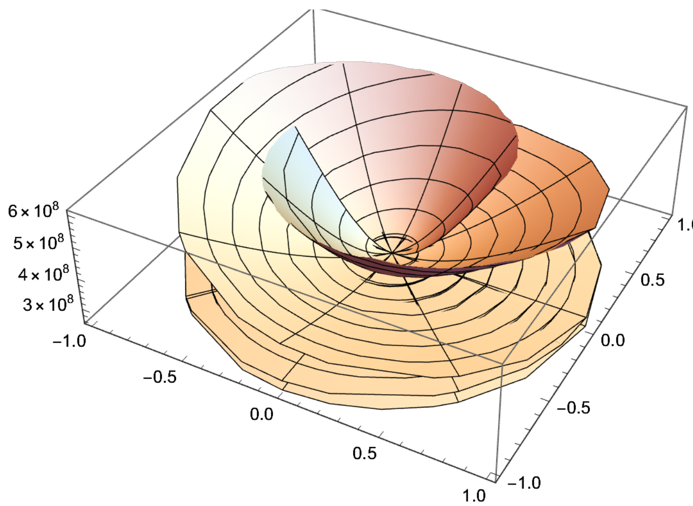


$$\text{Solve}\left[\frac{2\,\pi\,r - r\,\theta}{2\,\pi} == \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\,\sqrt{1 - \frac{(v)^2}{c^2}}, v\right]$$

$$\left\{\left\{v \to -\frac{c\,\sqrt{16\,\pi^4 - 16\,\pi^3\,r^2\,\theta + 20\,\pi^2\,r^2\,\theta^2 - 8\,\pi\,r^2\,\theta^3 + r^2\,\theta^4}}{4\,\pi^2}\right\},\right.$$

$$\left.\left\{v \to \frac{c\,\sqrt{16\,\pi^4 - 16\,\pi^3\,r^2\,\theta + 20\,\pi^2\,r^2\,\theta^2 - 8\,\pi\,r^2\,\theta^3 + r^2\,\theta^4}}{4\,\pi^2}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{c\sqrt{16\pi^4 - 16\pi^3 r^2 \theta + 20\pi^2 r^2 \theta^2 - 8\pi r^2 \theta^3 + r^2 \theta^4}}{4\pi^2}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} == \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\sqrt{1 - \frac{(v)^2}{c^2}}, v\right]$$

$$\{\{v \to -c\}, \{v \to c\}\}$$

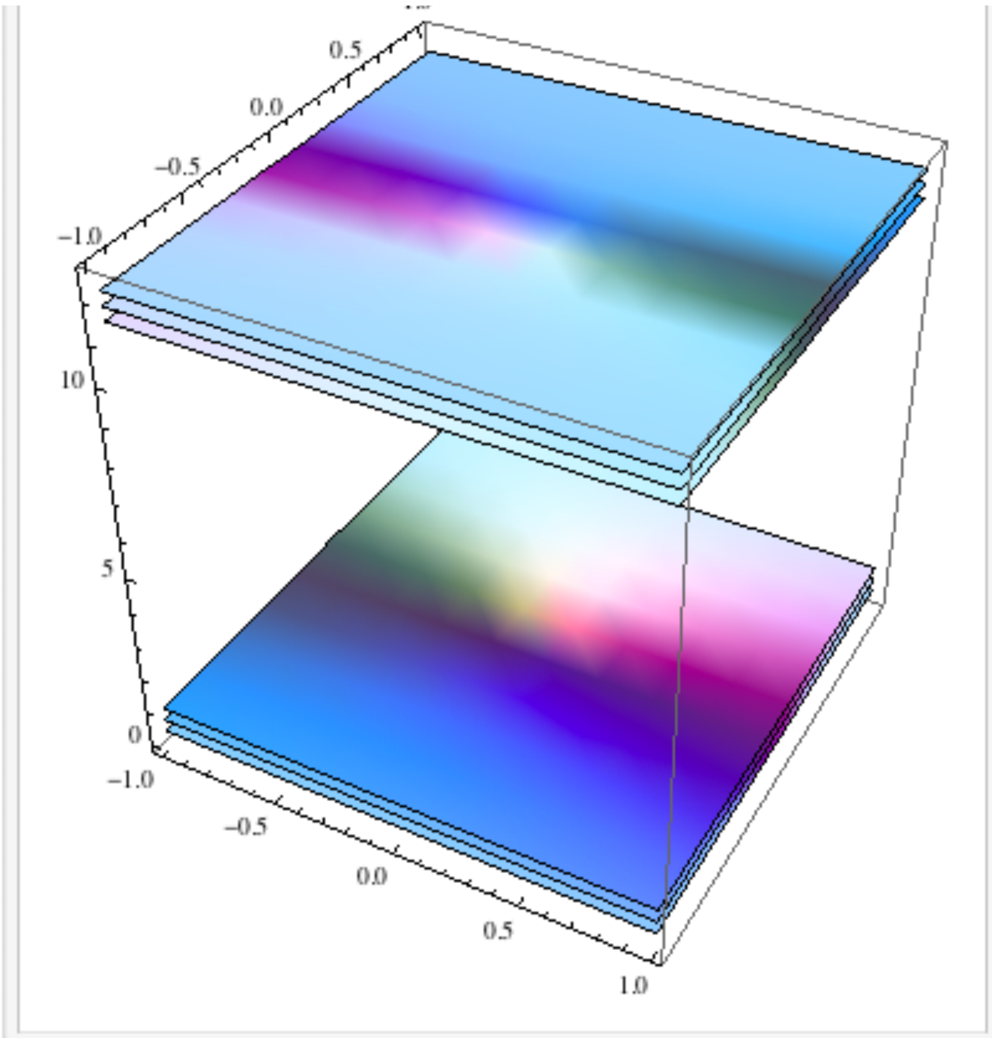
$2\pi x - 2\pi r' = \vartheta\,\eta$, where ϑ is an angle of a similar dimensional kind to theta, but different.

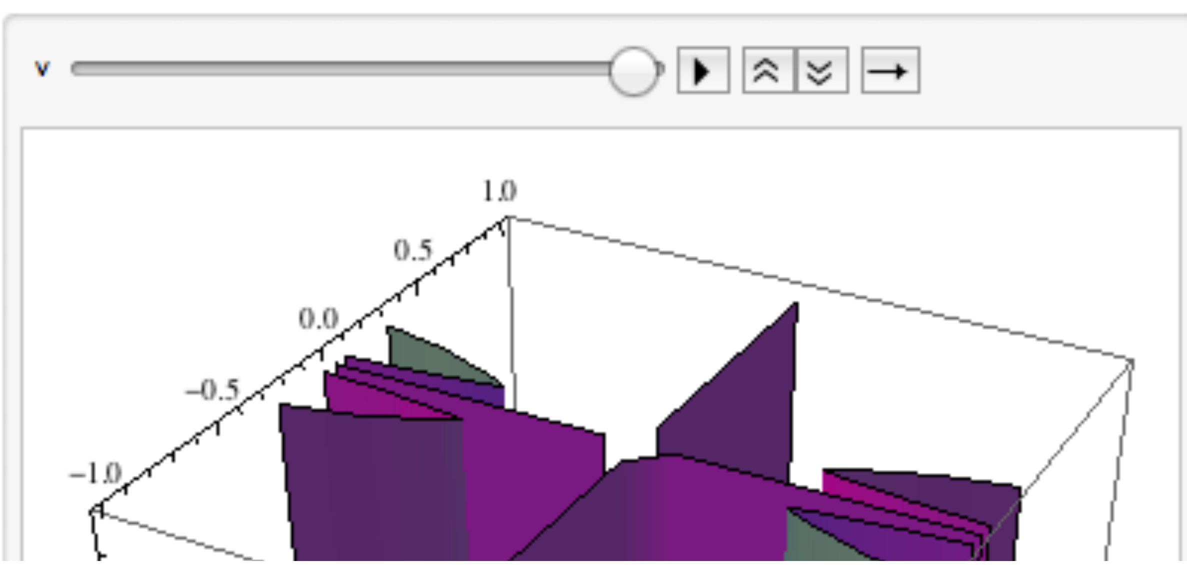
$$c := 2.99792458\,(10^8)$$

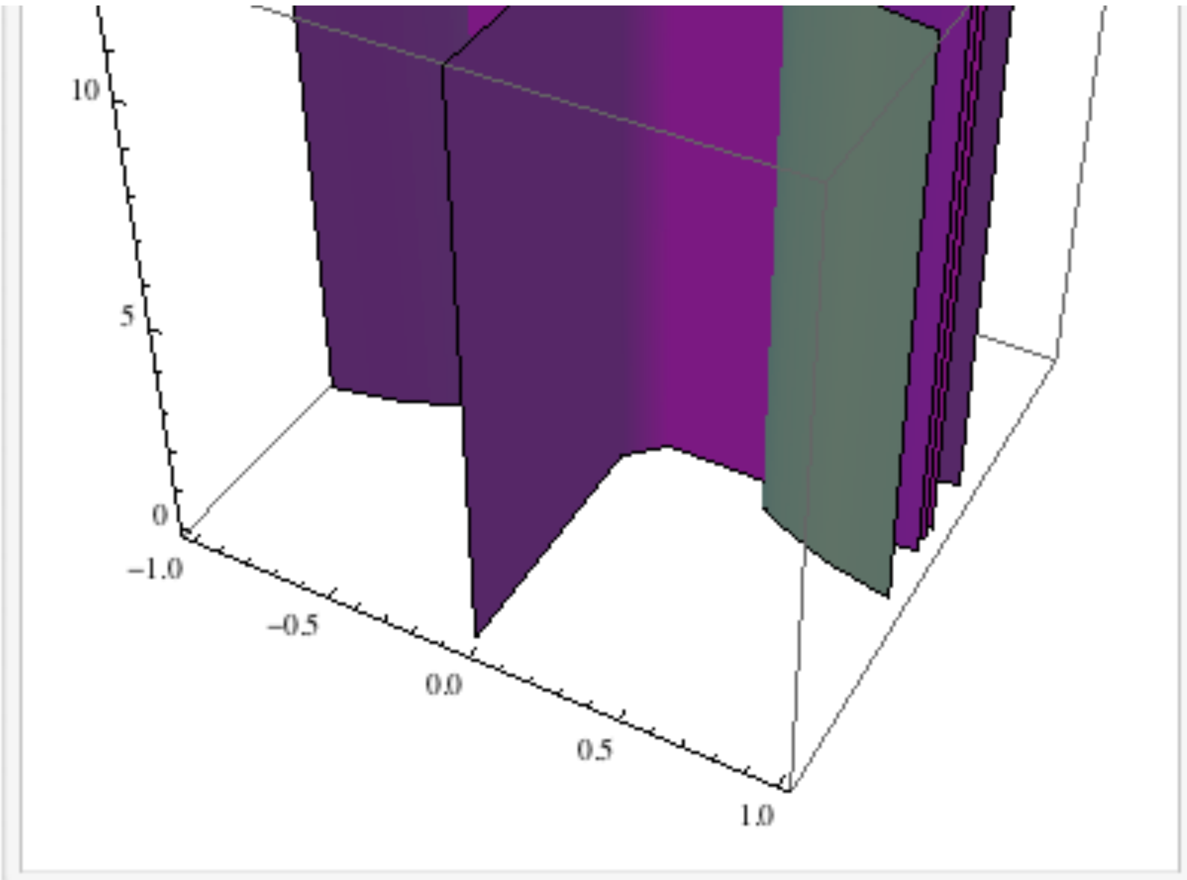
$$\text{Solve}\left[2\pi x - 2\pi\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\sqrt{1 - \frac{(v)^2}{c^2}} == \vartheta\,\eta, \vartheta\right]$$

$$\left\{\left\{\vartheta \to \frac{2\left(-2\pi^2\sqrt{\frac{c^2 - v^2}{c^2}}\,\eta + \pi x\sqrt{(4\pi - \theta)\,\theta}\right)}{\eta\sqrt{(4\pi - \theta)\,\theta}}\right\}\right\}$$

$$\text{Animate}\left[\text{ContourPlot3D}\left[\frac{2\left(-2\pi^2\sqrt{\frac{c^2 - v^2}{c^2}}\,\eta + \pi x\sqrt{(4\pi - \theta)\,\theta}\right)}{\eta\sqrt{(4\pi - \theta)\,\theta}},\right.\right.$$
$$\left.\left.\{x, -1, 1\}, \{\eta, -1, 1\}, \{\theta, 0, 4\pi\}\right], \{v, -c, c\}\right]$$


0.5
0.0
−0.5
−1.0
10
5
0
−1.0
−0.5
0.0
0.5
1.0


v
1.0
0.5
0.0
−0.5
−1.0

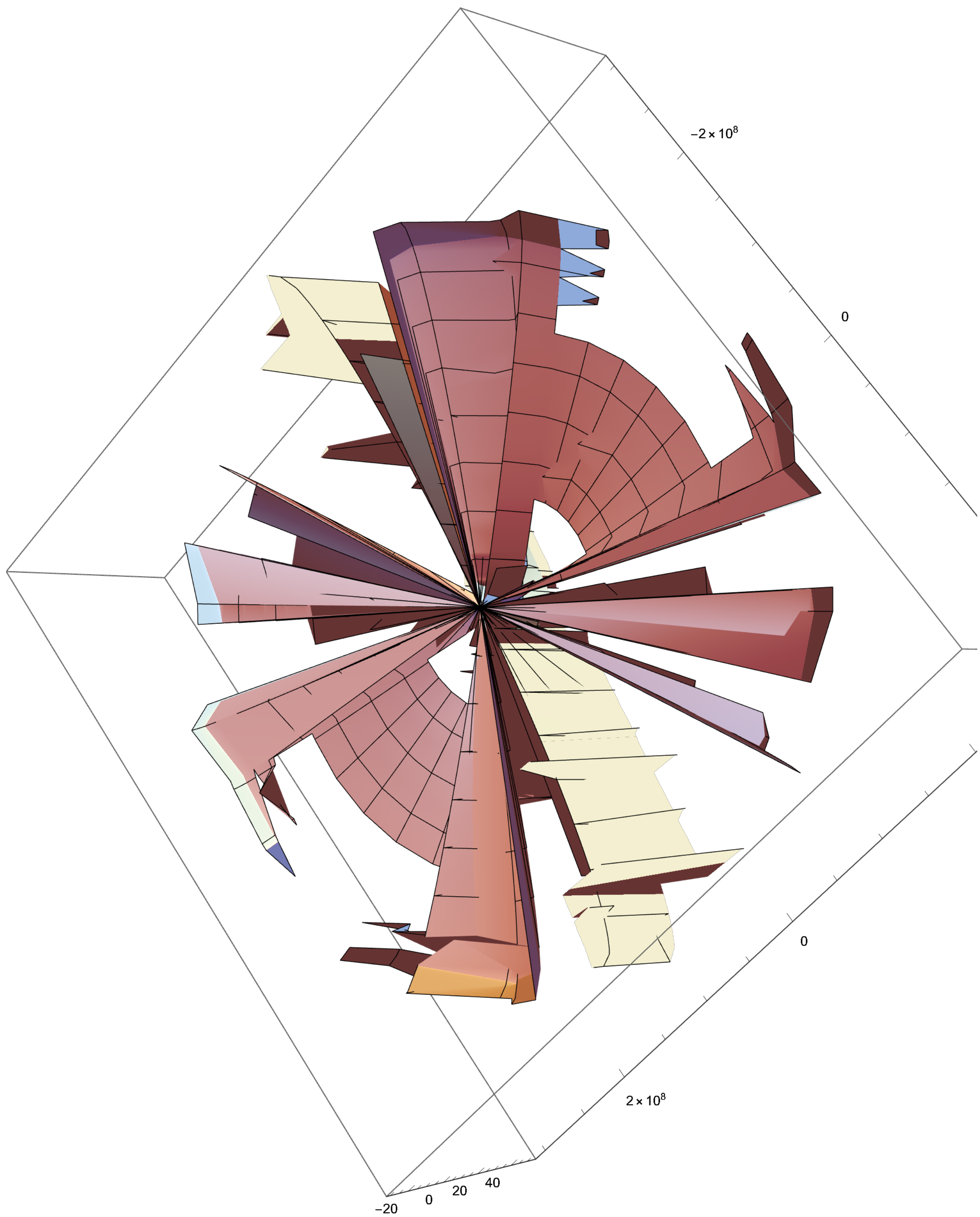


$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\frac{2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\sqrt{1-\frac{(v)^2}{c^2}}==\vartheta\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \vartheta\right]$$

$$\left\{\left\{\vartheta\to-\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\frac{2\,\pi\,\sqrt{1-\frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right\}\right\}$$

$$r:=\frac{-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}}{16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3}$$

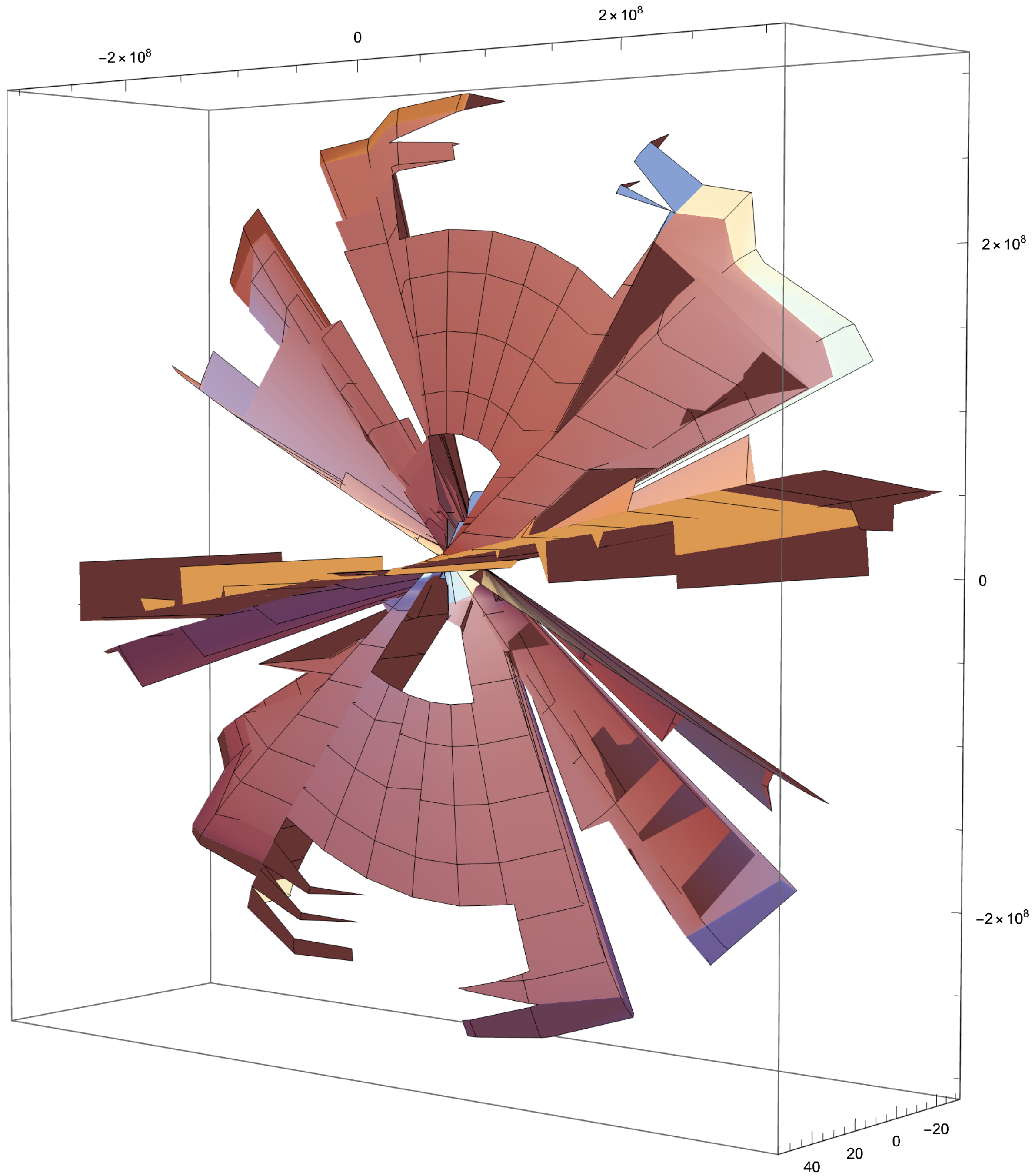
$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\frac{2\,\pi\,\sqrt{1-\frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{v,-c,c\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



−2 × 10^8
0
0
2 × 10^8
−20
0
20
40

```
v := (√(-1.1294090667581471`*^18 θ +
    8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))
```

$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\frac{2\,\pi\,\sqrt{1-\frac{v^2}{c^2}}\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{v,\ -c,\ c\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$

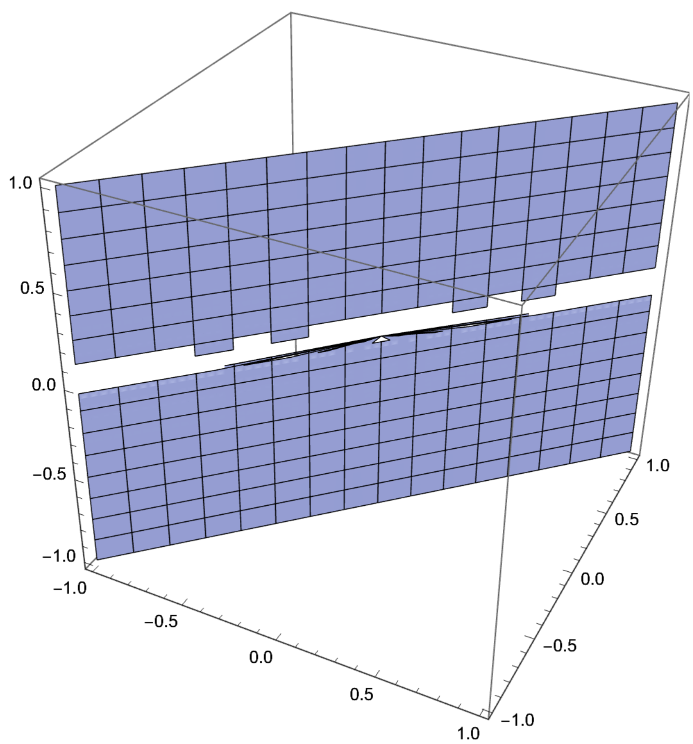


$2\pi x - 2\pi r' = \theta\eta$

```
Solve[2 π x - 2 π r ' == θ η, θ]
```

$$\left\{\left\{\theta \to \frac{2\,(\pi\,x - \pi\,r')}{\eta}\right\}\right\}$$

```
ContourPlot3D[2 (π x - π r')/η, {x, -1, 1}, {r ', -1, 1}, {η, -1, 1}]
```



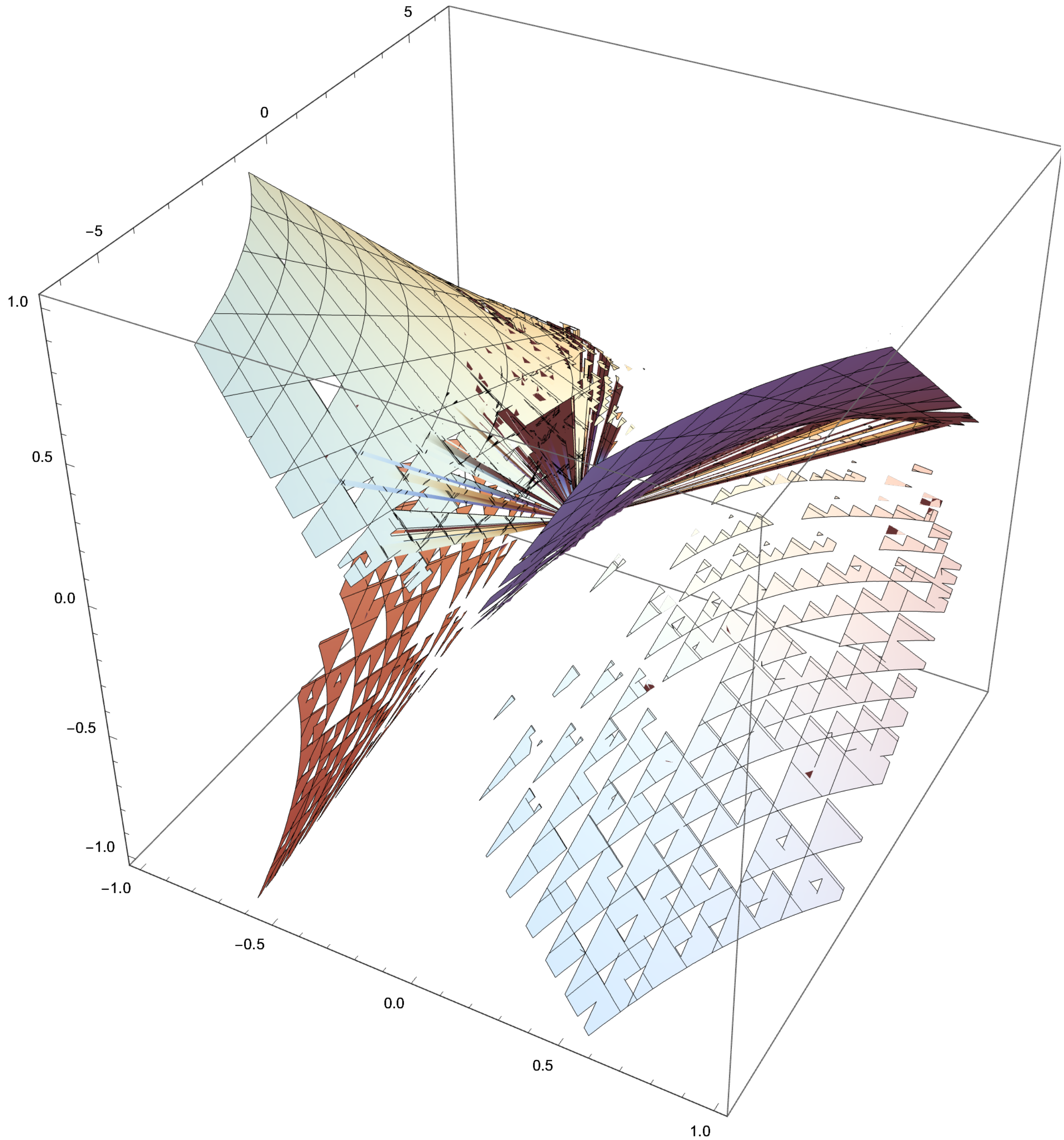
$$\eta = x' = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1 - \frac{(v)^2}{c^2}}$$

```
c := 2.99792458 (10^8)
```

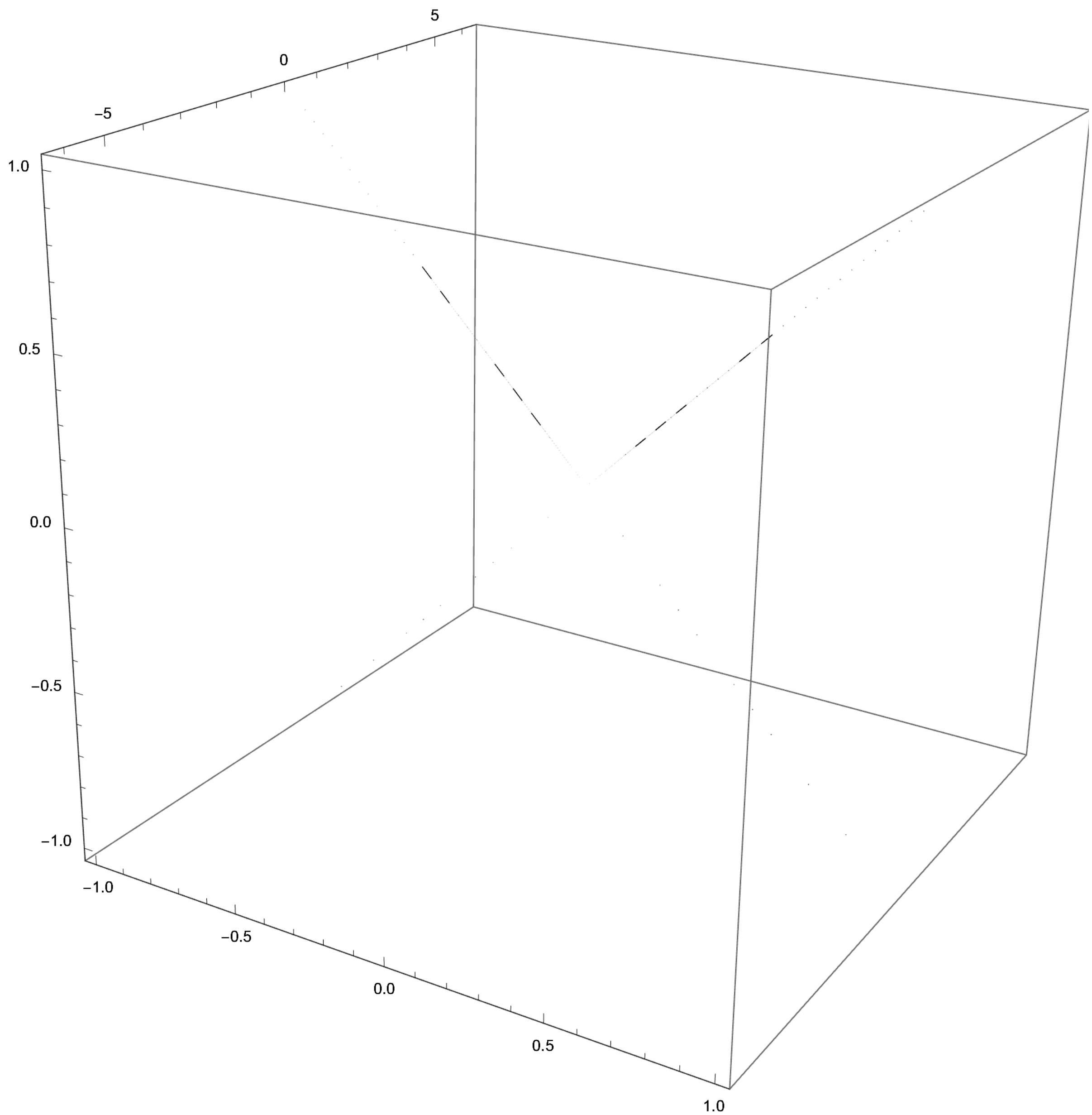
```
Solve[η == (2 π r - r θ)/(2 π) Sqrt[1 - (v)^2/c^2], v]
```

$$\left\{\left\{v \to -\frac{c\,\sqrt{4\,\pi^2\,r^2 - 4\,\pi^2\,\eta^2 - 4\,\pi\,r^2\,\theta + r^2\,\theta^2}}{r\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\}, \left\{v \to \frac{c\,\sqrt{4\,\pi^2\,r^2 - 4\,\pi^2\,\eta^2 - 4\,\pi\,r^2\,\theta + r^2\,\theta^2}}{r\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[-\frac{c\sqrt{4\pi^2 r^2 - 4\pi^2 \eta^2 - 4\pi r^2 \theta + r^2 \theta^2}}{r\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{\eta, -1, 1\}\right]$$



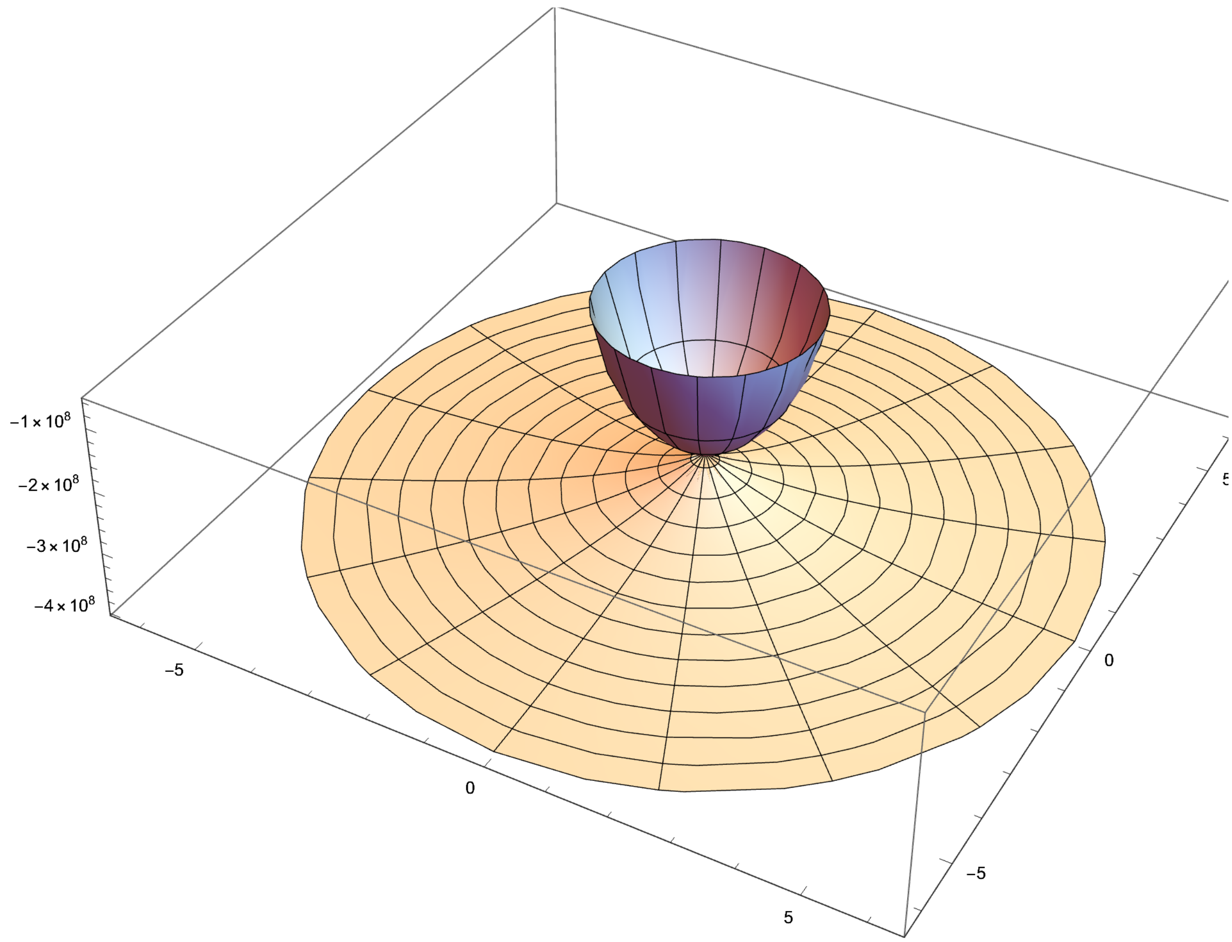
$$\text{ContourPlot3D}\left[\left\{-\frac{c\sqrt{4\pi^2 r^2-4\pi^2\eta^2-4\pi r^2\theta+r^2\theta^2}}{r\sqrt{4\pi^2-4\pi\theta+\theta^2}},\ \frac{c\sqrt{4\pi^2 r^2-4\pi^2\eta^2-4\pi r^2\theta+r^2\theta^2}}{r\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\pi,2\pi\},\{\eta,-1,1\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}==\frac{2\pi r-r\theta}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}},v\right]$$

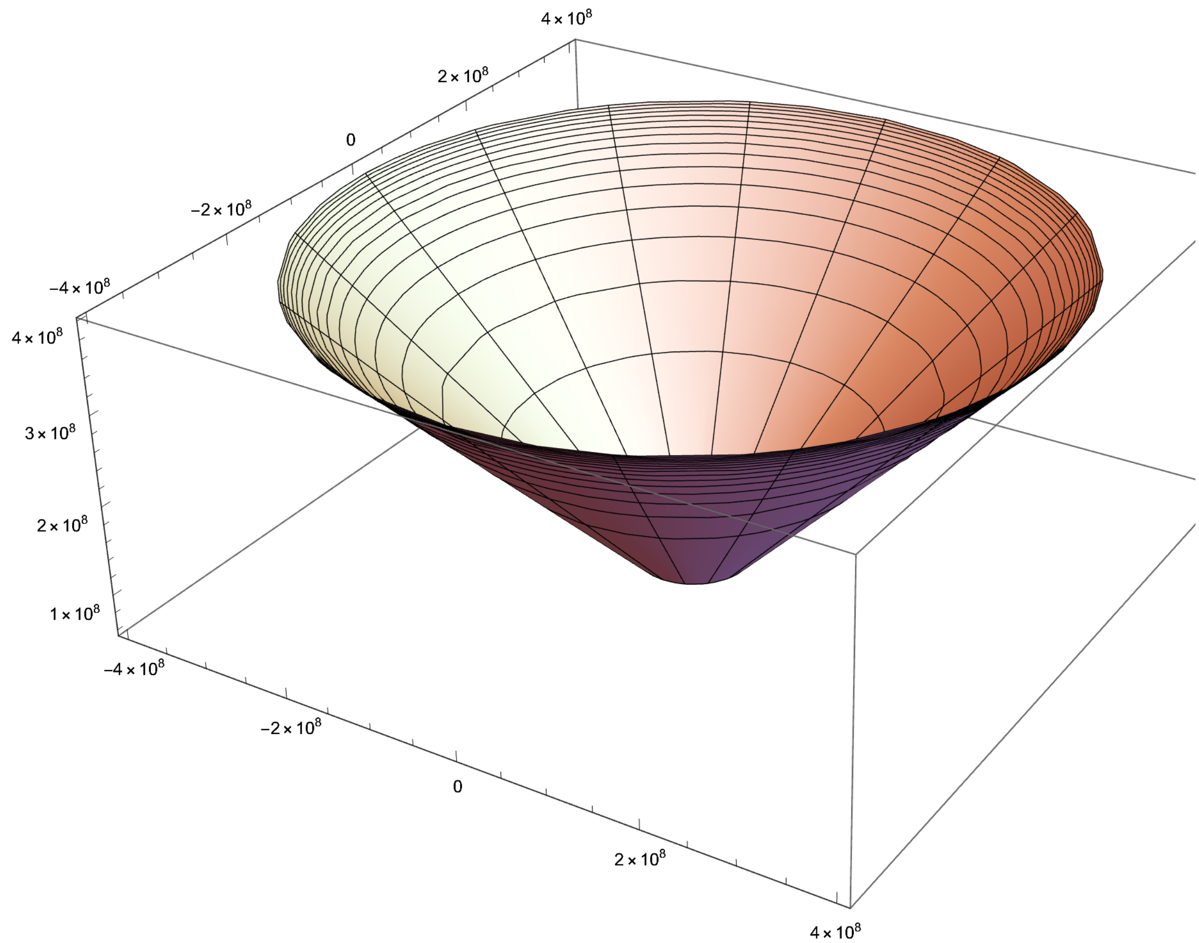
$$\left\{\left\{v\to-\frac{\sqrt{2}\sqrt{2c^2\pi^2-4c^2\pi\theta+c^2\theta^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\left\{v\to\frac{\sqrt{2}\sqrt{2c^2\pi^2-4c^2\pi\theta+c^2\theta^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\}\right\}$$

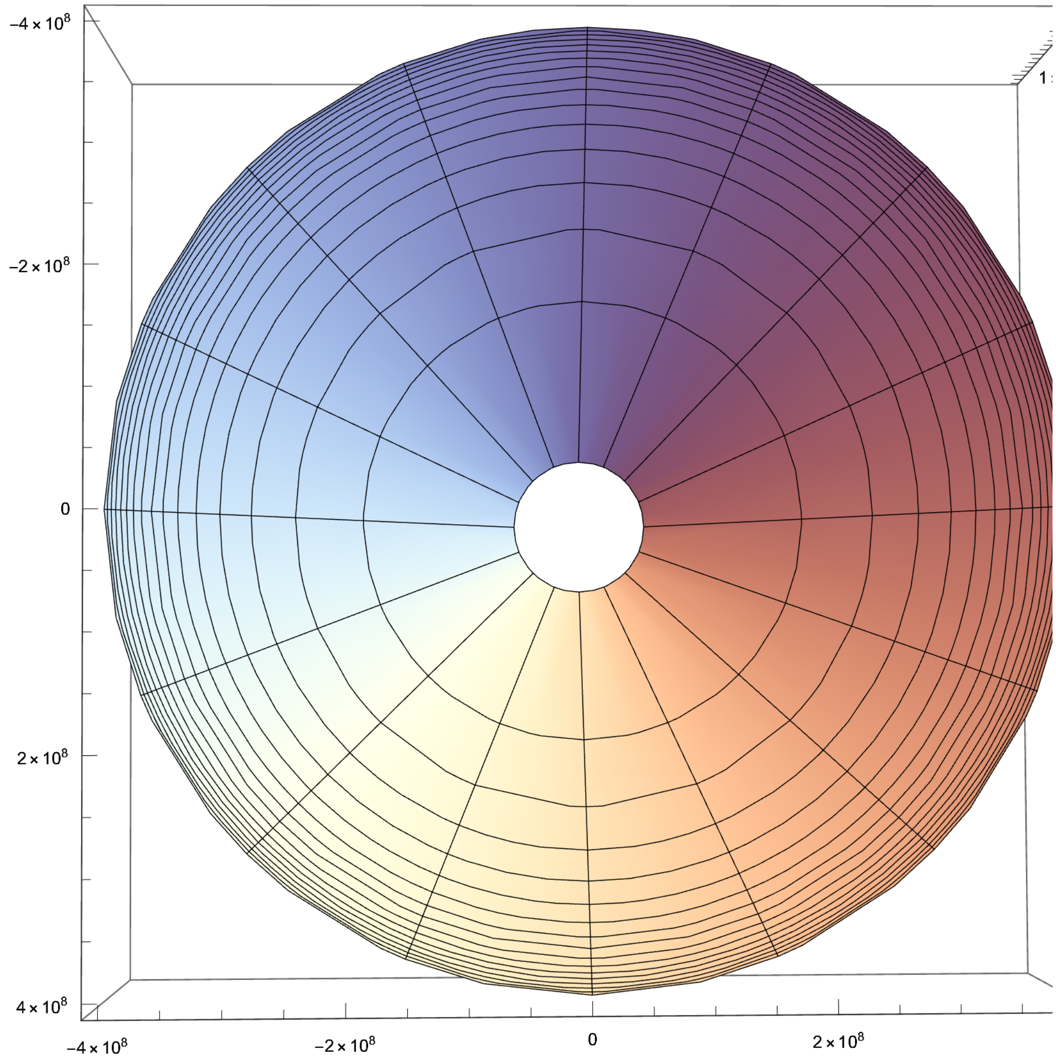
$$\text{RevolutionPlot3D}\left[-\frac{\sqrt{2}\ \sqrt{2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\,\theta^2}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



```
RevolutionPlot3D[
```

$$\left\{-\frac{\sqrt{2}\ \sqrt{2\ c^2\ \pi^2-4\ c^2\ \pi\ \theta+c^2\ \theta^2}}{\sqrt{4\ \pi^2-4\ \pi\ \theta+\theta^2}},\ \frac{\sqrt{2}\ \sqrt{2\ c^2\ \pi^2-4\ c^2\ \pi\ \theta+c^2\ \theta^2}}{\sqrt{4\ \pi^2-4\ \pi\ \theta+\theta^2}}\right\},\ \{\theta,\ -2\ \pi,\ 2\ \pi\}]$$

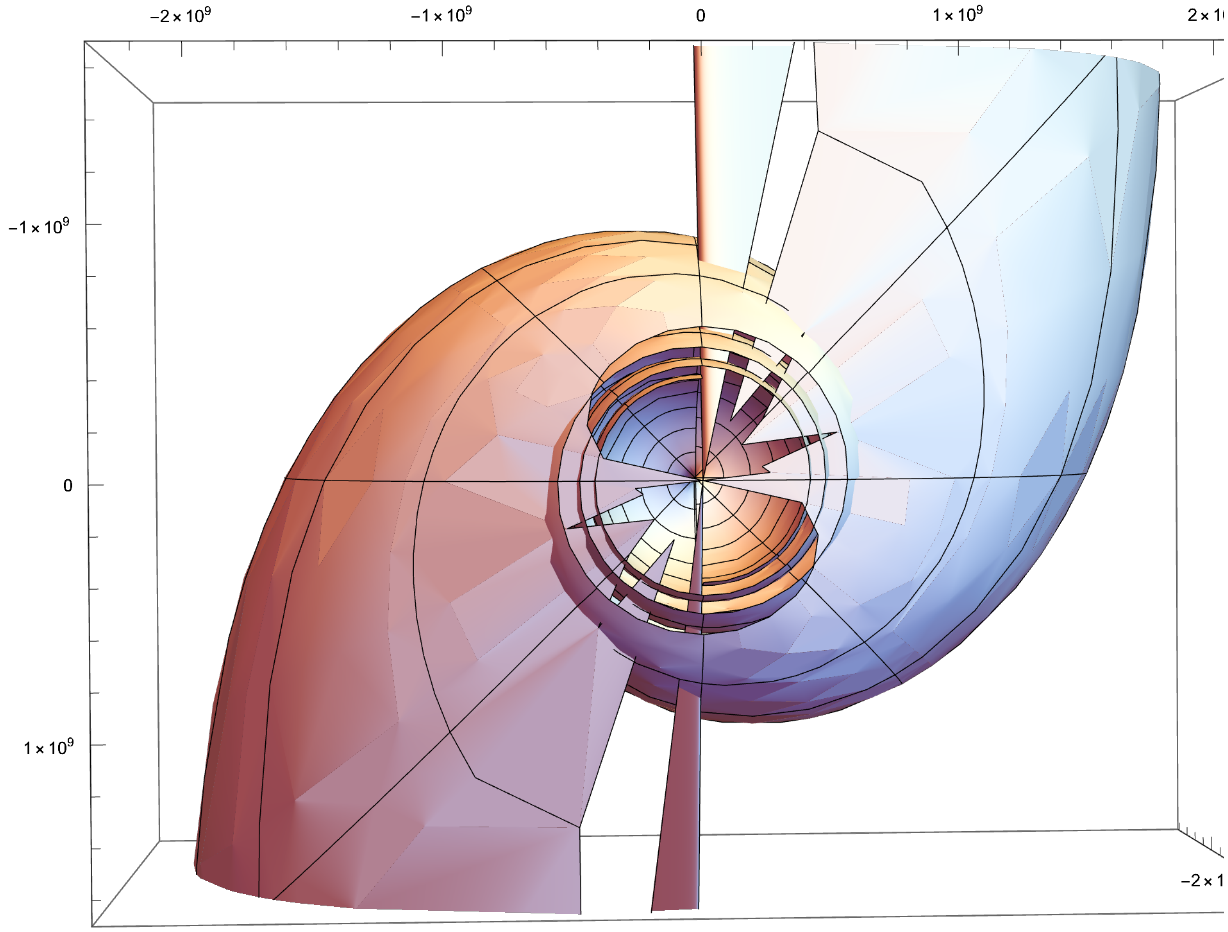




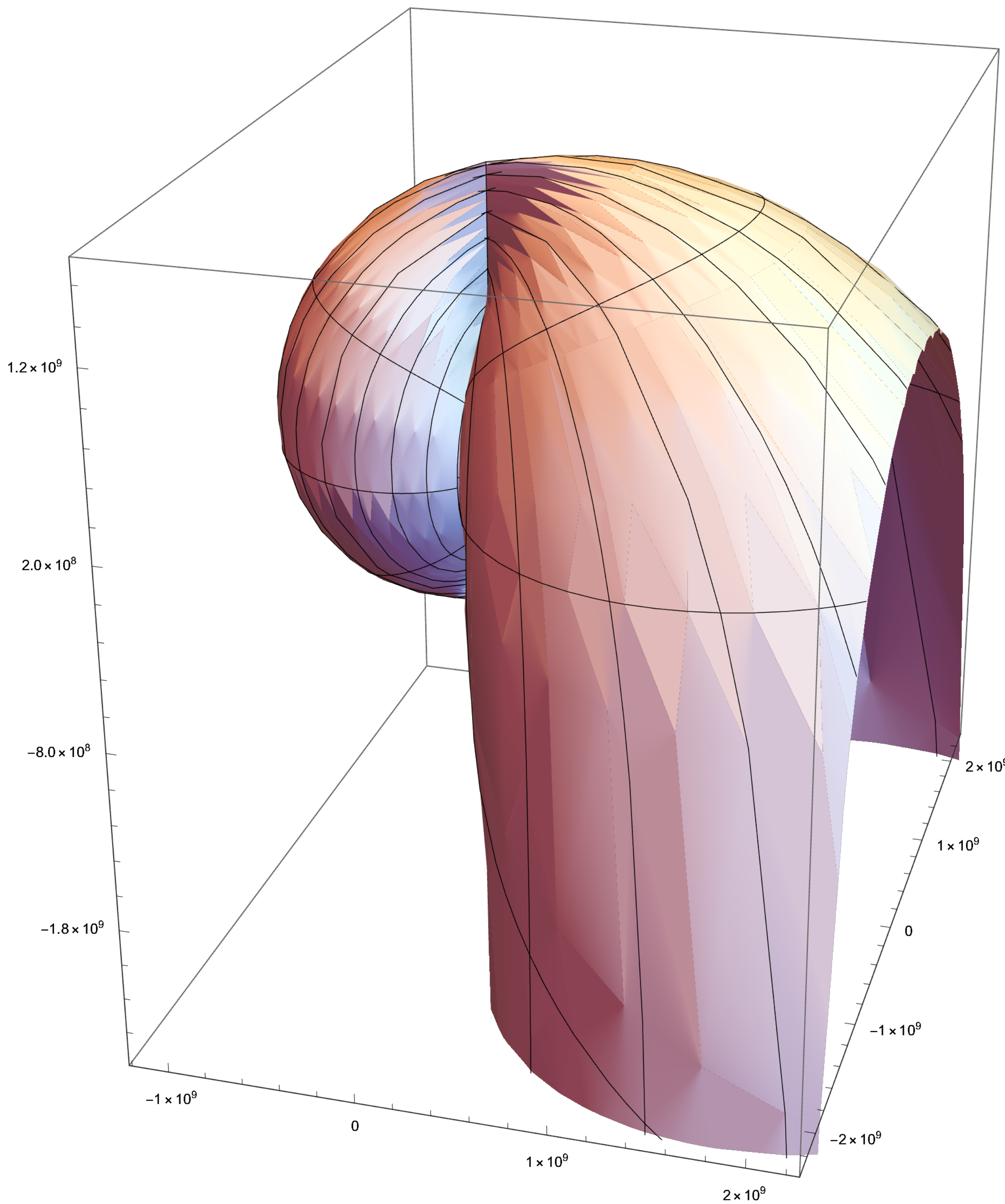
A brief substitution :

```
c := 2.99792458 (10^8)
```

$$\text{SphericalPlot3D}\left[-\left(\sqrt{2}\,\sqrt{\left(2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/\left(\sqrt{4\,\pi^2 - 4\,\pi\,\theta + (\theta)^2}\right),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[-\left(\sqrt{2}\,\sqrt{\left(2\,c^2\,\pi^2 - 4\,c^2\,\pi\,\theta + c^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/\left(\sqrt{4\,\pi^2 - 4\,\pi\,\theta + (\theta)^2}\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



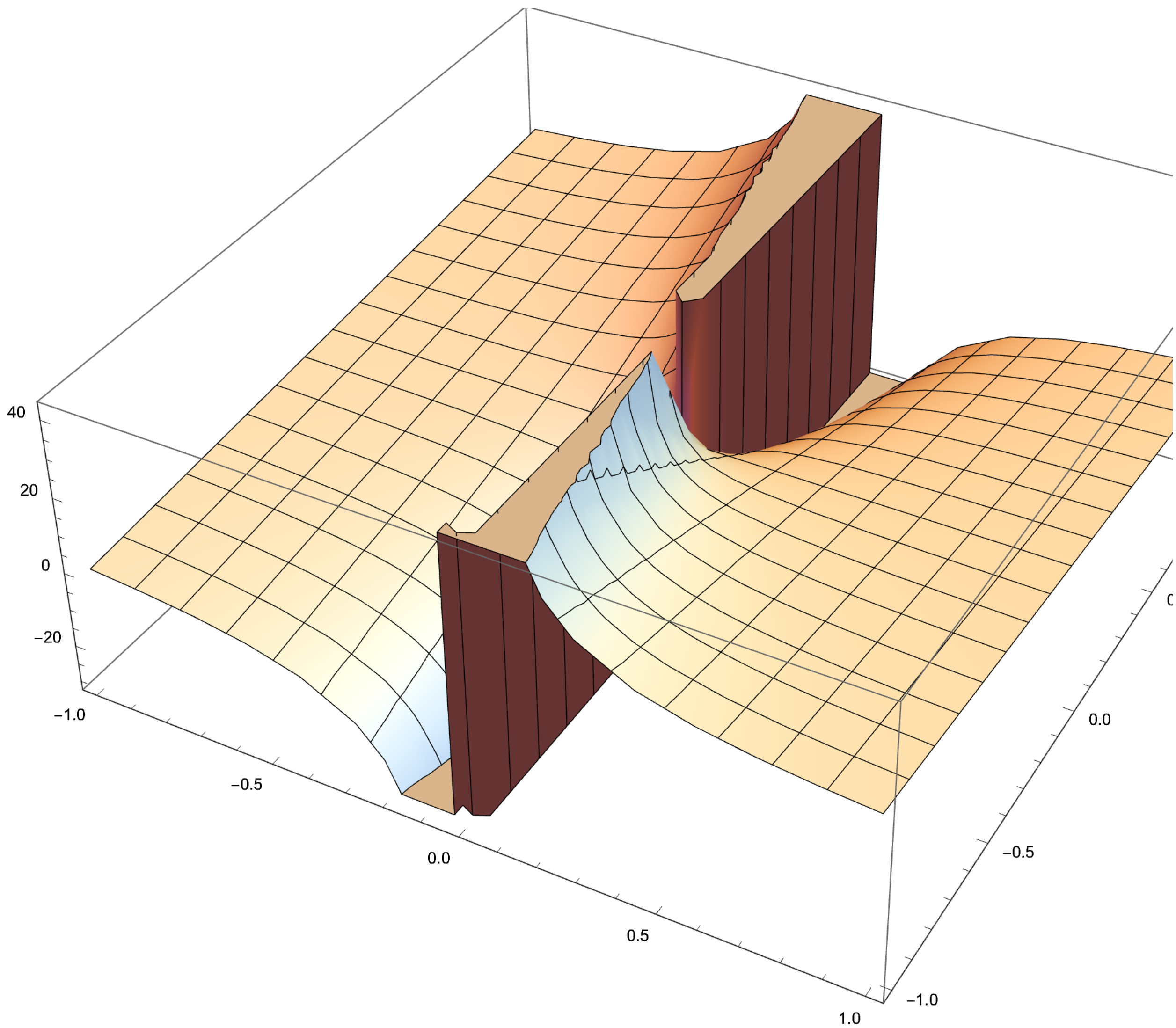
1.2 × 10^9
2.0 × 10^8
−8.0 × 10^8
−1.8 × 10^9
−1 × 10^9
0
1 × 10^9
2 × 10^9
2 × 10^9
1 × 10^9
0
−1 × 10^9
−2 × 10^9

2 π η - 2 π x' = ω η, where ω is an angle of a similar dimensional kind to theta, but different.

```
Solve[2 π η - 2 π x ' == ω η, ω]
```

$$\left\{\left\{\omega \to \frac{2\ (\pi\ \eta - \pi\ x')}{\eta}\right\}\right\}$$

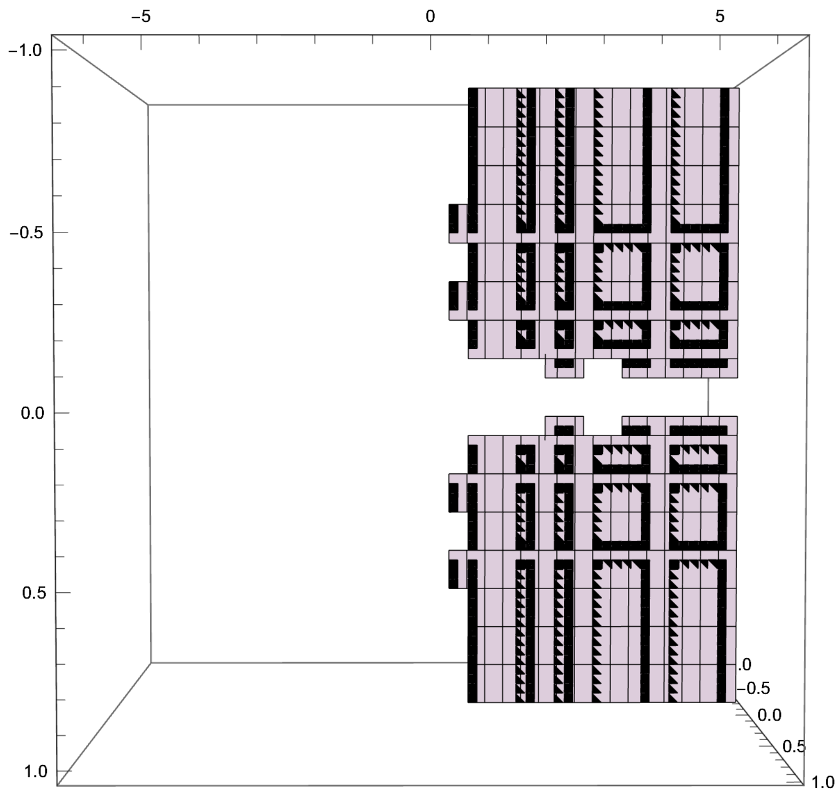
```
Plot3D[2 (π η - π x′)/η, {η, -1, 1}, {x ', -1, 1}]
```



$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,x' == \omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \omega\right]$$

$$\left\{\left\{\omega \to \frac{2\,\pi\left(\sqrt{r^2\,(4\,\pi - \theta)\,\theta} - 2\,\pi\,x'\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{2\,\pi\left(\sqrt{r^2\,(4\,\pi - \theta)\,\theta} - 2\,\pi\,x'\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}},\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\},\ \{x', -1, 1\}\right]$$

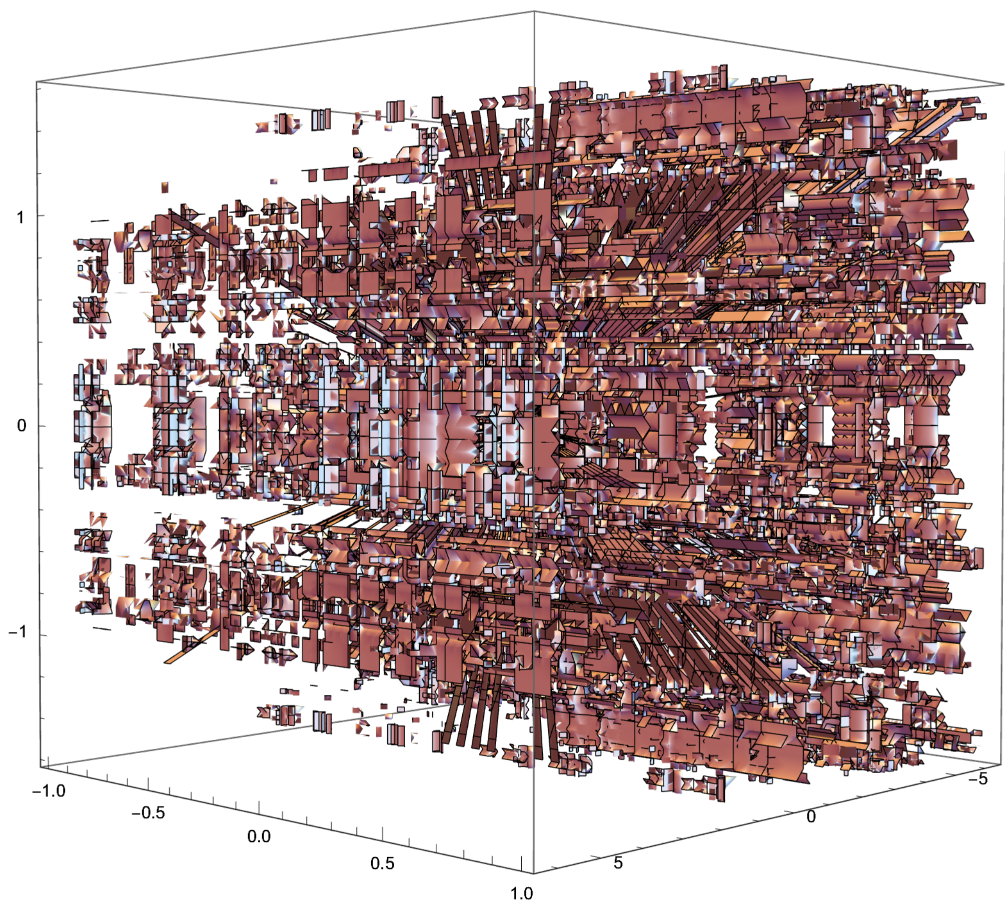


$$v := \left(\sqrt{\left(-1.1294090667581471\text{\`}*\text{\^{}}18\,\theta + 8.987551787368176\text{\`}*\text{\^{}}16\,\theta^2 + 3.5481432270250993\text{\`}*\text{\^{}}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{\`}\,\theta + \theta^2 + 39.47841760435743\text{\`}\,\text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{c^2}} == \omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \omega\right]$$

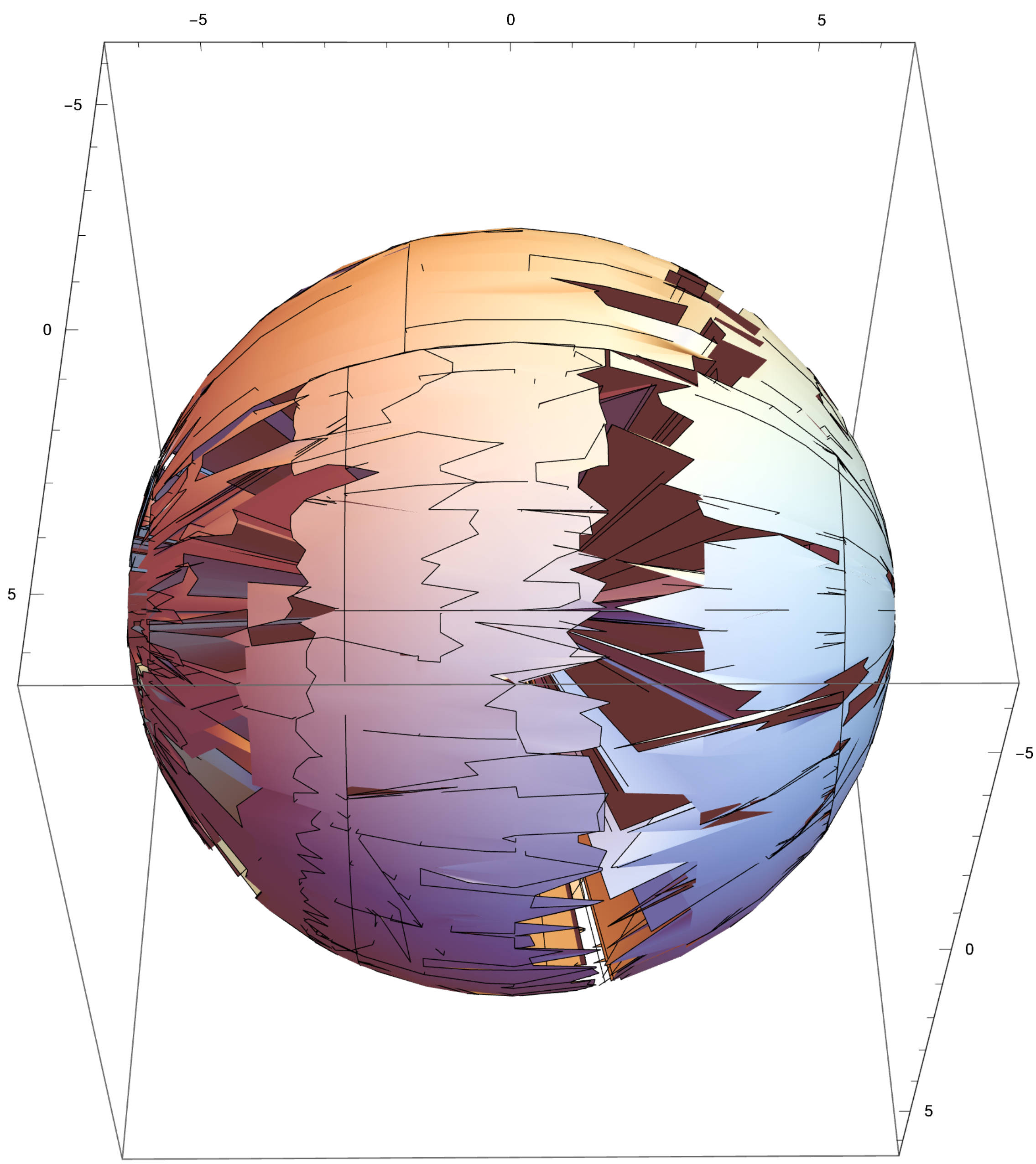
$$\Bigg\{\Bigg\{\omega \to -\frac{1}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}}\,6.28319\,\Bigg(-1.\,\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2} + 1.\,(6.28319\,r - 1.\,r\,\theta)\,\sqrt{1. - \frac{1.11265\times 10^{-17}\,\left(-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\text{Sin}[\beta]^2\right)}{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\Bigg)\Bigg\}\Bigg\}$$

```
ContourPlot3D[-(6.283185307179586`
    (1.` √(1.`-1.1126500560536185`*^-17 ((√(-1.1294090667581471`*^18 θ +
                      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
                (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
        (6.283185307179586` r - 1.` r θ) - 1.` √(12.566370614359172` r^2 θ - 1.` r^2 θ^2)))/
  (√(12.566370614359172` r^2 θ - 1.` r^2 θ^2)),
 {β,
  -π/
   2, π/
   2}, {θ, -2
   π, 2
   π}, {r, -1, 1}]
```



$$r := \frac{-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}}{16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3}$$

```
SphericalPlot3D[-(6.283185307179586`
    (1.` √(1.`- 1.1126500560536185`*^-17 ((√(-1.1294090667581471`*^18 θ +
                8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
            (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
        (6.283185307179586` r - 1.` r θ) - 1.` √(12.566370614359172` r^2 θ - 1.` r^2 θ^2))) /
  (√(12.566370614359172` r^2 θ - 1.` r^2 θ^2)),
 {θ,
  -2
   π, 2
   π}, {β, -π /
   2, π /
   2}]
```



$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1 - \frac{v^2}{c^2}} == \omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ v\right]$$

$$\left\{\left\{v \to -\frac{\sqrt{16\,c^2\,\pi^4 - 32\,c^2\,\pi^3\,\theta + 8\,c^2\,\pi^2\,\theta^2 + 16\,c^2\,\pi^2\,\theta\,\omega - 4\,c^2\,\pi\,\theta^2\,\omega - 4\,c^2\,\pi\,\theta\,\omega^2 + c^2\,\theta^2\,\omega^2}}{\sqrt{16\,\pi^4 - 16\,\pi^3\,\theta + 4\,\pi^2\,\theta^2}}\right\},\right.$$

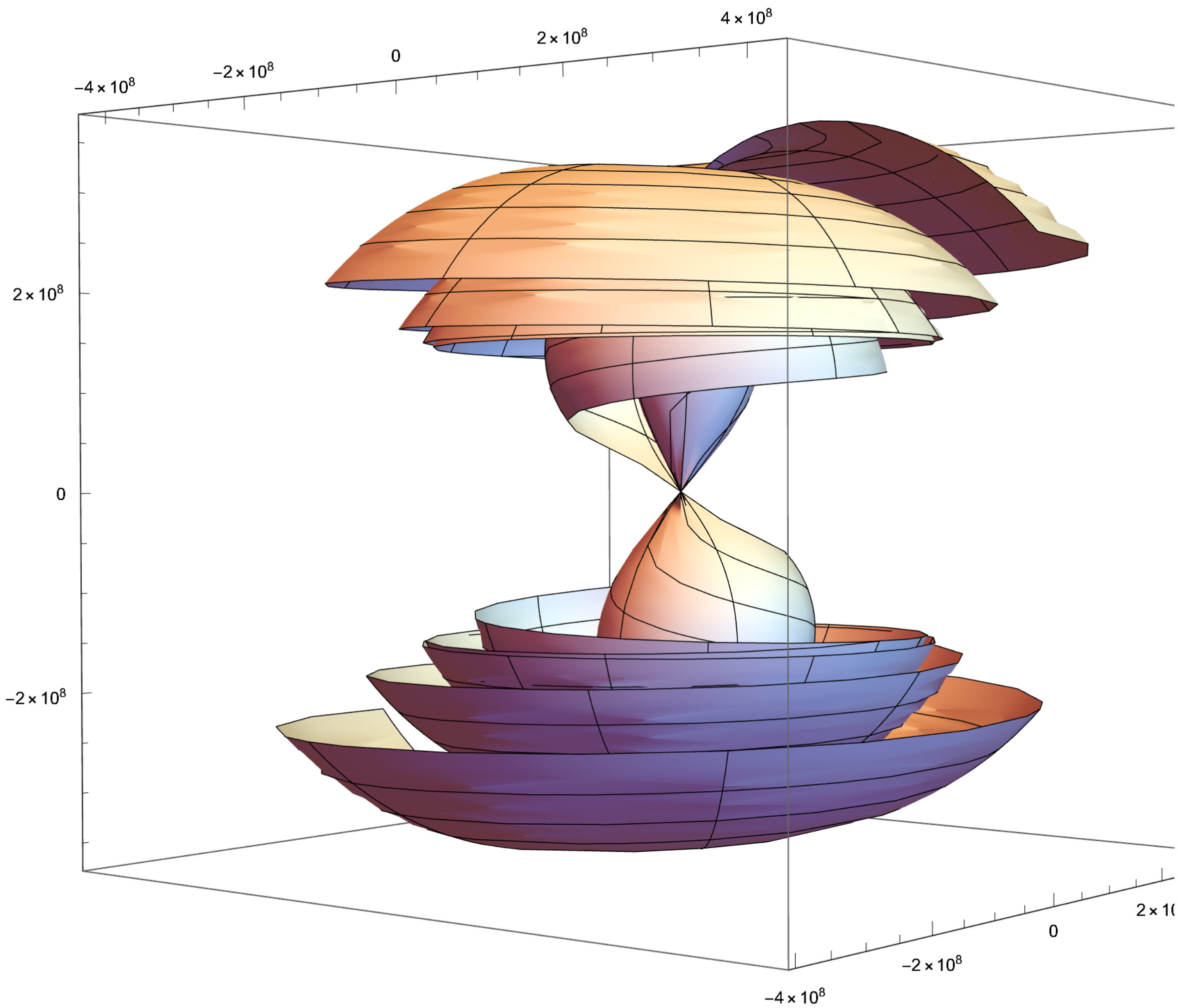
$$\left.\left\{v \to \frac{\sqrt{16\,c^2\,\pi^4 - 32\,c^2\,\pi^3\,\theta + 8\,c^2\,\pi^2\,\theta^2 + 16\,c^2\,\pi^2\,\theta\,\omega - 4\,c^2\,\pi\,\theta^2\,\omega - 4\,c^2\,\pi\,\theta\,\omega^2 + c^2\,\theta^2\,\omega^2}}{\sqrt{16\,\pi^4 - 16\,\pi^3\,\theta + 4\,\pi^2\,\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{c^2}}==\omega\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,v\right]$$

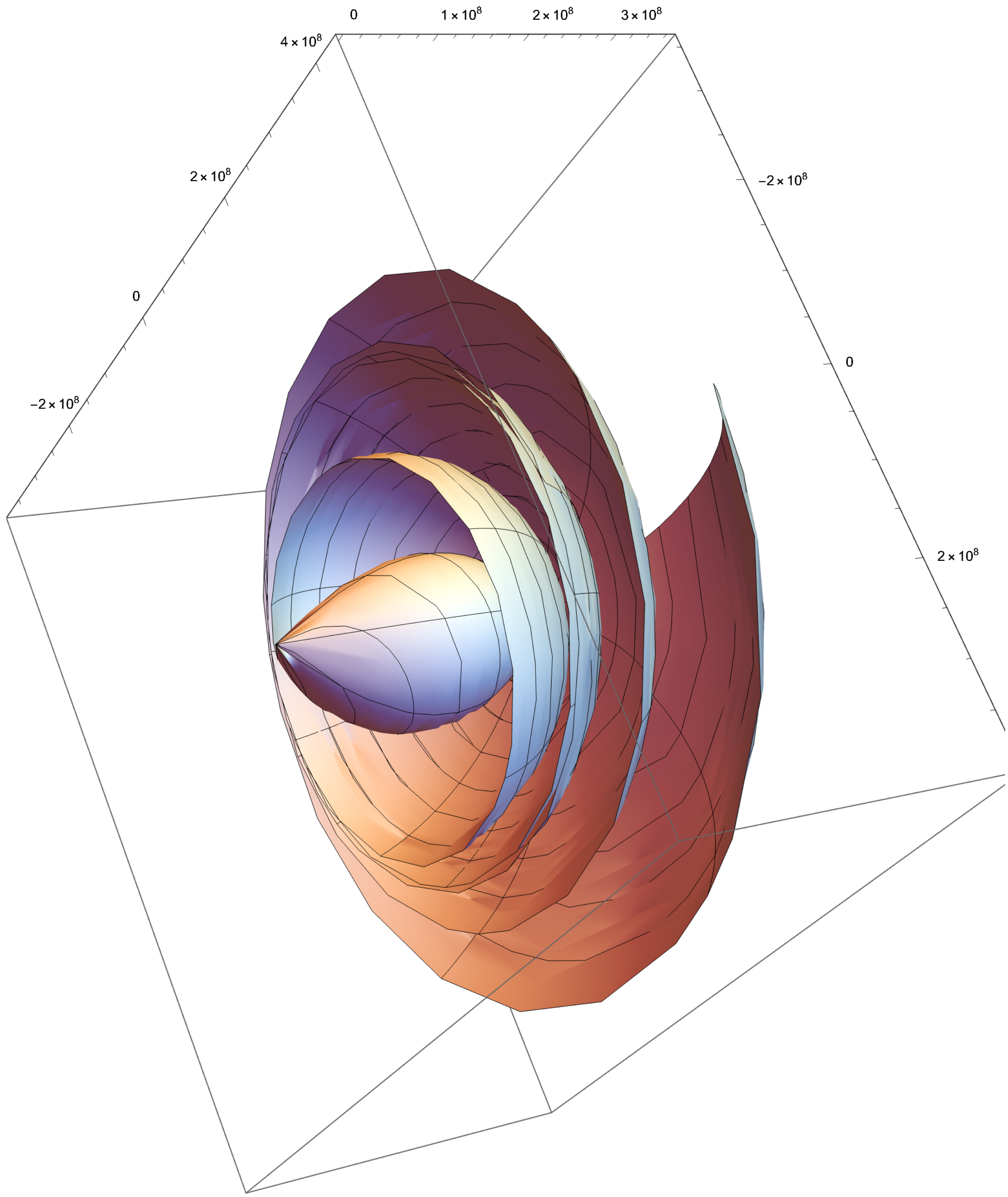
$$\Big\{\Big\{v\to-\Big(1.\,\sqrt{}\,\big(1.49539\times10^{48}-9.51997\times10^{47}\,\theta+7.57575\times10^{46}\,\theta^2+1.51515\times10^{47}\,\theta\,\omega-1.20572\times10^{46}\,\theta^2\,\omega-1.20572\times10^{46}\,\theta\,\omega^2+9.59481\times10^{44}\,\theta^2\,\omega^2\big)\Big)\Big/\left(\sqrt{1.66385\times10^{31}-5.2962\times10^{30}\,\theta+4.21458\times10^{29}\,\theta^2}\right)\Big\},$$

$$\Big\{v\to\Big(\sqrt{}\,\big(1.49539\times10^{48}-9.51997\times10^{47}\,\theta+7.57575\times10^{46}\,\theta^2+1.51515\times10^{47}\,\theta\,\omega-1.20572\times10^{46}\,\theta^2\,\omega-1.20572\times10^{46}\,\theta\,\omega^2+9.59481\times10^{44}\,\theta^2\,\omega^2\big)\Big)\Big/\left(\sqrt{1.66385\times10^{31}-5.2962\times10^{30}\,\theta+4.21458\times10^{29}\,\theta^2}\right)\Big\}\Big\}$$

```
SphericalPlot3D[
 {-(1.` √(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46
        θ^2 + 1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
        1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
   (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
       4.2145820905076925`*^29 θ^2)),
  (√(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46 θ^2 +
       1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
       1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
   (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
       4.2145820905076925`*^29 θ^2))}, {θ, -π / 3, π / 3}, {ω, -3 π, 3 π}]
```



```
SphericalPlot3D[
 (√(1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 7.575754960110463`*^46 θ^2 +
      1.5151509920220929`*^47 θ ω - 1.2057188495545248`*^46 θ^2 ω -
      1.2057188495545248`*^46 θ ω^2 + 9.594805744283795`*^44 θ^2 ω^2)) /
  (√(1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
      4.2145820905076925`*^29 θ^2)), {θ, -π / 3, π / 3}, {ω, -3 π, 3 π}]
```


0
1 × 10^8
2 × 10^8
3 × 10^8
4 × 10^8
2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8

Synchronized angles: $2\pi\eta - 2\pi x' = \theta\eta$

```
Solve[2 π η - 2 π x' == θ η, θ]
```

$$\text{Solve}\left[2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi x' == \theta\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

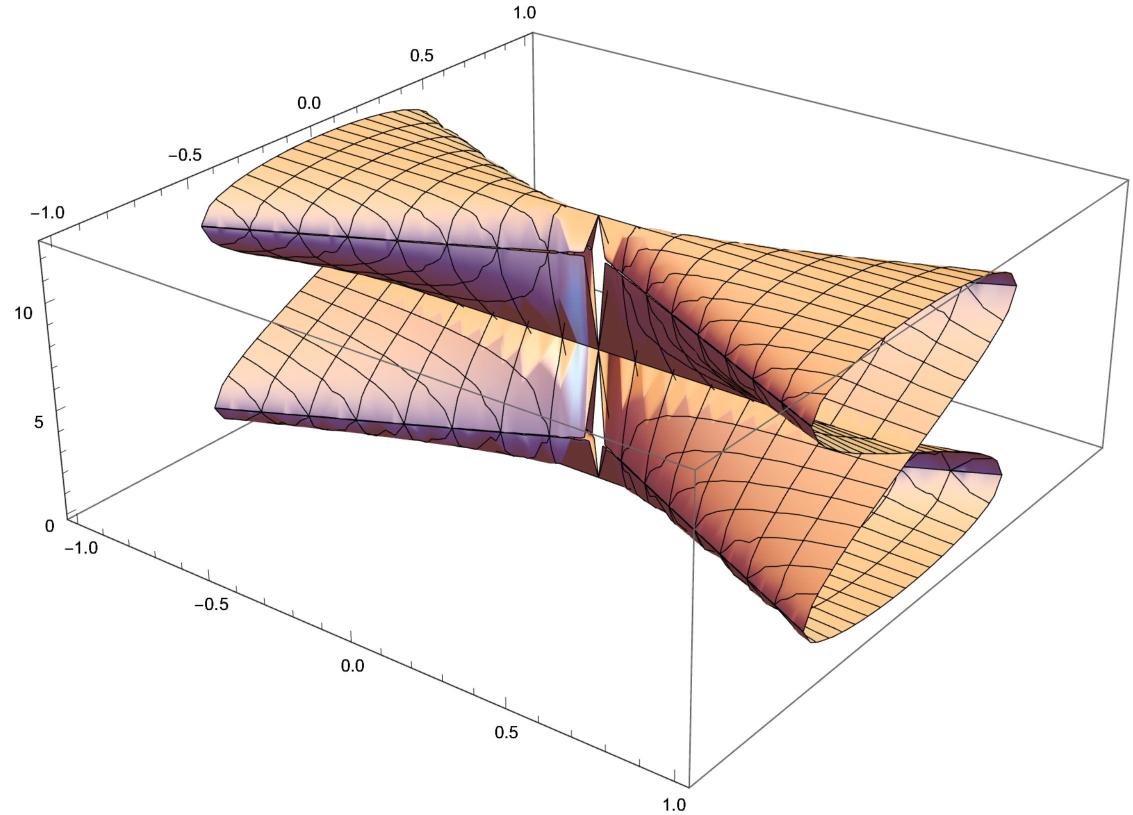
$$\left\{\left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\,\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4\,(x')^2\right)}}}{r^2}\right\},\right.$$

$$\left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\,\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4\,(x')^2\right)}}}{r^2}\right\},$$

$$\left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\,\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4\,(x')^2\right)}}}{r^2}\right\},$$

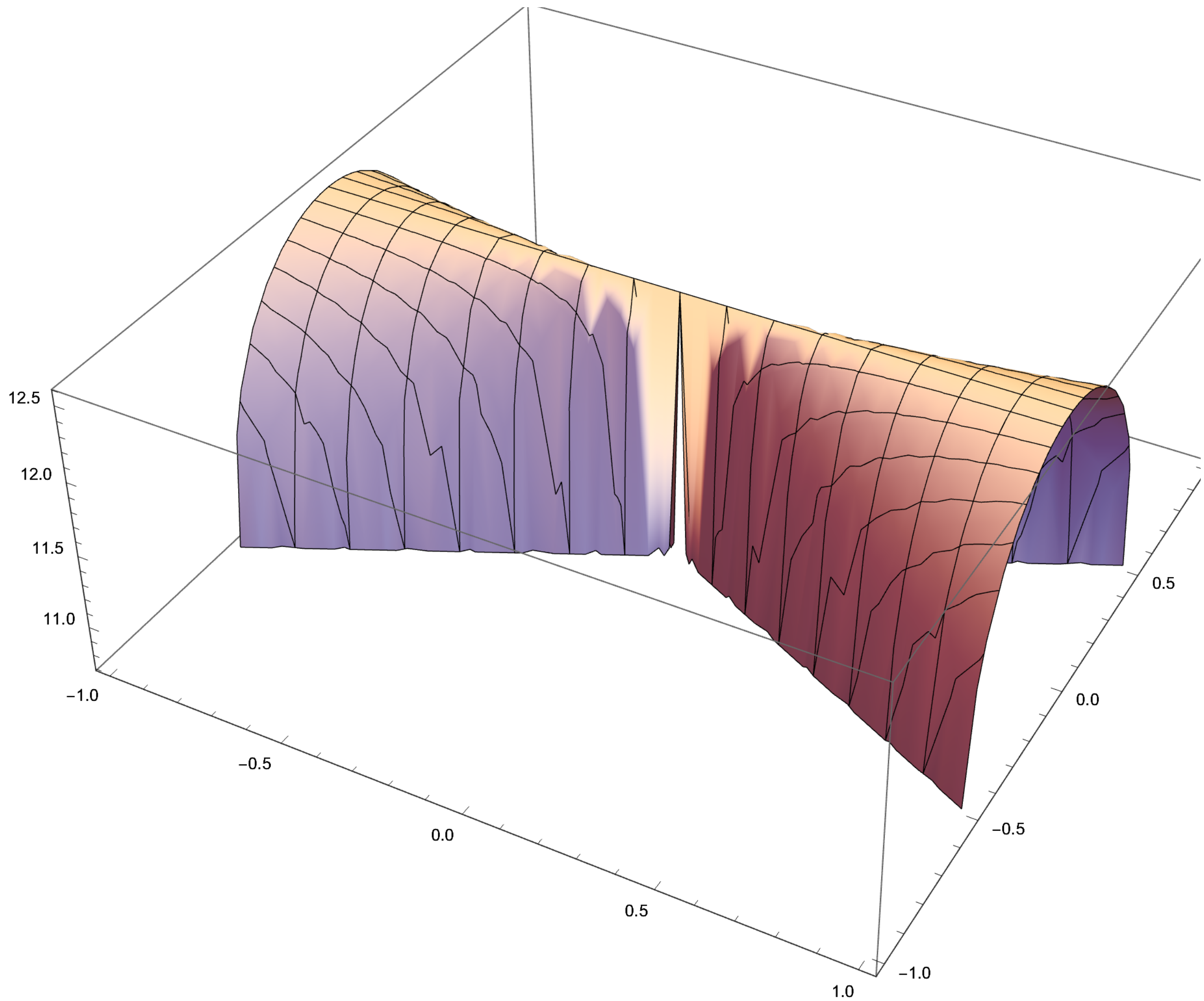
$$\left.\left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\,\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4\,(x')^2\right)}}}{r^2}\right\}\right\}$$

$$\text{Plot3D}\Big[\Big\{\frac{2\pi r^2-\sqrt{2}\,\pi\sqrt{r^4+r^2\sqrt{r^2\left(r^2-4\,(x')^2\right)}}}{r^2},\\ \frac{2\pi r^2-\sqrt{2}\,\pi\sqrt{r^4-r^2\sqrt{r^2\left(r^2-4\,(x')^2\right)}}}{r^2},\ \frac{2\pi r^2+\sqrt{2}\,\pi\sqrt{r^4-r^2\sqrt{r^2\left(r^2-4\,(x')^2\right)}}}{r^2},\\ \frac{2\pi r^2+\sqrt{2}\,\pi\sqrt{r^4+r^2\sqrt{r^2\left(r^2-4\,(x')^2\right)}}}{r^2}\Big\},\ \{r,-1,1\},\ \{x',-1,1\}\Big]$$



```
Plot3D[(2 π r^2 + Sqrt[2] π Sqrt[r^4 + r^2 Sqrt[r^2 (r^2 - 4 (x')^2)]])/r^2, {r, -1, 1}, {x', -1, 1}]
```

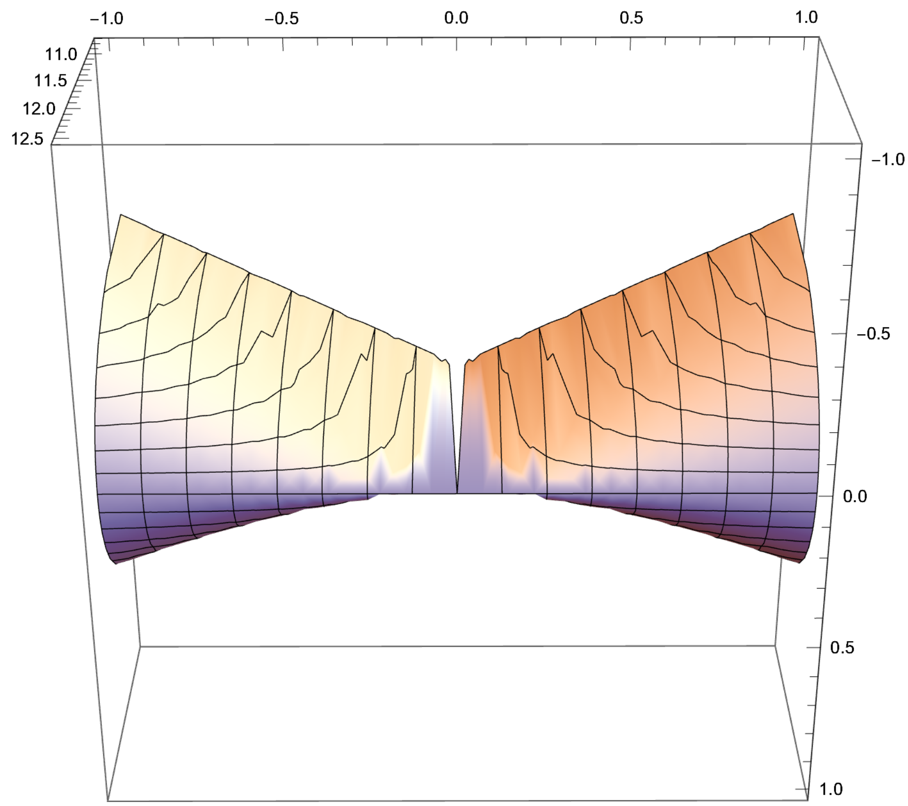
$$\text{Plot3D}\left[\frac{2\pi r^2+\sqrt{2}\,\pi\sqrt{r^4+r^2\sqrt{r^2\left(r^2-4\,(x')^2\right)}}}{r^2},\ \{r,-1,1\},\ \{x',-1,1\}\right]$$



$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi x' == \theta\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\,\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\},\right.$$
$$\left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\,\pi\sqrt{r^4 - r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\},$$
$$\left\{\theta \to \frac{2\pi r^2 - \sqrt{2}\,\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\},$$
$$\left.\left\{\theta \to \frac{2\pi r^2 + \sqrt{2}\,\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2}\right\}\right\}$$

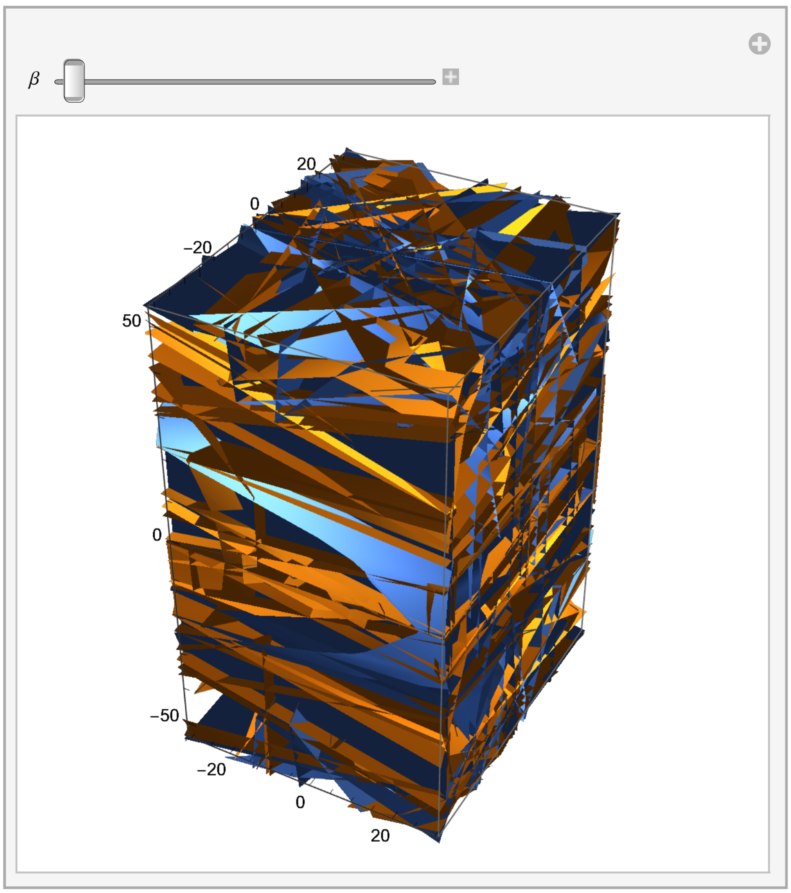
$$\text{Plot3D}\left[\frac{2\pi r^2 + \sqrt{2}\,\pi\sqrt{r^4 + r^2\sqrt{r^2\left(r^2 - 4(x')^2\right)}}}{r^2},\ \{x', -1, 1\},\ \{r, -1, 1\}\right]$$



$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\sqrt{1 - \frac{v^2}{c^2}} == \theta\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\left\{\{\theta \to 2\pi\},\ \left\{\theta \to \frac{2\,(c\,\pi - \pi\,v)}{c}\right\},\ \left\{\theta \to \frac{2\,(c\,\pi + \pi\,v)}{c}\right\}\right\}$$

```
Manipulate[SphericalPlot3D[
  {1/c 2 (c π + π (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
          (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))),
   1/c 2 (c π - π (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
          (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))},
  {θ, -2 π, 2 π}, {c, -3 * 10^8, 3 * 10^8}], {β,
  -4
   π, 4
   π}]
```



General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::ivar : 2.99792458`*^8 is not a valid variable. ≫

General::stop : Further output of General::ivar will be suppressed during this calculation. ≫

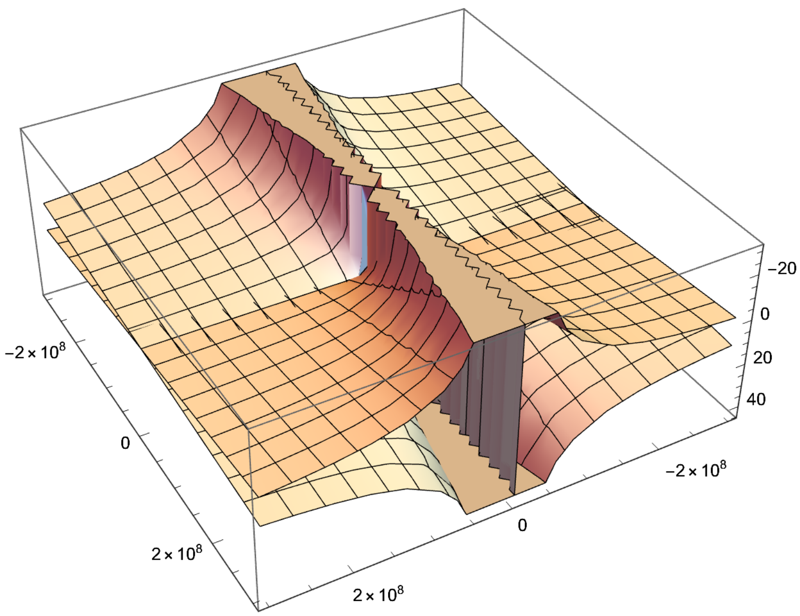
··· General: 2.99792458`*^8 is not a valid variable.

··· General: 2.99792458`*^8 is not a valid variable.

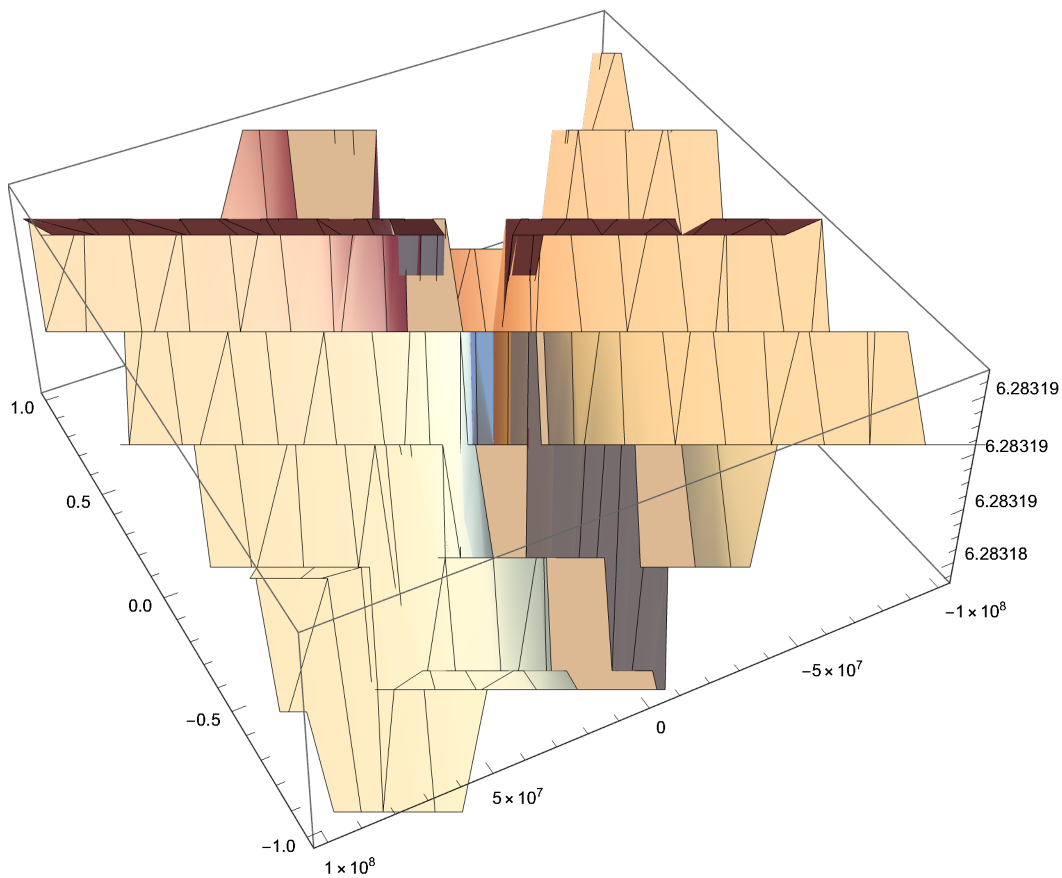
··· General: 2.99792458`*^8 is not a valid variable.

··· General: Further output of General::ivar will be suppressed during this calculation.

$$\text{Plot3D}\left[\left\{\frac{2\,(c\,\pi+\pi\,v)}{c},\ \frac{2\,(c\,\pi-\pi\,v)}{c}\right\},\ \{v,-3*10^{\wedge}8,3*10^{\wedge}8\},\ \{c,-3*10^{\wedge}8,3*10^{\wedge}8\}\right]$$



$$\text{Plot3D}\left[\frac{2\,(c\,\pi+\pi\,v)}{c},\ \{v,-1,1\},\ \{c,-10^{\wedge}8,\ 10^{\wedge}8\}\right]$$



$$r := \frac{-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}}{16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3}$$

$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\sqrt{1-\frac{v^2}{c^2}} == \theta\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ v\right]$$

$$\left\{\left\{v \to -\frac{1}{2}c\sqrt{4-\frac{4\theta}{\pi}+\frac{\theta^2}{\pi^2}}\right\},\ \left\{v \to \frac{1}{2}c\sqrt{4-\frac{4\theta}{\pi}+\frac{\theta^2}{\pi^2}}\right\}\right\}$$

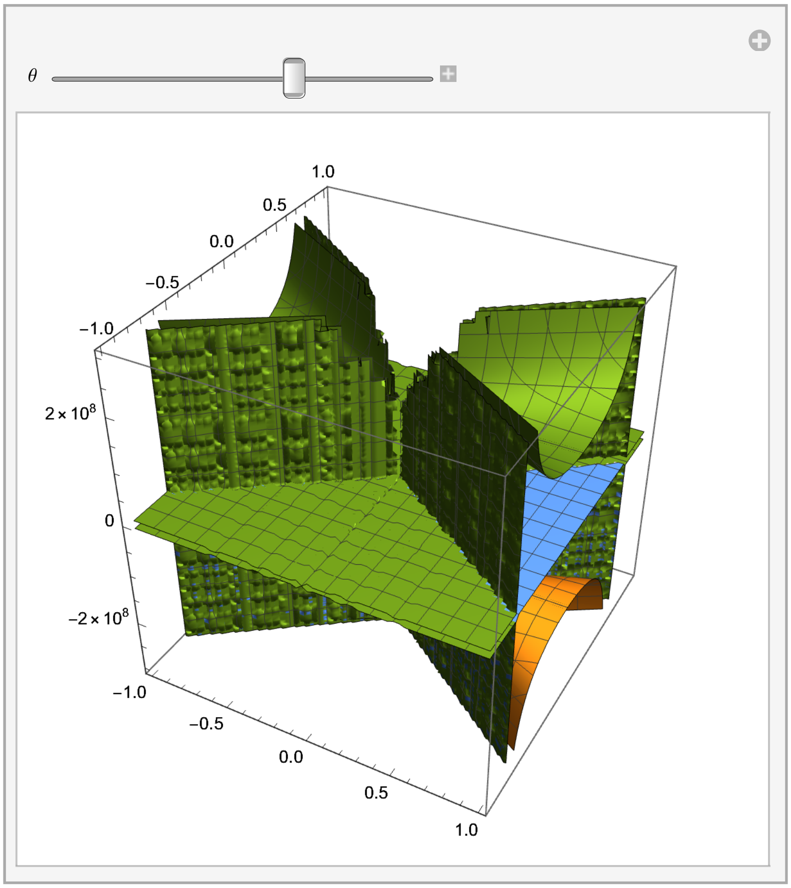
$$x = \eta\,' = \frac{2\pi r - r\theta}{2\pi} = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}}$$

$$\text{Solve}\left[x == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

$$\left\{\left\{v \to -c\sqrt{1-\frac{\pi x^2}{r^2(4\pi-\theta)}-\frac{\pi x^2}{r^2\theta}}\right\},\ \left\{v \to c\sqrt{1-\frac{\pi x^2}{r^2(4\pi-\theta)}-\frac{\pi x^2}{r^2\theta}}\right\}\right\}$$

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[c\sqrt{1-\frac{\pi x^2}{r^2(4\pi-\theta)}-\frac{\pi x^2}{r^2\theta}},\right.\right.$$

$$\left.\left.\{r, -1, 1\}, \{x, -1, 1\}, \{c, -3*10\wedge 8, 3*10\wedge 8\}\right], \{\theta, -2\pi, 2\pi\}\right]$$



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

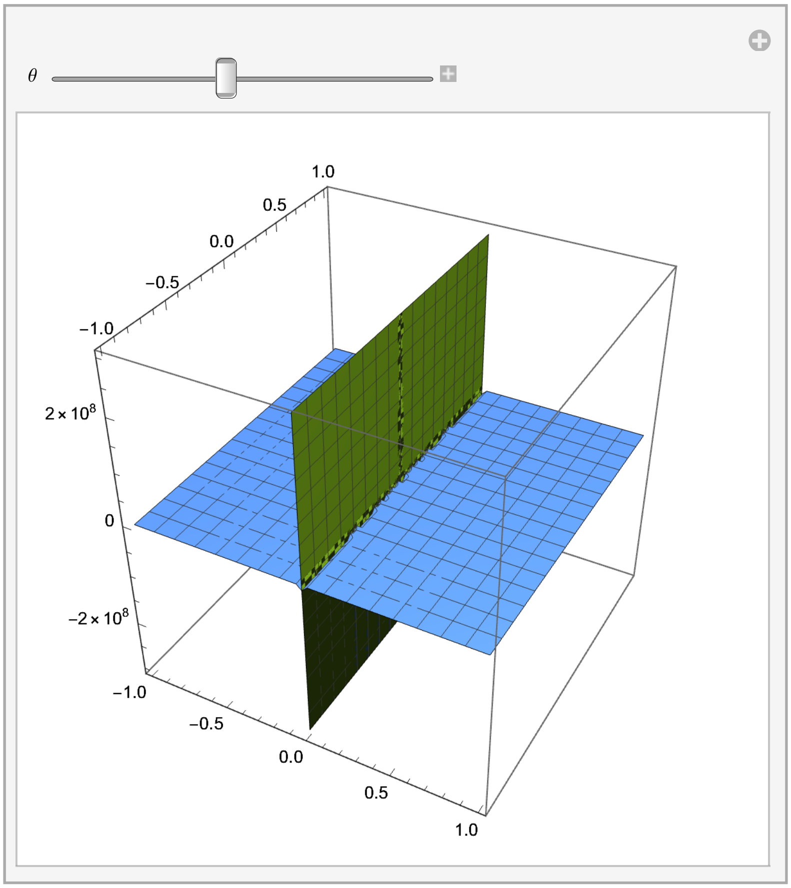
Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 1 + ComplexInfinity + ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

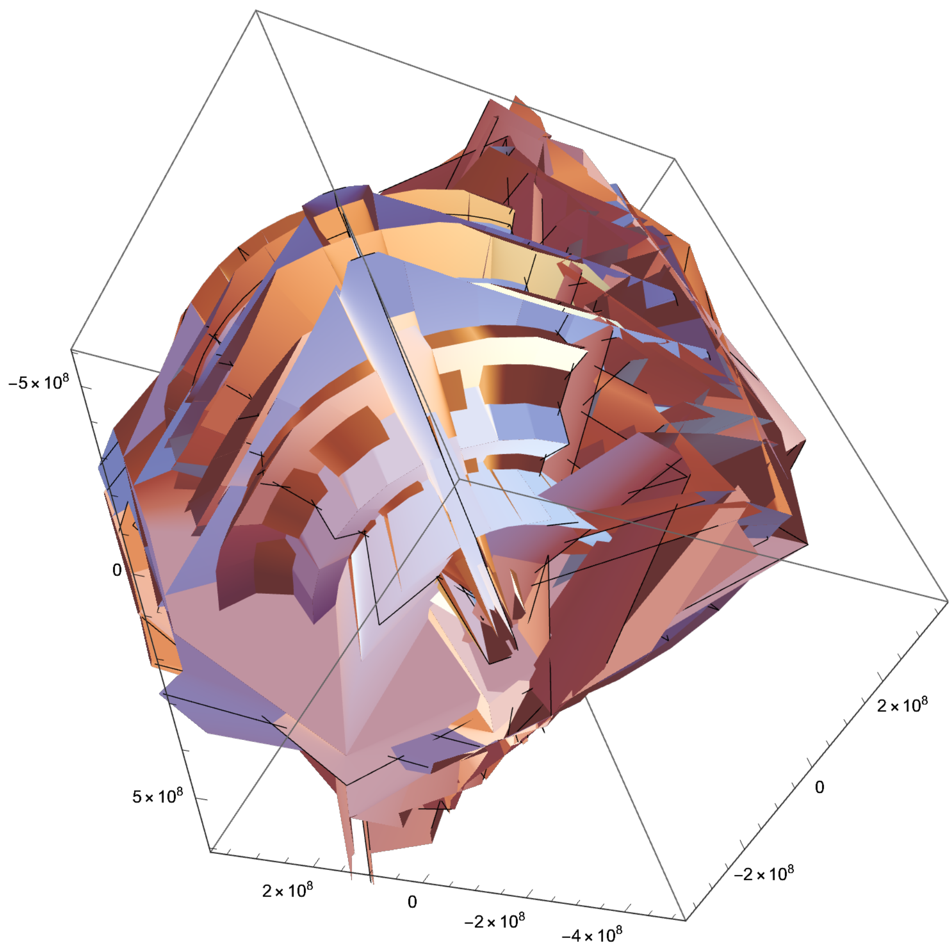
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$$

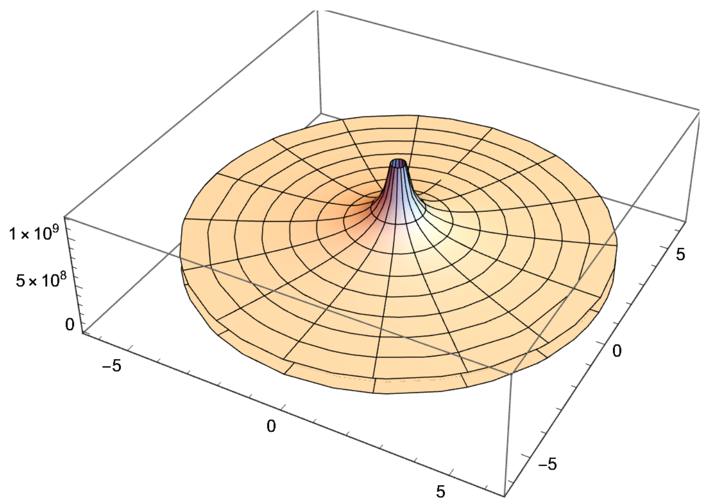
$$\left\{\left\{v \to -c\sqrt{2-\frac{\pi}{4\pi-\theta}-\frac{\pi}{\theta}}\right\},\left\{v \to c\sqrt{2-\frac{\pi}{4\pi-\theta}-\frac{\pi}{\theta}}\right\}\right\}$$

```
SphericalPlot3D[c Sqrt[2 - π/(4 π - θ) - π/θ],
 {c, -2.99792458 (10^8), 2.99792458 (10^8)}, {θ, -2 π, 2 π}]
```



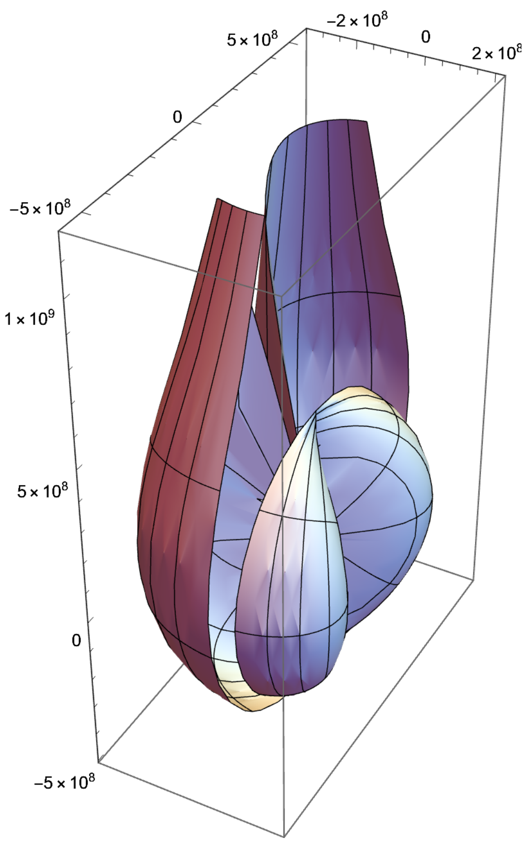

```
c := 2.99792458 (10^8)
```

$$\texttt{RevolutionPlot3D}\left[c\ \sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{\theta}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



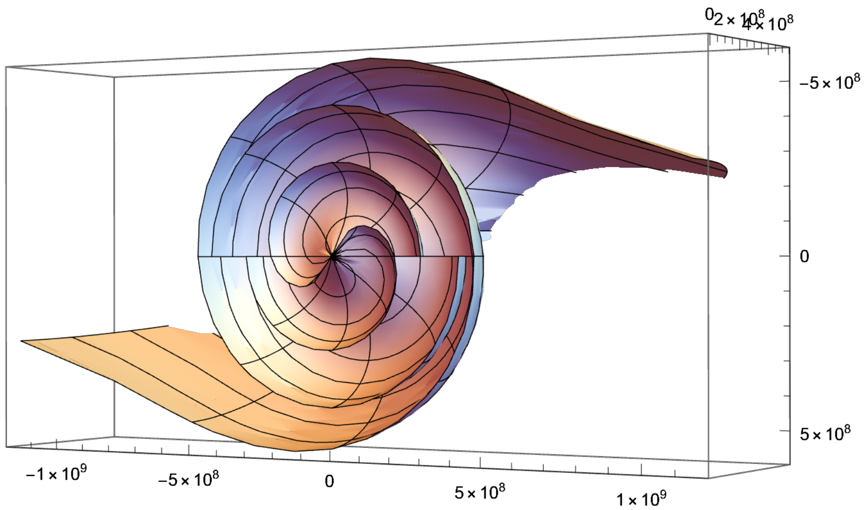
$$\texttt{SphericalPlot3D}\left[c\ \sqrt{2-\frac{\pi}{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}-\frac{\pi}{\theta}},\right.$$

$$\left.\{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$

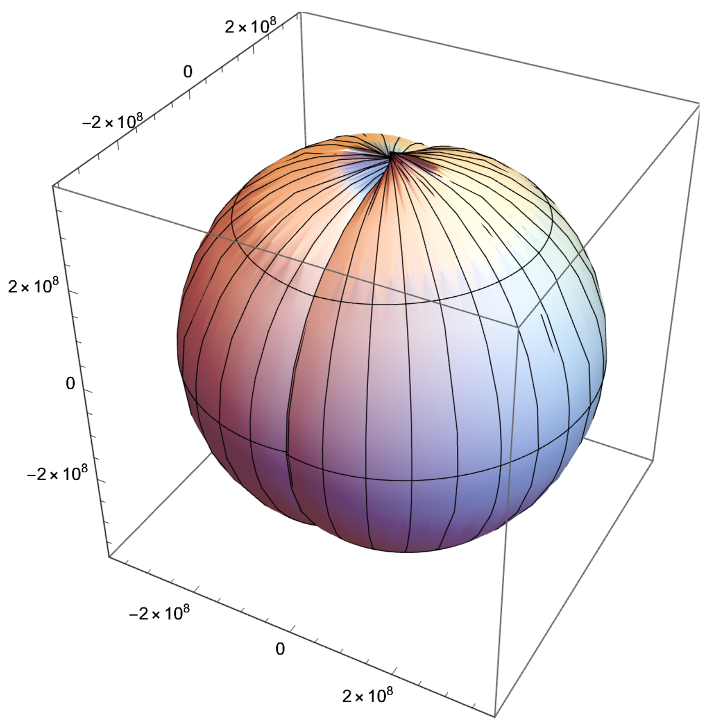


```
SphericalPlot3D[c Sqrt[2 - π/(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - π/θ],
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

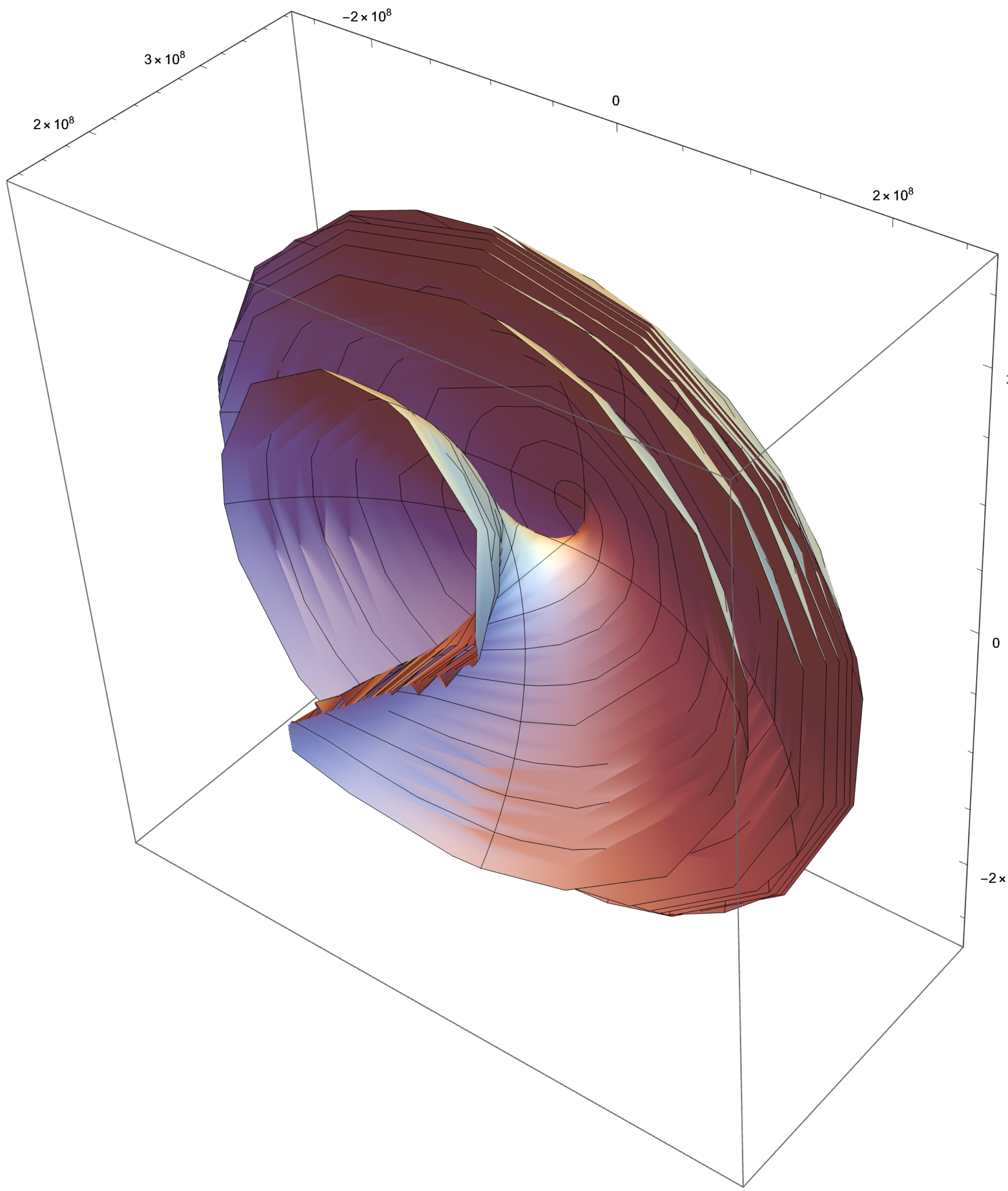
$$\text{SphericalPlot3D}\left[c\sqrt{2-\frac{\pi}{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}-\frac{\pi}{\theta}},\ \{\beta,-\pi/2,\pi/2\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[c\sqrt{2-\frac{\pi}{4\pi-\theta}-\frac{\pi}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}},\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



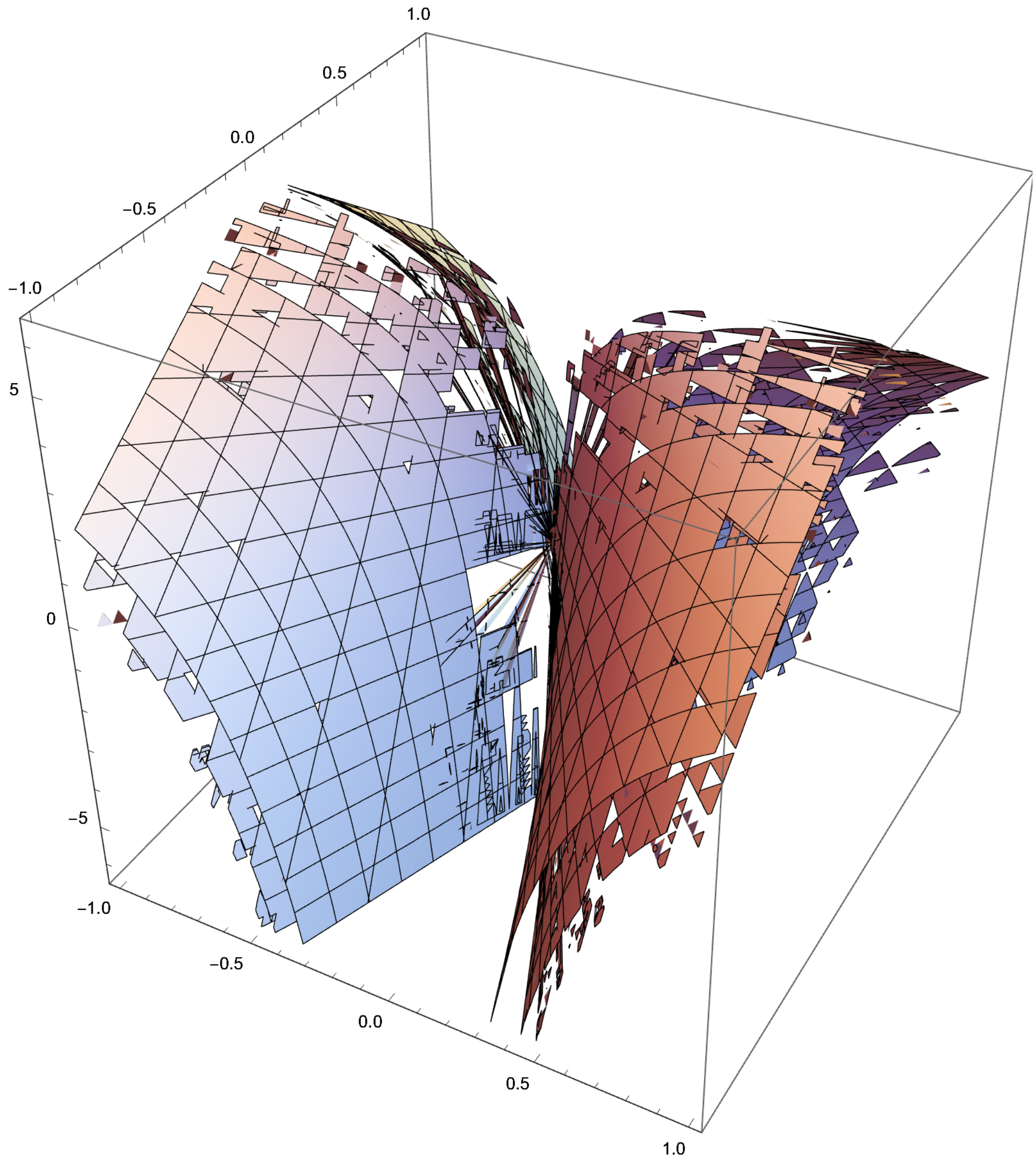
$$\text{SphericalPlot3D}\left[c\sqrt{2-\frac{\pi}{4\,\pi-\theta}-\frac{\pi}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}\,,\right.$$
$$\left.\{\beta,-\pi/4,\pi/4\},\{\theta,-4\,\pi,4\,\pi\}\right]$$


−2 × 10^8
0
2 × 10^8
3 × 10^8
2 × 10^8
0
−2 ×

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == \eta\sqrt{1-\frac{(v)^2}{c^2}}, v\right]$$

$$\left\{\left\{v \to -\frac{c\sqrt{4\pi^2 - \frac{4\pi^2 r^2}{\eta^2} + \frac{4\pi r^2\theta}{\eta^2} - \frac{r^2\theta^2}{\eta^2}}}{2\pi}\right\}, \left\{v \to \frac{c\sqrt{4\pi^2 - \frac{4\pi^2 r^2}{\eta^2} + \frac{4\pi r^2\theta}{\eta^2} - \frac{r^2\theta^2}{\eta^2}}}{2\pi}\right\}\right\}$$

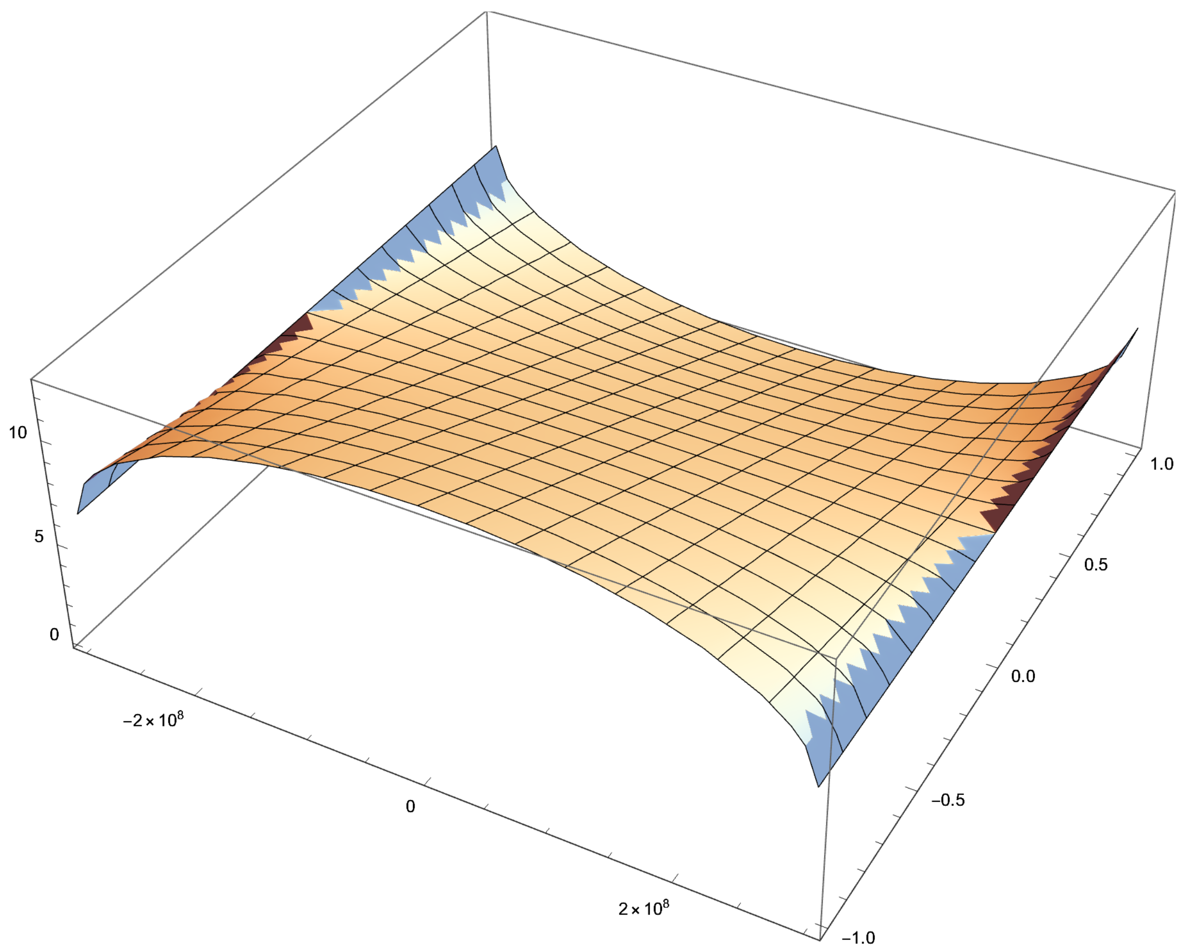
$$\text{ContourPlot3D}\left[\frac{c\sqrt{4\pi^2 - \frac{4\pi^2 r^2}{\eta^2} + \frac{4\pi r^2\theta}{\eta^2} - \frac{r^2\theta^2}{\eta^2}}}{2\pi}, \{r, -1, 1\}, \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == \eta\sqrt{1 - \frac{(v)^2}{c^2}}, \theta\right]$$

$$\left\{\left\{\theta \to -6.28319\left(-1. + 1.\sqrt{1. - 1.11265\times10^{-17}\,v^2}\,\eta\right)\right\}\right\}$$

```
Plot3D[-6.283186703443298`
  (-0.9999997777777779` + 1.` √(1.`- 1.1126500560536185`*^-17 v^2) η), {v,
  -c, c}, {η, -1, 1}]
```



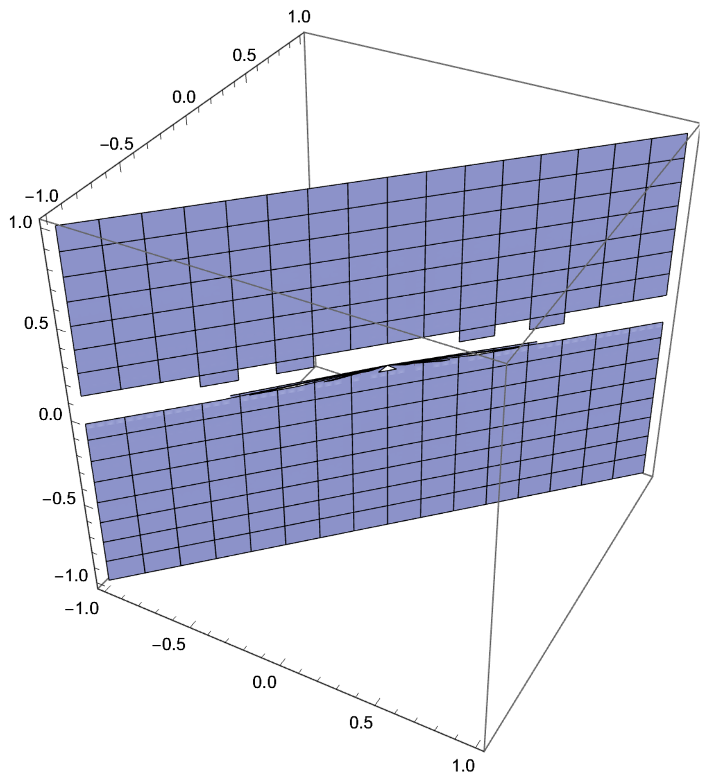
$2\pi x - 2\pi\eta' = \rho\,\eta$, where ρ is an angle of a similar dimensional kind to theta, but different.

$$\text{Solve}[2\pi x - 2\pi\eta' == \rho\,\eta, \rho]$$

$$\left\{\left\{\rho \to \frac{2\,(\pi x - \pi\eta')}{\eta}\right\}\right\}$$

$\eta' = \mathbf{p}$

$$\texttt{ContourPlot3D}\left[\frac{2\,(\pi\,x-\pi\,p)}{\eta},\ \{x,-1,1\},\ \{p,-1,1\},\ \{\eta,-1,1\}\right]$$



$$\texttt{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\eta' == \rho\,\eta,\ \rho\right]$$

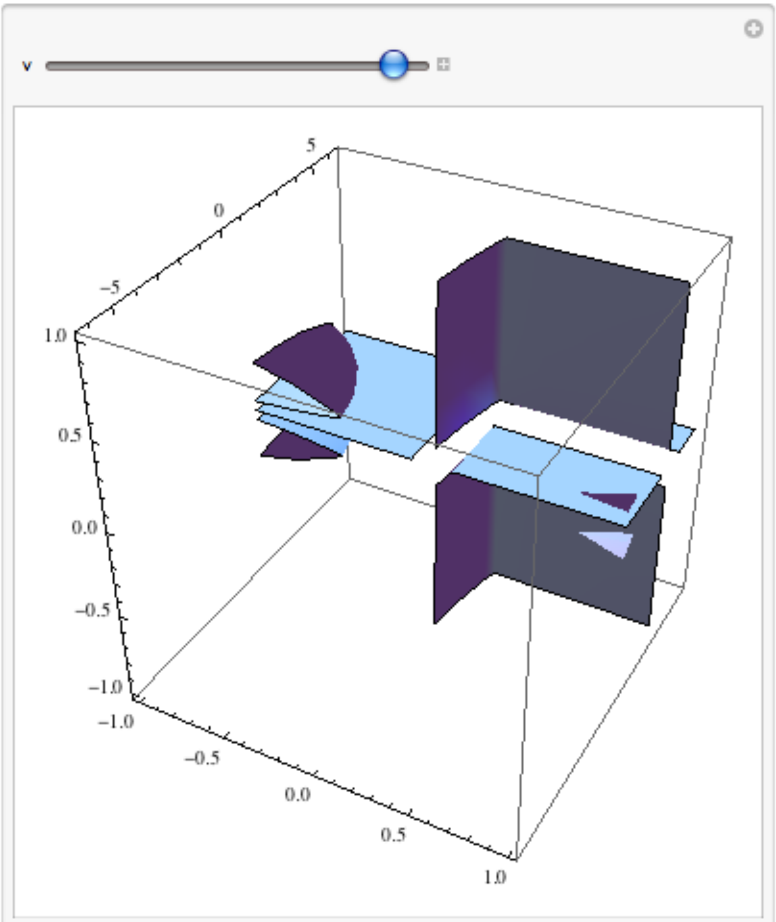
$$\left\{\left\{\rho\to\frac{2\,\pi\,r-r\,\theta-2\,\pi\,\eta'}{\eta}\right\}\right\}$$

$$\texttt{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}} == \rho\,\eta,\ \rho\right]$$

$$\left\{\left\{\rho\to\frac{2\,\pi\,r-r\,\theta-\sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{\eta}\right\}\right\}$$

$$c := 2.99792458\,\left(10^8\right)$$

$$\texttt{Manipulate}\left[\texttt{ContourPlot3D}\left[\frac{2\,\pi\,r-r\,\theta-\sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{\eta},\right.\right.$$
$$\left.\left.\{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\},\ \{\eta,-1,1\}\right],\ \{v,-c,c\}\right]$$



v

$$\text{ContourPlot3D}\left[\frac{(2\,\pi)\ r - r\,\theta - \sqrt{\frac{c^2 - \text{FE`v\$\$301}^2}{c^2}}\ \sqrt{\left(r^2\ (4\,\pi - \theta)\right)\ \theta}}{\eta},\right.$$
$$\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\eta, -1, 1\}\right]$$

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{2\,\pi\,r - r\,\theta - \sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{\eta},\right.\right.$$
$$\left.\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{v,-c,c\}\right],\{\eta,-1,1\}\right]$$

η

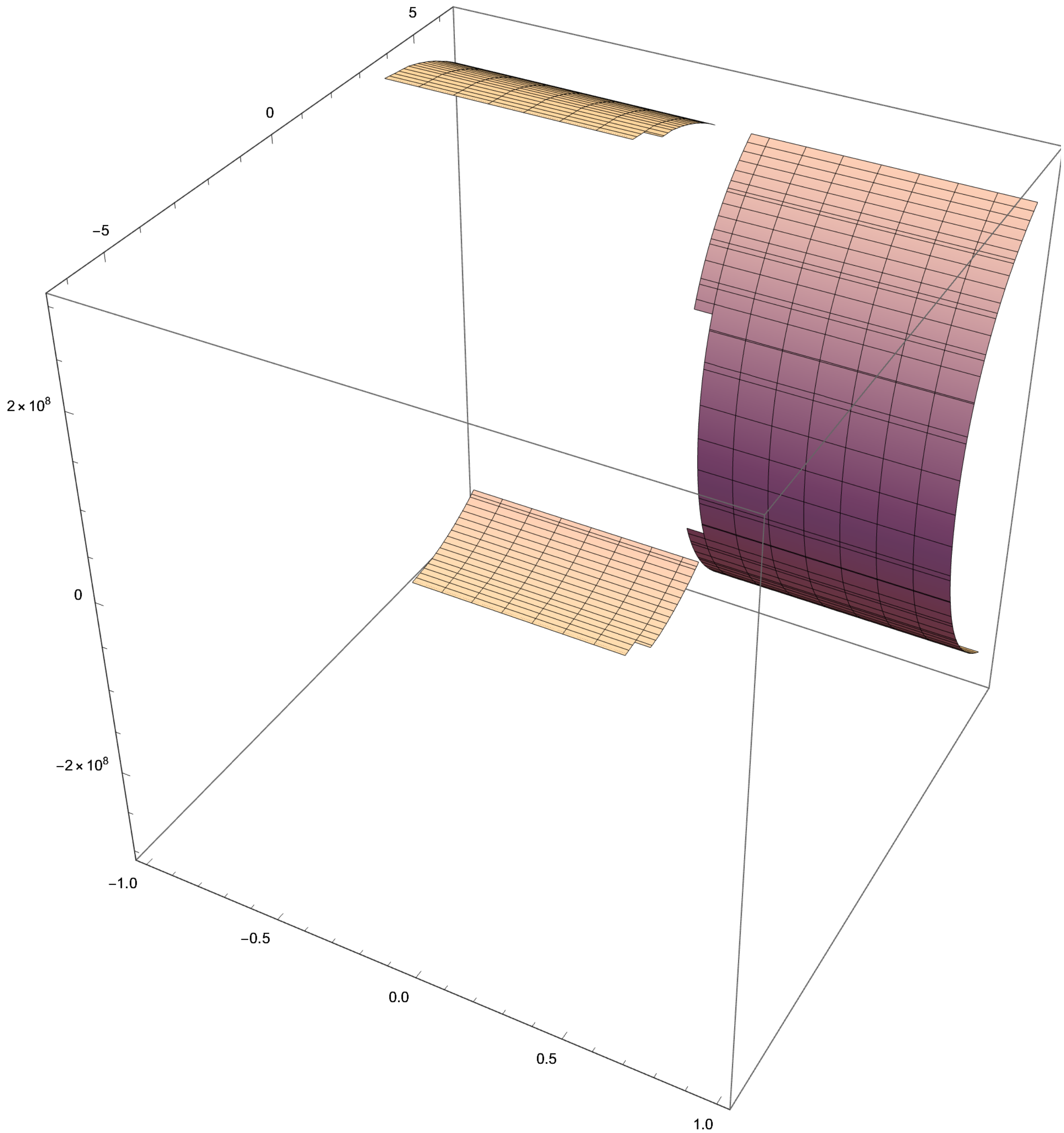
$$\text{ContourPlot3D}\left[\frac{(2\,\pi)\,r - r\,\theta - \sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{\left(r^2\,(4\,\pi-\theta)\right)\,\theta}}{\text{FE`}\eta\$\$302},\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{v,-c,c\}\right]$$

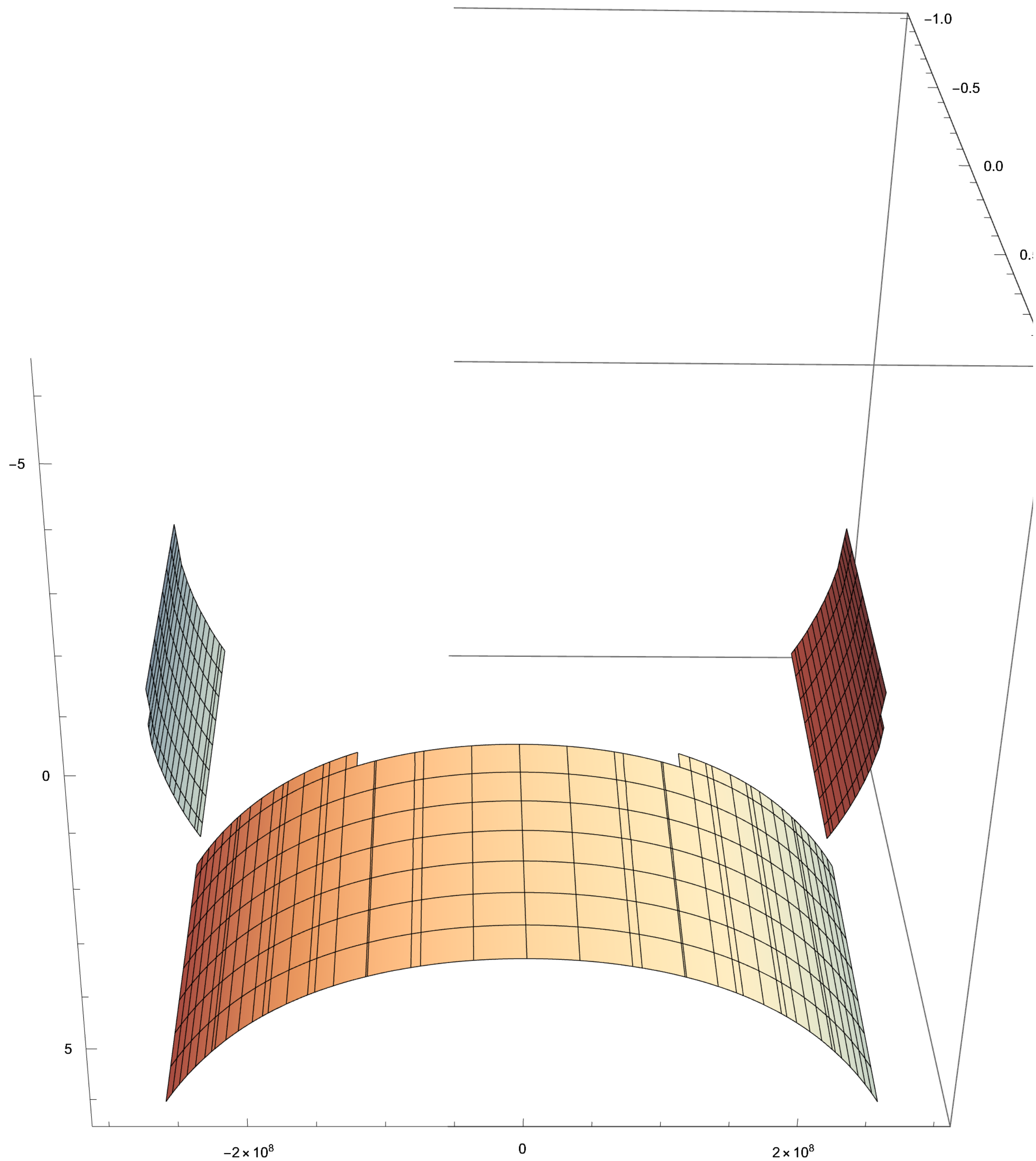
$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi} - 2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}} == \rho\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\rho\right]$$

$$\left\{\left\{\rho \to -\frac{2\,\pi\left(-2\,\pi\,r + r\,\theta + \sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[-\frac{2\,\pi\left(-2\,\pi\,r+r\,\theta+\sqrt{\frac{c^2-v^2}{c^2}}\ \sqrt{r^2\ (4\,\pi-\theta)\ \theta}\right)}{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\right.$$

$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{v,-c,c\}\right]$$





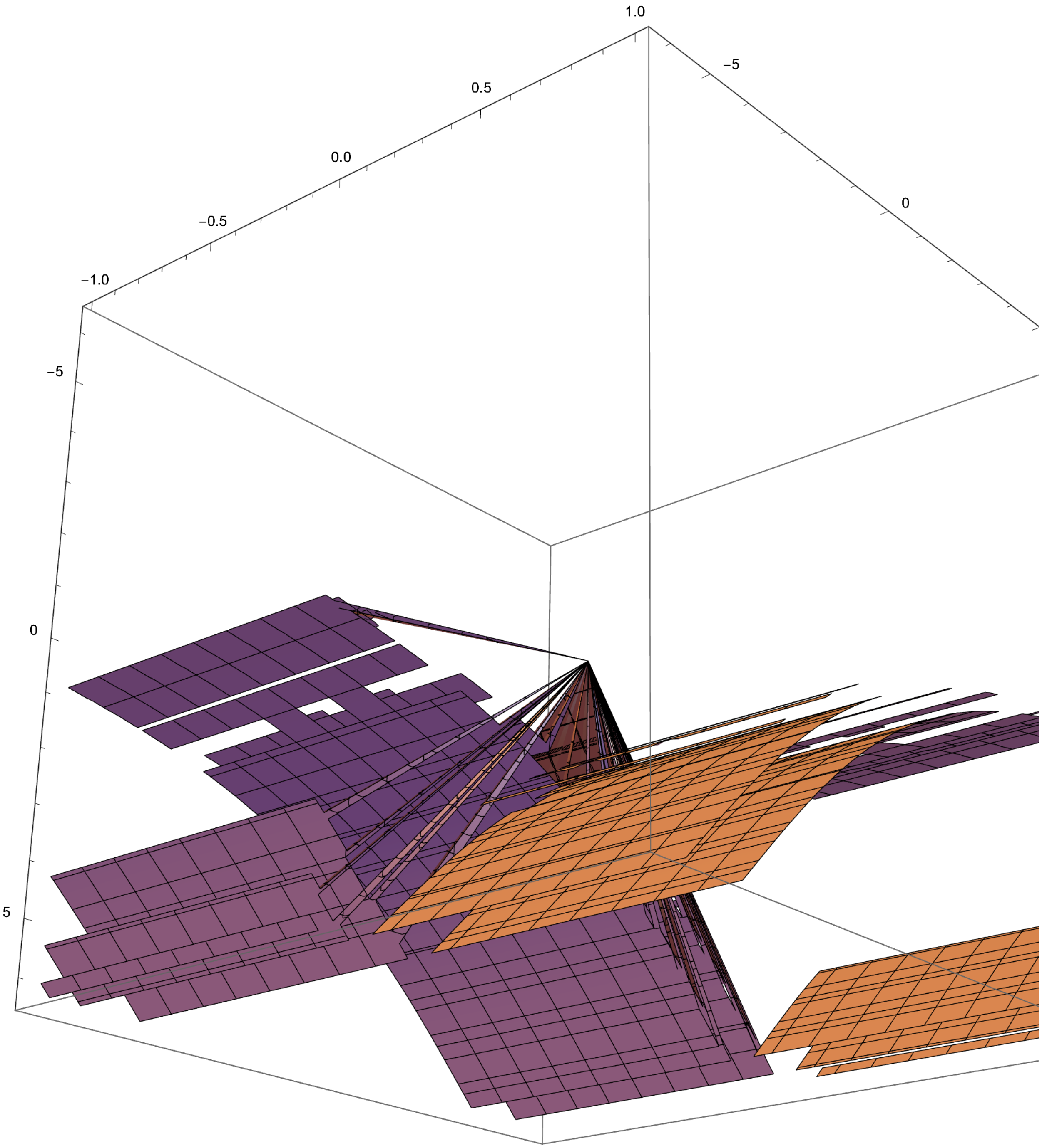
-1.0
-0.5
0.0
-5
0
5
-2×10^8
0
2×10^8

$$\text{Solve}\left[2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}-2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}}==\rho\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,v\right]$$

$$\left\{\left\{v\to-\frac{\sqrt{8\,c^2\,\pi^2-\frac{4\,c^2\,\pi^3}{4\,\pi-\theta}-\frac{4\,c^2\,\pi^3}{\theta}-\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,(4\,\pi-\theta)}+\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,\theta}-c^2\,\rho^2}}{2\,\pi}\right\},\right.$$

$$\left.\left\{v\to\frac{\sqrt{8\,c^2\,\pi^2-\frac{4\,c^2\,\pi^3}{4\,\pi-\theta}-\frac{4\,c^2\,\pi^3}{\theta}-\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,(4\,\pi-\theta)}+\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,\theta}-c^2\,\rho^2}}{2\,\pi}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{\sqrt{8\,c^2\,\pi^2-\frac{4\,c^2\,\pi^3}{4\,\pi-\theta}-\frac{4\,c^2\,\pi^3}{\theta}-\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,(4\,\pi-\theta)}+\frac{2\,c^2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\,\rho}{r\,\theta}-c^2\,\rho^2}}{2\,\pi},\right.$$
$$\left.\{\theta,-2\,\pi,2\,\pi\},\{\rho,-2\,\pi,2\,\pi\},\{r,-1,1\}\right]$$

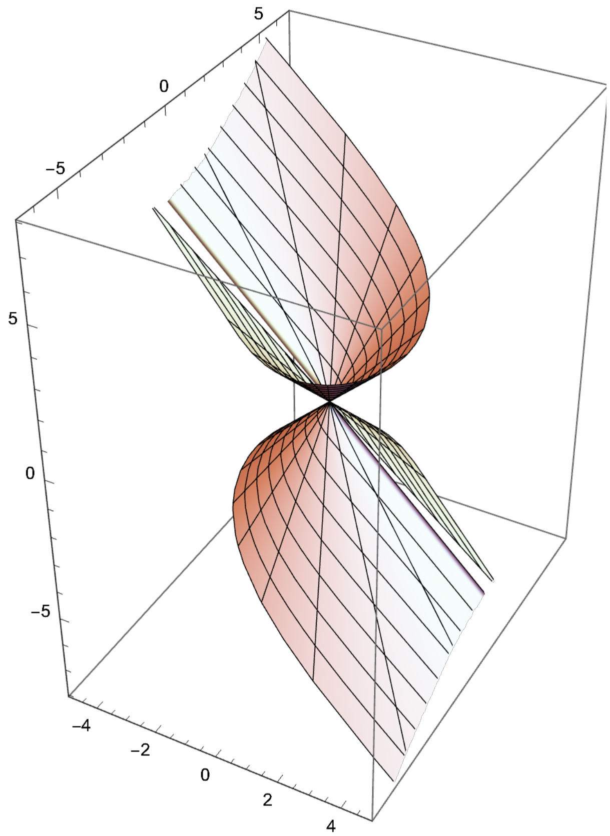


$2\,\pi\,\eta - 2\,\pi\,x' = \theta\,\eta$

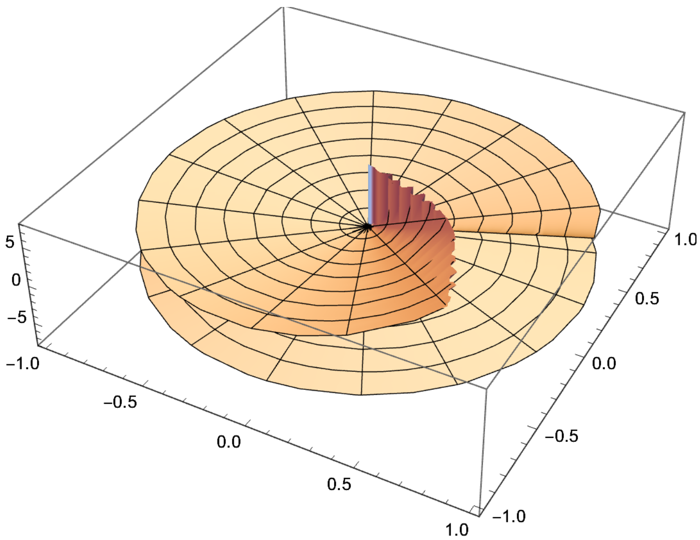
```
Solve[2 π Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π) - 2 π x' == θ Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π), r]
```

$$\left\{\left\{r \to -\frac{4\,\pi^2\,x'}{\sqrt{16\,\pi^3\,\theta - 20\,\pi^2\,\theta^2 + 8\,\pi\,\theta^3 - \theta^4}}\right\}, \left\{r \to \frac{4\,\pi^2\,x'}{\sqrt{16\,\pi^3\,\theta - 20\,\pi^2\,\theta^2 + 8\,\pi\,\theta^3 - \theta^4}}\right\}\right\}$$

```
RevolutionPlot3D[{-4 π^2 x'/Sqrt[16 π^3 θ - 20 π^2 θ^2 + 8 π θ^3 - θ^4], 4 π^2 x'/Sqrt[16 π^3 θ - 20 π^2 θ^2 + 8 π θ^3 - θ^4]},
 {x', -1, 1}, {θ, -2 π, 2 π}]
```



$$\texttt{RevolutionPlot3D}\left[\frac{4\,\pi^2\,x'}{\sqrt{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+8\,\pi\,\theta^3-\theta^4}},\ \{x',-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\texttt{c} := 2.99792458\ (10\,{}^\wedge 8)$$

$$\texttt{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}}=\theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \theta\right]$$

$$\Bigg\{\Bigg\{\theta\to 6.28319-$$
$$0.5\sqrt{\Big(-78.9568+4.39257\times10^{-16}\,v^2+3.4741\times10^{-46}\,\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)+}$$
$$\left(4.37709\times10^{-46}\,\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}+$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$
$$1.49725\times10^{89}\,v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}\Big)-$$
$$0.5\sqrt{\Big(78.9568+4.39257\times10^{-16}\,v^2-3.4741\times10^{-46}\,\left(2.27273\times10^{47}-4.21458\times10^{29}\,v^2\right)-}$$
$$\left(4.37709\times10^{-46}\,\left(3.03199\times10^{62}+6.55503\times10^{60}\,v^2+1.77627\times10^{59}\,v^4\right)\right)\Big/$$
$$\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-1.49725\times10^{89}\,v^6+$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\,v^2-1.37161\times10^{201}\,v^4-\right.}$$
$$\left.2.47784\times10^{199}\,v^6+2.75697\times10^{182}\,v^8+0.\,v^{10}+0.\,v^{12}\right)\Big)^{1/3}-$$
$$2.7574\times10^{-46}\,\Big(8.27465\times10^{109}-1.3805\times10^{93}\,v^2-8.28801\times10^{90}\,v^4-$$

$$1.49725\times10^{89}\ v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}-$$
$$\left(0.25\ \left(15\,875.2-100.531\ \left(236.871-4.39257\times10^{-16}\ v^2\right)-\right.\right.$$
$$\left.\left.8.\ \left(-992.201+5.51986\times10^{-15}\ v^2\right)\right)\right)\Big/\ \left(\sqrt{\left(-78.9568+\right.}\right.$$
$$4.39257\times10^{-16}\ v^2+3.4741\times10^{-46}\ \left(2.27273\times10^{47}-4.21458\times10^{29}\ v^2\right)+$$
$$\left(4.37709\times10^{-46}\ \left(3.03199\times10^{62}+6.55503\times10^{60}\ v^2+1.77627\times10^{59}\ v^4\right)\right)\Big/$$
$$\left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-1.49725\times10^{89}\ v^6+\right.$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}+$$
$$2.7574\times10^{-46}\ \left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-1.49725\times\right.$$
$$10^{89}\ v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.\left.\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}\right)\right)\right)\Big\},$$
$$\Big\{\theta\to6.28319-0.5\ \sqrt{\left(-78.9568+4.39257\times10^{-16}\ v^2+3.4741\times10^{-46}\right.}$$
$$\left(2.27273\times10^{47}-4.21458\times10^{29}\ v^2\right)+$$
$$\left(4.37709\times10^{-46}\ \left(3.03199\times10^{62}+6.55503\times10^{60}\ v^2+1.77627\times10^{59}\ v^4\right)\right)\Big/$$
$$\left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-1.49725\times10^{89}\ v^6+\right.$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}+$$
$$2.7574\times10^{-46}\ \left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-\right.$$
$$1.49725\times10^{89}\ v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}\right)+$$
$$0.5\ \sqrt{\left(78.9568+4.39257\times10^{-16}\ v^2-3.4741\times10^{-46}\ \left(2.27273\times10^{47}-4.21458\times10^{29}\ v^2\right)-\right.}$$
$$\left(4.37709\times10^{-46}\ \left(3.03199\times10^{62}+6.55503\times10^{60}\ v^2+1.77627\times10^{59}\ v^4\right)\right)\Big/$$
$$\left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-1.49725\times10^{89}\ v^6+\right.$$
$$\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}-$$
$$2.7574\times10^{-46}\ \left(8.27465\times10^{109}-1.3805\times10^{93}\ v^2-8.28801\times10^{90}\ v^4-\right.$$
$$1.49725\times10^{89}\ v^6+\sqrt{\left(6.84699\times10^{219}-2.28463\times10^{203}\ v^2-1.37161\times10^{201}\ v^4-\right.}$$
$$\left.\left.2.47784\times10^{199}\ v^6+2.75697\times10^{182}\ v^8+0.\ v^{10}+0.\ v^{12}\right)\right)^{1/3}-$$
$$\left(0.25\ \left(15\,875.2-100.531\ \left(236.871-4.39257\times10^{-16}\ v^2\right)-\right.\right.$$
$$\left.\left.8.\ \left(-992.201+5.51986\times10^{-15}\ v^2\right)\right)\right)\Big/\ \left(\sqrt{\left(-78.9568+\right.}\right.$$

$$4.39257\times 10^{-16}\ v^2 + 3.4741\times 10^{-46}\ (2.27273\times 10^{47} - 4.21458\times 10^{29}\ v^2) +$$
$$(4.37709\times 10^{-46}\ (3.03199\times 10^{62} + 6.55503\times 10^{60}\ v^2 + 1.77627\times 10^{59}\ v^4))\ /$$
$$(8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 - 1.49725\times 10^{89}\ v^6 +$$
$$\sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3} +$$
$$2.7574\times 10^{-46}\ (8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 - 1.49725\times$$
$$10^{89}\ v^6 + \sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3}))))\},$$
$$\{\theta \to 6.28319 + 0.5\ \sqrt{}\ (-78.9568 + 4.39257\times 10^{-16}\ v^2 + 3.4741\times 10^{-46}$$
$$(2.27273\times 10^{47} - 4.21458\times 10^{29}\ v^2) +$$
$$(4.37709\times 10^{-46}\ (3.03199\times 10^{62} + 6.55503\times 10^{60}\ v^2 + 1.77627\times 10^{59}\ v^4))\ /$$
$$(8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 - 1.49725\times 10^{89}\ v^6 +$$
$$\sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3} +$$
$$2.7574\times 10^{-46}\ (8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 -$$
$$1.49725\times 10^{89}\ v^6 + \sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3}) -$$
$$0.5\ \sqrt{}\ (78.9568 + 4.39257\times 10^{-16}\ v^2 - 3.4741\times 10^{-46}\ (2.27273\times 10^{47} - 4.21458\times 10^{29}\ v^2) -$$
$$(4.37709\times 10^{-46}\ (3.03199\times 10^{62} + 6.55503\times 10^{60}\ v^2 + 1.77627\times 10^{59}\ v^4))\ /$$
$$(8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 - 1.49725\times 10^{89}\ v^6 +$$
$$\sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3} -$$
$$2.7574\times 10^{-46}\ (8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 -$$
$$1.49725\times 10^{89}\ v^6 + \sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$
$$2.47784\times 10^{199}\ v^6 + 2.75697\times 10^{182}\ v^8 + 0.\ v^{10} + 0.\ v^{12}))^{1/3} +$$
$$(0.25\ (15\,875.2 - 100.531\ (236.871 - 4.39257\times 10^{-16}\ v^2) -$$
$$8.\ (-992.201 + 5.51986\times 10^{-15}\ v^2)))\ /\ (\sqrt{}\ (-78.9568 +$$
$$4.39257\times 10^{-16}\ v^2 + 3.4741\times 10^{-46}\ (2.27273\times 10^{47} - 4.21458\times 10^{29}\ v^2) +$$
$$(4.37709\times 10^{-46}\ (3.03199\times 10^{62} + 6.55503\times 10^{60}\ v^2 + 1.77627\times 10^{59}\ v^4))\ /$$
$$(8.27465\times 10^{109} - 1.3805\times 10^{93}\ v^2 - 8.28801\times 10^{90}\ v^4 - 1.49725\times 10^{89}\ v^6 +$$
$$\sqrt{}\ (6.84699\times 10^{219} - 2.28463\times 10^{203}\ v^2 - 1.37161\times 10^{201}\ v^4 -$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}+$$

$$2.7574\times10^{-46}\ (8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-1.49725\times$$

$$10^{89}\ v^{6}+\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}))))\},$$

$$\{\theta\to6.28319+0.5\ \sqrt{}(-78.9568+4.39257\times10^{-16}\ v^{2}+3.4741\times10^{-46}$$

$$(2.27273\times10^{47}-4.21458\times10^{29}\ v^{2})+$$

$$(4.37709\times10^{-46}\ (3.03199\times10^{62}+6.55503\times10^{60}\ v^{2}+1.77627\times10^{59}\ v^{4}))\Big/$$

$$(8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-1.49725\times10^{89}\ v^{6}+$$

$$\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}+$$

$$2.7574\times10^{-46}\ (8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-$$

$$1.49725\times10^{89}\ v^{6}+\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3})+$$

$$0.5\ \sqrt{}(78.9568+4.39257\times10^{-16}\ v^{2}-3.4741\times10^{-46}\ (2.27273\times10^{47}-4.21458\times10^{29}\ v^{2})-$$

$$(4.37709\times10^{-46}\ (3.03199\times10^{62}+6.55503\times10^{60}\ v^{2}+1.77627\times10^{59}\ v^{4}))\Big/$$

$$(8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-1.49725\times10^{89}\ v^{6}+$$

$$\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}-$$

$$2.7574\times10^{-46}\ (8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-$$

$$1.49725\times10^{89}\ v^{6}+\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}+$$

$$(0.25\ (15\,875.2-100.531\ (236.871-4.39257\times10^{-16}\ v^{2})-$$

$$8.\ (-992.201+5.51986\times10^{-15}\ v^{2})))\Big/\ (\sqrt{}(-78.9568+$$

$$4.39257\times10^{-16}\ v^{2}+3.4741\times10^{-46}\ (2.27273\times10^{47}-4.21458\times10^{29}\ v^{2})+$$

$$(4.37709\times10^{-46}\ (3.03199\times10^{62}+6.55503\times10^{60}\ v^{2}+1.77627\times10^{59}\ v^{4}))\Big/$$

$$(8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-1.49725\times10^{89}\ v^{6}+$$

$$\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$$2.47784\times10^{199}\ v^{6}+2.75697\times10^{182}\ v^{8}+0.\ v^{10}+0.\ v^{12}))^{1/3}+$$

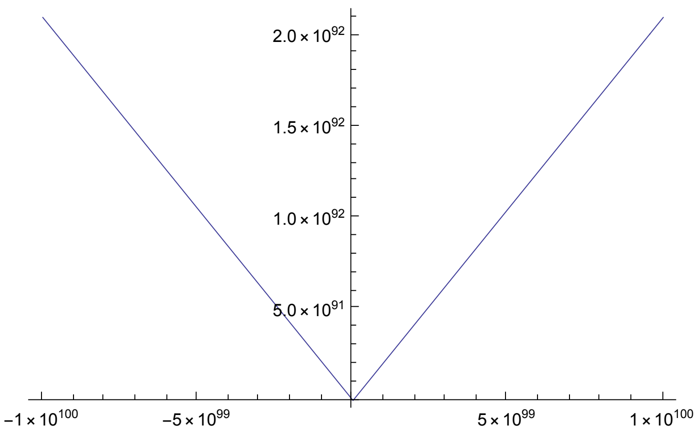
$$2.7574\times10^{-46}\ (8.27465\times10^{109}-1.3805\times10^{93}\ v^{2}-8.28801\times10^{90}\ v^{4}-1.49725\times$$

$$10^{89}\ v^{6}+\sqrt{}(6.84699\times10^{219}-2.28463\times10^{203}\ v^{2}-1.37161\times10^{201}\ v^{4}-$$

$2.47784 \times 10^{199}\, v^6 + 2.75697 \times 10^{182}\, v^8 + 0.\, v^{10} + 0.\, v^{12}\Big)\Big)^{1/3}\Big)\Big)\Big)\Big\}\Big\}$

```
Plot[6.283185307179586`+
  0.5` √(-78.95683520871486` + 4.392566356039645`*^-16 v^2 + 3.474101948670718`*^-46
      (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) +
     (4.377094174611036`*^-46 (3.0319879916202416`*^62 +
          6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
      (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
         8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
         √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
            1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
            2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^1/3 +
     2.7573965439823348`*^-46 (8.274653940104402`*^109 - 1.3805000153057876`*^93
          v^2 - 8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
         √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
            1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
            2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^1/3) +
  0.5` √(78.95683520871488` + 4.392566356039645`*^-16 v^2 -
     3.474101948670718`*^-46
      (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) -
     (4.377094174611036`*^-46 (3.0319879916202416`*^62 +
          6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
      (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
         8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
         √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
            1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
            2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^1/3 -
     2.7573965439823348`*^-46 (8.274653940104402`*^109 - 1.3805000153057876`*^93
          v^2 - 8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
         √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
            1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
            2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^1/3 +
     (0.25` (15875.213660313508` - 100.53096491487338`
            (236.8705056261446` - 4.392566356039645`*^-16 v^2) -
          8.` (-992.2008537695941` + 5.519861677815934`*^-15 v^2))) /
      (√(-78.95683520871486` + 4.392566356039645`*^-16 v^2 +
          3.474101948670718`*^-46
           (2.2727264880331392`*^47 - 4.2145820905076925`*^29 v^2) +
```

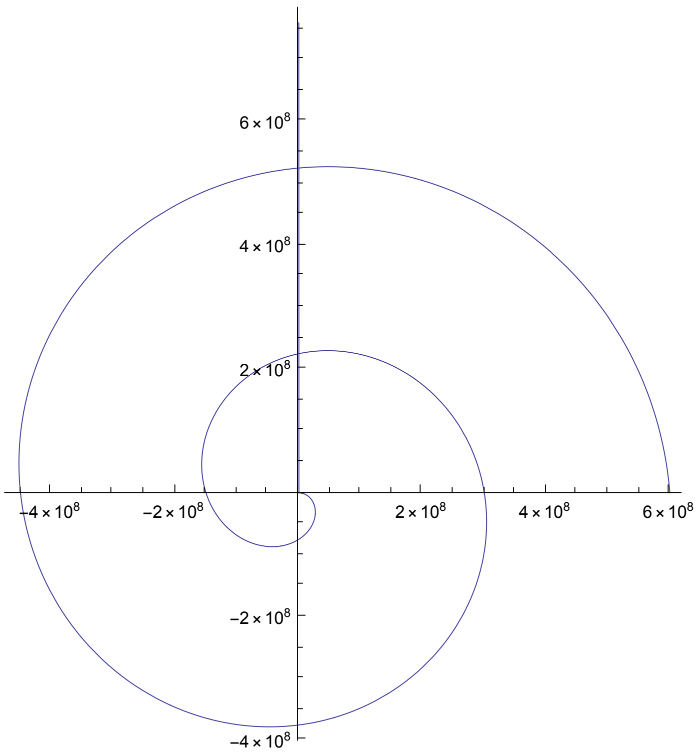
```
(4.377094174611036`*^-46 (3.0319879916202416`*^62 +
      6.555025201979783`*^60 v^2 + 1.776270219762819`*^59 v^4)) /
  (8.274653940104402`*^109 - 1.3805000153057876`*^93 v^2 -
     8.288007545727168`*^90 v^4 - 1.497247331222908`*^89 v^6 +
     √(6.846989782848531`*^219 - 2.2846319781928445`*^203 v^2 -
        1.371607885877325`*^201 v^4 - 2.477840705722886`*^199 v^6 +
        2.7569696001145084`*^182 v^8 + 0.` v^10 + 0.` v^12))^(1/3) +
 2.7573965439823348`*^-46 (8.274653940104402`*^109 -
     1.3805000153057876`*^93 v^2 - 8.288007545727168`*^90 v^4 -
     1.497247331222908`*^89 v^6 + √(6.846989782848531`*^219 -
        2.2846319781928445`*^203 v^2 - 1.371607885877325`*^201 v^4 -
        2.477840705722886`*^199 v^6 + 2.7569696001145084`*^182 v^8 +
        0.` v^10 + 0.` v^12))^(1/3))), {v, -10^100, 10^100}]
```



$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\,\sqrt{1-\frac{v^2}{(c)^2}} == \theta\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ v\right]$$

$$\Big\{\Big\{v \to -\Big(\Big(1.\,\sqrt{\left(1.49539\times10^{48} - 9.51997\times10^{47}\,\theta + 2.27273\times10^{47}\,\theta^2 - 2.41144\times10^{46}\,\theta^3 + 9.59481\times10^{44}\,\theta^4\right)}\Big)\Big/\Big(\sqrt{1.66385\times10^{31} - 5.2962\times10^{30}\,\theta + 4.21458\times10^{29}\,\theta^2}\Big)\Big)\Big\},\ \Big\{v \to \frac{\sqrt{1.49539\times10^{48} - 9.51997\times10^{47}\,\theta + 2.27273\times10^{47}\,\theta^2 - 2.41144\times10^{46}\,\theta^3 + 9.59481\times10^{44}\,\theta^4}}{\sqrt{1.66385\times10^{31} - 5.2962\times10^{30}\,\theta + 4.21458\times10^{29}\,\theta^2}}\Big\}\Big\}$$

```
PolarPlot[
 (√ (1.495394089917615`*^48 - 9.519974451231788`*^47 θ + 2.2727264880331392`*^47 θ^2 -
      2.4114376991090496`*^46 θ^3 + 9.594805744283795`*^44 θ^4)) /
  (√ (1.663850317969084`*^31 - 5.296200053396031`*^30 θ +
      4.2145820905076925`*^29 θ^2)), {θ, -2 π, 2 π}]
```



Light

$2 \pi r - 2 \pi x == \theta r$

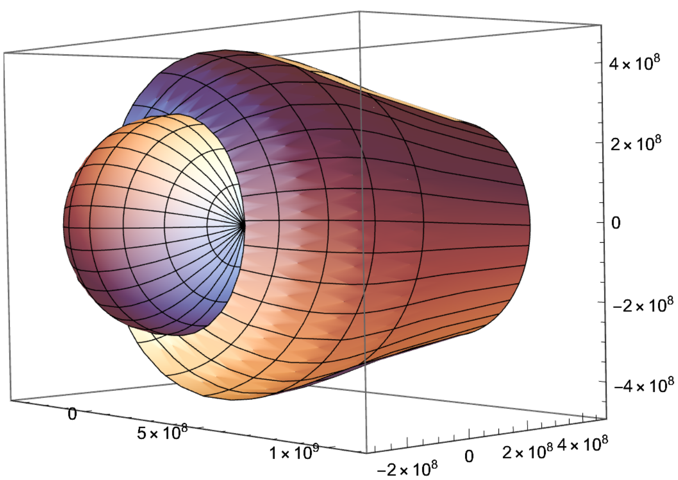
$\text{Solve}\left[2 \pi r - 2 \pi r \sqrt{1 - \frac{(v)^2}{c^2}} == \theta r, v\right]$

$\left\{\left\{v \to -\frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2 \pi}\right\}, \left\{v \to \frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2 \pi}\right\}\right\}$

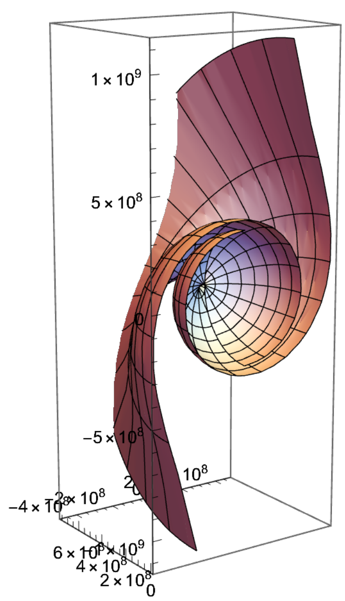
$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta-c^2\,\theta^2}}{2\,\pi}==\left(\sqrt{\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right),\,c\right]$$

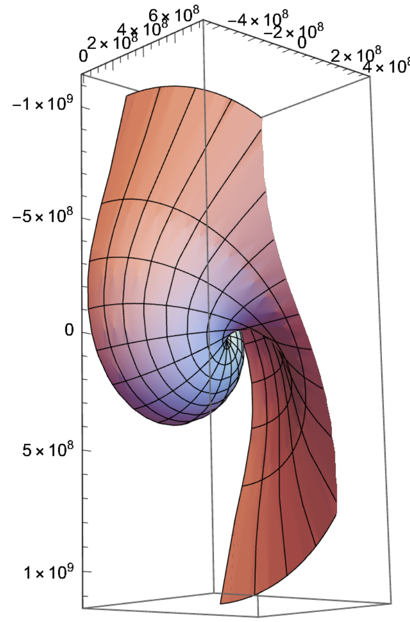
$$\Big\{\Big\{c\to-\left(1.\,\sqrt{2.02015\times10^{40}\,\theta-1.60758\times10^{39}\,\theta^2-6.34649\times10^{40}\,\text{Sin}[\beta]^2}\right)\Big/\left(\sqrt{\theta}\,\sqrt{\left(7.15472\times10^{22}\,\theta-1.13871\times10^{22}\,\theta^2+4.53078\times10^{20}\,\theta^3-2.24772\times10^{23}\,\text{Sin}[\beta]^2+1.78868\times10^{22}\,\theta\,\text{Sin}[\beta]^2\right)}\right)\Big\},$$
$$\Big\{c\to\left(\sqrt{2.02015\times10^{40}\,\theta-1.60758\times10^{39}\,\theta^2-6.34649\times10^{40}\,\text{Sin}[\beta]^2}\right)\Big/\left(\sqrt{\theta}\,\sqrt{\left(7.15472\times10^{22}\,\theta-1.13871\times10^{22}\,\theta^2+4.53078\times10^{20}\,\theta^3-2.24772\times10^{23}\,\text{Sin}[\beta]^2+1.78868\times10^{22}\,\theta\,\text{Sin}[\beta]^2\right)}\right)\Big\}\Big\}$$

$$\text{SphericalPlot3D}\Big[\left(\sqrt{\left(2.0201505625374124\text{`}*\text{^}40\,\theta-1.607584739088511\text{`}*\text{^}39\,\theta^2-6.346490166412822\text{`}*\text{^}40\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\theta}\,\sqrt{\left(7.154717000231094\text{`}*\text{^}22\,\theta-1.138708577010396\text{`}*\text{^}22\,\theta^2+4.530777469308567\text{`}*\text{^}20\,\theta^3-2.2477206366440006\text{`}*\text{^}23\,\text{Sin}[\beta]^2+1.7886792500577734\text{`}*\text{^}22\,\theta\,\text{Sin}[\beta]^2\right)}\right),\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]$$



$$\text{SphericalPlot3D}\Big[\left(\sqrt{\left(2.0201505625374124\text{`}*\text{^}40\,\theta-1.607584739088511\text{`}*\text{^}39\,\theta^2-6.346490166412822\text{`}*\text{^}40\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\theta}\,\sqrt{\left(7.154717000231094\text{`}*\text{^}22\,\theta-1.138708577010396\text{`}*\text{^}22\,\theta^2+4.530777469308567\text{`}*\text{^}20\,\theta^3-2.2477206366440006\text{`}*\text{^}23\,\text{Sin}[\beta]^2+1.7886792500577734\text{`}*\text{^}22\,\theta\,\text{Sin}[\beta]^2\right)}\right),\,\{\beta,\,-\pi/2,\,\pi/2\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$





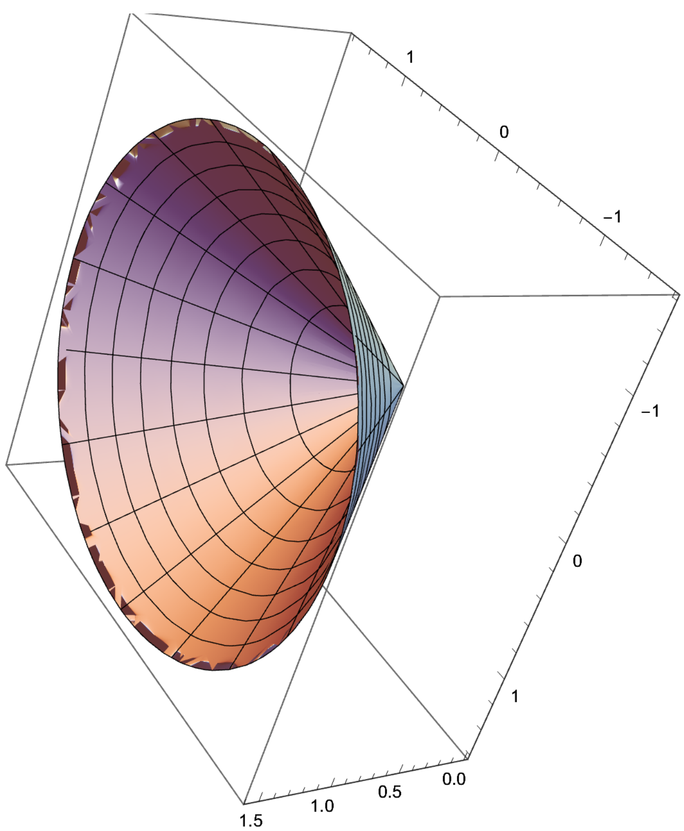
```
c := 2.99792458 (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{4\,c^2\,\pi\,\theta - c^2\,\theta^2}}{2\,\pi} == \left(\sqrt{\left(-1.1294090667581471\text{`*^}18\,\theta + 8.987551787368176\text{`*^}16\,\theta^2 + 3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -1.\,\text{ArcSin}\left[\frac{\sqrt{\theta}\,\sqrt{6.43991\times10^{46} - 2.56236\times10^{46}\,\theta + 3.2625\times10^{45}\,\theta^2 - 1.29811\times10^{44}\,\theta^3}}{\sqrt{2.02316\times10^{47} - 6.43991\times10^{46}\,\theta + 5.12472\times10^{45}\,\theta^2}}\right]\right\},\right.$$

$$\left.\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{\theta}\,\sqrt{6.43991\times10^{46} - 2.56236\times10^{46}\,\theta + 3.2625\times10^{45}\,\theta^2 - 1.29811\times10^{44}\,\theta^3}}{\sqrt{2.02316\times10^{47} - 6.43991\times10^{46}\,\theta + 5.12472\times10^{45}\,\theta^2}}\right]\right\}\right\}$$

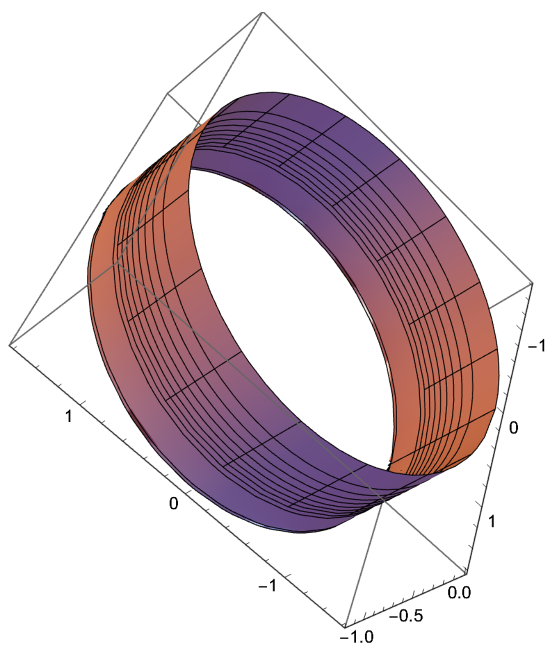
```
RevolutionPlot3D[
 {-1.` ArcSin[(√θ √(6.439907533884034`*^46 - 2.562357792680954`*^46 θ +
          3.2624952694016945`*^45 θ^2 - 1.298105622348011`*^44 θ^3)) /
      (√(2.0231566198247644`*^47 - 6.439907533884035`*^46 θ +
          5.124715585361908`*^45 θ^2))],
  ArcSin[(√θ √(6.439907533884034`*^46 - 2.562357792680954`*^46 θ +
          3.2624952694016945`*^45 θ^2 - 1.298105622348011`*^44 θ^3)) /
     (√(2.0231566198247644`*^47 - 6.439907533884035`*^46 θ +
          5.124715585361908`*^45 θ^2))]}, {θ, -4 π, 4 π}]
```



$$\text{Solve}\Big[\frac{\sqrt{4\,c^2\,\pi\,2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-c^2\,\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}==$$
$$\left(\sqrt{}\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$
$$\left(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right),\ \beta\Big]$$

$$\Big\{\Big\{\beta\to-1.\,\text{ArcSin}\Big[0.5\,\sqrt{}\Big(-2.\,\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)-2.\,\sqrt{}\Big(-8.09397\times10^{-41}\,\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\,\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\Big)\Big)\Big]\Big\},$$
$$\Big\{\beta\to\text{ArcSin}\Big[0.5\,\sqrt{}\Big(-2.\,\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)-2.\,\sqrt{}\Big(-8.09397\times10^{-41}\,\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\,\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\Big)\Big)\Big]\Big\},$$
$$\Big\{\beta\to-1.\,\text{ArcSin}\Big[0.5\,\sqrt{}\Big(-2.\,\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)+2.\,\sqrt{}\Big(-8.09397\times10^{-41}\,\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\,\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\Big)\Big)\Big]\Big\},$$
$$\Big\{\beta\to\text{ArcSin}\Big[0.5\,\sqrt{}\Big(-2.\,\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)+2.\,\sqrt{}\Big(-8.09397\times10^{-41}\,\left(1.57307\times10^{40}-1.25181\times10^{39}\,\theta\right)\,\theta+\left(-1.-0.31831\,\theta+0.0253303\,\theta^2\right)^2\Big)\Big)\Big]\Big\}\Big\}$$

```
RevolutionPlot3D[
 {-1.` ArcSin[0.5` √(-2.` (-0.9999999999999999` - 0.3183098861837907` θ +
          0.025330295910584444` θ^2) +
        2.` √(-8.093971489670607`*^-41 (1.573071447508865`*^40 -
               1.2518104835387941`*^39 θ) θ + (-0.9999999999999999` -
               0.3183098861837907` θ + 0.025330295910584444` θ^2)^2))],
  -1.` ArcSin[0.5` √(-2.` (-0.9999999999999999` - 0.3183098861837907` θ +
          0.025330295910584444` θ^2) - 2.` √(-8.093971489670607`*^-41
            (1.573071447508865`*^40 - 1.2518104835387941`*^39 θ) θ +
          (-0.9999999999999999` - 0.3183098861837907` θ +
               0.025330295910584444` θ^2)^2))]}, {θ, -8 π, 8 π}]
```



$$D[hnf, \theta] = D\left[(6.62606896 * 10^{-34})\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\,\pi\,\theta}, \theta\right] =$$

$$D\left[h\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\,\pi\,\theta}, \theta\right] = h\,D\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\,\pi\,\theta}, \theta\right] = ma = Force$$

$$h\,D\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\ \frac{\sqrt{(4\pi-\theta)\,\theta}}{6\,\pi\,\theta}, \theta\right]$$

$$h\left(-\frac{4\pi-\theta}{3\,\pi^2\,\theta^3} - \frac{1}{6\,\pi^2\,\theta^2}\right)$$

$$\text{Solve}\left[\pi\left(r^{\wedge}2-\left(\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}\right)\right)^{\wedge}2==\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi\,\theta^2}\left(\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}\right),\,r\right]$$

$$\left\{\{r\to 0\},\,\{r\to 0\},\,\left\{r\to -\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\},\right.$$
$$\left.\left\{r\to \frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\}\right\}$$

$$D\left[\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\,\theta\right]$$

$$\text{Velocity}==\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\,\pi^3\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}-$$
$$\frac{\pi^{3/2}\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}$$

$$D\left[\left(\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\,\pi^3\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}-\right.\right.$$
$$\left.\left.\frac{\pi^{3/2}\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}\right),\,\theta\right]$$

$$
\begin{aligned}
\texttt{a} := {} & -\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)^2}{2\,\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,\left(-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)^{3/2}}+{} \\
& \left(\pi^{3/2}\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right. \\
& \qquad \left.\left.\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/ \\
& \left(\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}\right)- \\
& \left(\pi^{3/2}\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right. \\
& \qquad \left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/ \\
& \left(\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}\right)+ \\
& \frac{3\,\pi^{3/2}\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{5/2}}- \\
& \frac{\pi^{3/2}\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}
\end{aligned}
$$

$$
\begin{aligned}
& \texttt{D[hnf,}\,\theta\texttt{]} = \texttt{D}\left[(6.62606896 * 10\,\hat{}\,{-34})\;\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi\,\theta^2}\;\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta},\,\theta\right] = \\
& \quad \texttt{D}\left[h\;\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi\,\theta^2}\;\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta},\,\theta\right] = h\,\texttt{D}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi\,\theta^2}\;\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{6\,\pi\,\theta},\,\theta\right] = \texttt{ma} = \texttt{Force}
\end{aligned}
$$

$$\text{Solve}\left[h\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)==m\,a,\ m\right]$$

$$\Bigg\{\Bigg\{m\to-\left(h\left(-\frac{4\pi-\Theta}{3\pi^2\Theta^3}-\frac{1}{6\pi^2\Theta^2}\right)\right)\Bigg/$$

$$\left(\frac{\pi^{3/2}\left(-\frac{4\pi-2\Theta}{2\pi^3\sqrt{(4\pi-\Theta)\Theta}}+\frac{2(4\pi-2\Theta)}{\pi^2\Theta\sqrt{(4\pi-\Theta)\Theta}}-\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\Theta+24\pi^2\Theta^2-8\pi\Theta^3+\Theta^4}\left(-\frac{\sqrt{(4\pi-\Theta)\Theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta}\right)^{3/2}}-\right.$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\Theta)^2}{4\pi^3((4\pi-\Theta)\Theta)^{3/2}}-\frac{(4\pi-2\Theta)^2}{\pi^2\Theta((4\pi-\Theta)\Theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\Theta)\Theta}}-\right.\right.$$

$$\left.\left.\frac{4(4\pi-2\Theta)}{\pi^2\Theta^2\sqrt{(4\pi-\Theta)\Theta}}-\frac{4}{\pi^2\Theta\sqrt{(4\pi-\Theta)\Theta}}+\frac{8\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta^3}\right)\right)\Bigg/$$

$$\left(\sqrt{16\pi^4-32\pi^3\Theta+24\pi^2\Theta^2-8\pi\Theta^3+\Theta^4}\sqrt{-\frac{\sqrt{(4\pi-\Theta)\Theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta}}\right)+$$

$$\left(\pi^{3/2}\left(-32\pi^3+48\pi^2\Theta-24\pi\Theta^2+4\Theta^3\right)\right.$$

$$\left.\left(-\frac{4\pi-2\Theta}{2\pi^3\sqrt{(4\pi-\Theta)\Theta}}+\frac{2(4\pi-2\Theta)}{\pi^2\Theta\sqrt{(4\pi-\Theta)\Theta}}-\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta^2}\right)\right)\Bigg/$$

$$\left(\left(16\pi^4-32\pi^3\Theta+24\pi^2\Theta^2-8\pi\Theta^3+\Theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\Theta)\Theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta}}\right)-$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\Theta-24\pi\Theta^2+4\Theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\Theta)\Theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta}}}{2\left(16\pi^4-32\pi^3\Theta+24\pi^2\Theta^2-8\pi\Theta^3+\Theta^4\right)^{5/2}}+$$

$$\left.\frac{\pi^{3/2}\left(48\pi^2-48\pi\Theta+12\Theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\Theta)\Theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\Theta)\Theta}}{\pi^2\Theta}}}{\left(16\pi^4-32\pi^3\Theta+24\pi^2\Theta^2-8\pi\Theta^3+\Theta^4\right)^{3/2}}\right)\Bigg\}\Bigg\}$$

$$\text{Simplify}\Bigg[-\left(h\left(-\frac{4\pi-\theta}{3\pi^2\theta^3}-\frac{1}{6\pi^2\theta^2}\right)\right)\Bigg/$$

$$\left(\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}-\right.$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

$$\left.\left.\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Bigg/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)+$$

$$\left(\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$

$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\right)\Bigg/$$

$$\left(\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)-$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\left.\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}\right)\Bigg]$$

$$\text{Solve}\left[-\frac{(6.26*10\text{^}-34)(8\pi-\theta)(-4\pi+\theta)^2(-2\pi+\theta)^2\sqrt{(-2\pi+\theta)^4}}{3\pi^2\theta\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(80\pi^4-224\pi^3\theta+448\pi^2\theta^2-160\pi\theta^3+15\theta^4\right)}==F,\ \theta\right]$$

Perceptual Space Applied to the Uncertainty Model of Physics

by Parker Emmerson with assistance from Andrew Berisha

A bit of Philosophy of Perception. Also, see the Geometric Pattern of Perception of the Moon from beneath the Legs by Parker Emmerson.

$c = 3.0 * 10^8 m / s$

$C = 2 \pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2 \pi r_1$

This is the circumference of our second circle,
the base of the cone, of radius r_1

$r^2 = r_1^2 + \eta^2$

This is the initial radius squared expressed as the slant of
the cone in terms of the height of the cone, η, and the radius
of the base of the cone, r_1

$$r = \sqrt{(r_1^2 + \eta^2)} \tag{59}$$

$t = \theta r$

$t / \theta = r$

The arc length taken out of a circle at a given time is =
$t = C - C_2 = 2 \pi r - 2 \pi r_1 = \theta r$ → Equation 7

$r_1^2 == r^2 - \eta^2$

$r_1 = \sqrt{(r^2 - \eta^2)}$

$h \leq r$

τ = time

1 second = 6 degrees

πr_1^2 = Area = $n \eta^2$

To construct a square of the same area as a given circle, we will begin with the postulates above regarding the geometry of a cone.

When, "relationship is added to non relational stimuli" (Perception, MacLeod and Pick for Gibson, 24), illusion is able to be understood through phenomenology. We can use mathematics like a language for disussing its structural elements.

The derivative of zero is equal to the derivative of an equation that is equal to 0.

```
Solve[r1^2 + η^2 == r^2, η]
```

$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\}$

$$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\} \tag{60}$$

$(t / \theta) = r$

$t = C - C_2 = 2 \pi r - 2 \pi r_1 = 2 \pi (t / \theta) - 2 \pi \sqrt{((t / \theta)^2 - \eta^2)}$

$t == 2 \pi (t / \theta) - 2 \pi \sqrt{((t / \theta)^2 - \eta^2)}$

Add $2\pi\sqrt{((r)^2-\eta^2)}$ to both sides

$t+2\pi\sqrt{((t/\theta)^2-\eta^2)} = 2\pi(t/\theta)$

Subtract t from both sides and remember that $(t/\theta) = r$

$2\pi\sqrt{((t/\theta)^2-(\eta^2))} = 2\pi(t/\theta) - t = 2\pi r - t$

Divide by 2π on both sides.

$(t/\theta) - t/(2\pi) = (r) - t/(2\pi) = \sqrt{((t/\theta)^2-(\eta^2))} = \sqrt{((r)^2-(\eta^2))} = r_1$

Square both sides. Substitute : $(t/\theta) = r$

$((t/\theta)-(t/(2\pi)))^2 = ((r)-(t/(2\pi)))^2 = ((t/\theta)^2-(\eta^2)) = (r_1^2)$

$((r)-(t/(2\pi)))^2 = ((r)^2-(\eta^2))$

Add η^2 to both sides.

$((r) - (t/(2\pi)))^2 + (\eta^2) = (r)^2$

Substitute : $\theta r=t$

$((t/\theta) - (t/(2\pi)))^2 = ((r) - (\theta*r/(2\pi)))^2$

$((r)-(\theta*r/(2\pi)))^2$

$$\left(r-\frac{r\,\theta}{2\pi}\right)^2$$

$$\text{Expand}\left[\left(r-\frac{r\,\theta}{2\pi}\right)^2\right]$$

$$r^2-\frac{r^2\,\theta}{\pi}+\frac{r^2\,\theta^2}{4\pi^2}$$

$$r^2-\frac{r^2\,\theta}{\pi}+\frac{r^2\,\theta^2}{4\pi^2}+\eta^2 = ((r)-(t/2\pi))^2+(\eta^2) = r^2$$

$$(r^2)-\left(r^2-\frac{r^2\,\theta}{\pi}+\frac{r^2\,\theta^2}{4\pi^2}\right)=\eta^2$$

$$\text{Simplify}\left[(r^2)-\left(r^2-\frac{r^2\,\theta}{\pi}+\frac{r^2\,\theta^2}{4\pi^2}\right)\right]$$

$$\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}=\eta^2 \tag{61}$$

$$\text{Solve}\left[\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}==\eta^2,\eta\right]$$

$$\left\{\left\{\eta\to-\frac{\sqrt{4\pi\,r^2\,\theta-r^2\,\theta^2}}{2\pi}\right\},\left\{\eta\to\frac{\sqrt{4\pi\,r^2\,\theta-r^2\,\theta^2}}{2\pi}\right\}\right\}$$

$$\frac{2\,\eta\,\pi}{\sqrt{4\pi\,\theta-\theta^2}}=r \tag{62}$$

$$\frac{2\ (r\ /\ 6\ \theta)\ (6\ \theta))\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} = r = \frac{2\ r\pi}{\sqrt{4\ \pi\ \theta - \theta^2}} \tag{63}$$

$$\textbf{Solve}\left[1 == \frac{2\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}},\ \theta\right]$$

$\{\{\theta \to 2\ \pi\}\}$

This is the equation for r_1 in terms of the geometric parameters of the cone described above.

$\pi\ (r\hat{}2 - \eta\hat{}2) == \pi\ r_1\hat{}2$

Then, we substitute for the solved height in terms of purely theta and radius.

$$\textbf{Solve}\left[\pi\left(r\hat{}2 - \left(\frac{r^2\ (4\ \pi - \theta)\ \theta}{4\ \pi^2}\right)\right) == \pi\left(r\hat{}2 - \left(\frac{r^2\ (4\ \pi - \theta)\ \theta}{4\ \pi^2}\right)\right)\hat{}2,\ r\right]$$

$$\left\{\{r \to 0\},\ \{r \to 0\},\ \left\{r \to -\frac{2\ \pi\ \sqrt{4\ \pi^2 - 4\ \pi\ \theta + \theta^2}}{\sqrt{16\ \pi^4 - 32\ \pi^3\ \theta + 24\ \pi^2\ \theta^2 - 8\ \pi\ \theta^3 + \theta^4}}\right\},\ \left\{r \to \frac{2\ \pi\ \sqrt{4\ \pi^2 - 4\ \pi\ \theta + \theta^2}}{\sqrt{16\ \pi^4 - 32\ \pi^3\ \theta + 24\ \pi^2\ \theta^2 - 8\ \pi\ \theta^3 + \theta^4}}\right\}\right\} \tag{64}$$

Remember when we said that $\pi\ (r\hat{}2 - \eta\hat{}2) == \pi\ r_1\hat{}2$.

When is the area of h^2 equal to the area of the circle of r_1?

Well, what if $n * \eta\hat{}2 = \pi\ r_1\hat{}2 = \pi\left(r\hat{}2 - \left(\frac{r^2\ (4\ \pi - \theta)\ \theta}{4\ \pi^2}\right)\right)$

If $r_1 = \eta$, then $n = \pi$

Where n is just a given number of h^2 that is related to E = hnf, where n is the number of frequencies, f is the frequency, and h is Planck's constant.

$$E\ =\ hnf = h\nu = mc\hat{}2 \tag{65}$$

$$r\ /\ t = r\ /\ (6\ \theta) = c = \lambda f = r\ (1\ /\ 6\ \theta) \tag{66}$$

v = velocity = $\lambda\nu$, where $\lambda = r$ and is the wavelength, and ν is the frequency. (67)

η **= v * time = (r / t) 6 (**θ**) = (r / (6** θ**)) 6 (**θ**)**

$$\frac{2\ \eta\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} = r = \frac{(r\ /\ t)\ 6\ (\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} = \frac{(r\ /\ (6\ \theta))\ 6\ (\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}}$$

$$\textbf{Solve}\left[(r\ /\ t) == \frac{(r\ /\ t)\ 6\ (\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} * \nu,\ \nu\right]$$

$$\left\{\left\{\nu \to \frac{\sqrt{(4\ \pi - \theta)\ \theta}}{6\ \pi\ \theta}\right\}\right\} \tag{68}$$

$$\nu := \frac{\sqrt{(4\pi - \theta)\,\theta}}{6\,\pi\,\theta}$$

nf = ν

$$\text{Solve}\left[n\,(1/6\,\theta) == \frac{\sqrt{(4\pi - \theta)\,\theta}}{6\,\pi\,\theta},\, n\right]$$

$$\left\{\left\{n \to \frac{\sqrt{(4\pi - \theta)\,\theta}}{\pi\,\theta^2}\right\}\right\} \tag{69}$$

$$n := \frac{\sqrt{(4\pi - \theta)\,\theta}}{\pi\,\theta^2}$$

Where h is Planck ' s Constant, n the number of moles,
and f the frequency, we may say that the force of dark matter (F_{dm})
is capable of being solved for in terms of time or purely space.

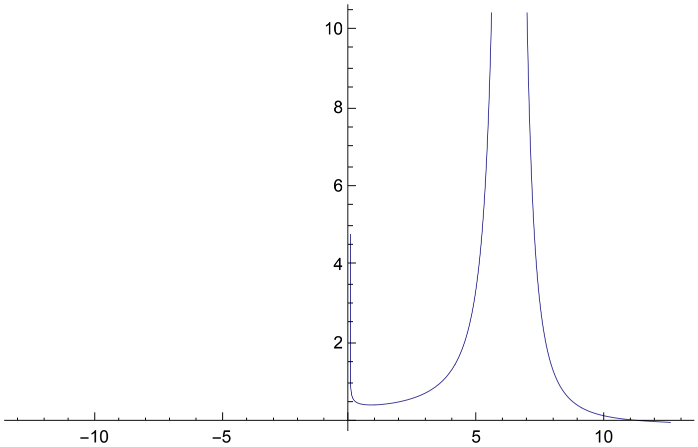
$$\pi\, r_1\text{^}2 = (r\text{^}2 - \eta\text{^}2)\text{^}2 = \pi\left(r\text{^}2 - \left(\frac{r^2\,(4\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2 = n\left(\frac{r^2\,(4\pi - \theta)\,\theta}{4\,\pi^2}\right)$$

The amount n (η^2) is correlated to the area of r_1,
because n is in terms of theta.

$$\text{Solve}\left[\pi\left(r\text{^}2 - \left(\frac{r^2\,(4\pi - \theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2 == \frac{\sqrt{(4\pi - \theta)\,\theta}}{\pi\,\theta^2}\left(\frac{r^2\,(4\pi - \theta)\,\theta}{4\,\pi^2}\right),\, r\right]$$

$$\left\{\{r \to 0\},\ \{r \to 0\},\ \left\{r \to -\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3} + \frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\},\right.$$
$$\left.\left\{r \to \frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3} + \frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right\}\right\} \tag{70}$$

$$\text{Plot}\left[\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\ \{\theta,\ -13,\ 13\}\right]$$



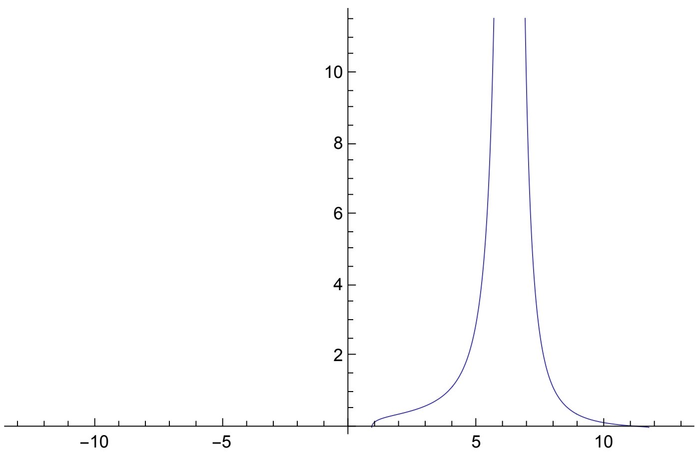
We will now elaborate on the nature of r_1 in terms of constant rate, and then come back to the equations for r that we have found through the realization of its parameters and solve them for theta.

$$r_1\,\hat{}\,2 = \left(r\,\hat{}\,2 - \left(\frac{r^2\ (4\,\pi-\Theta)\ \Theta}{4\,\pi^2}\right)\hat{}\,2\right) = r\,\hat{}\,2 - \eta\,\hat{}\,2 \tag{71}$$

$$r_1 = \sqrt{}\,(r\,\hat{}\,2-\eta\,\hat{}\,2) = \sqrt{\left(\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right)\hat{}\,2-\eta\,\hat{}\,2\right)} =$$

$$\sqrt{\left(\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right)\hat{}\,2-\left(\frac{\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\Big/\ (6\,\theta)\right)\,6\ (\theta)\ \pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\hat{}\,2\right)}$$

$$\texttt{Plot}\left[\sqrt{\left(\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right)\text{^}2-\left(\frac{\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\Big/\,(6\,\theta)\right)6\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\text{^}2\right)},\ \{\theta,-13,13\}\right]$$



We will briefly show what the graph looks like when the speed of light is the constant rate at which something along the line of η is traveling, not η = c6θ = (r / 6 θ) (6 θ). In that case, r would equal η, but what about the fact that h changes through r_1 (the base of the cone)? We will instead propose to say that η travels not at any rate, but at the speed of light. Of course, it's also possible to theorize and propose that the cone travels up into the third dimension, η, at a rate equal to the first derivative of the equation for r in terms of theta with respect to theta. However, we will now briefly discuss what happens to r_1 when the cone travels

$$\eta\text{^}2=\frac{4\,\eta^2\,\pi^2}{4\,\pi\,\theta-\theta^2}$$

$$r_1\text{^}2=\left(r\text{^}2-\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)\text{^}2\right)$$

$$D[r,\theta] = r - r_1 = \frac{2\,h\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} - \left(r\,\hat{}\,2 - \left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)\hat{}\,2\right)$$

$$\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2} = \eta\,\hat{}\,2;\quad \frac{2\,h\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = r$$

$$\eta = r\,/\,(6\,\theta) = r\,/\,t$$

$$\frac{4\,\eta^2\,\pi^2}{4\,\pi\,\theta-\theta^2} = r\,\hat{}\,2$$

$$\text{Solve}\left[\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2} == r\,\hat{}\,2,\ \theta\right]$$

$$\{\{\theta \to 2\,\pi\},\ \{\theta \to 2\,\pi\}\}$$

$$\text{Solve}\left[\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2} == (r\,/\,6\,\theta)\,\hat{}\,2,\ r\right]$$

$$\{\{r \to 0\},\ \{r \to 0\}\}$$

$$\text{Simplify}\left[\sqrt{\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}}\right]$$

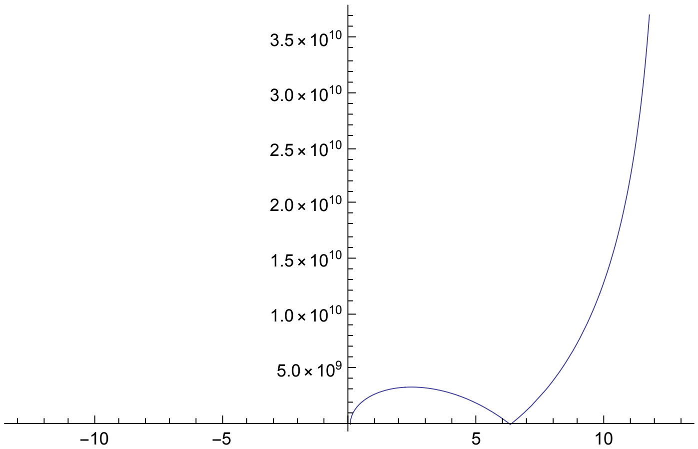
$$\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi}$$

For light, the equation would read :

$$r_1 = \sqrt{\left(\left(\frac{2\,(2.99792 * 10\,\hat{}\,8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\hat{}\,2 - \left(\frac{\sqrt{\left(\frac{2\,(2.99792*10\hat{}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi}\right)\hat{}\,2\right)}$$

$$\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2} - \frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}$$

$$\text{Plot}\left[\sqrt{\frac{1.2773276589129854\grave{}*\hat{}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\grave{}*\hat{}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}},\{\theta,-13,13\}\right]$$



This is something much different from the quality of matter whose energetic relation to velocity is defined within its own consistency.

Now we will return to the more general form of the equation. The case when h = (r/6 θ) (6 θ)

Now, by doing the first and second derivatives of the functions for radius in terms of the square of h being equal to the are of the cirle of r_1 with respect to time will give us velocity.

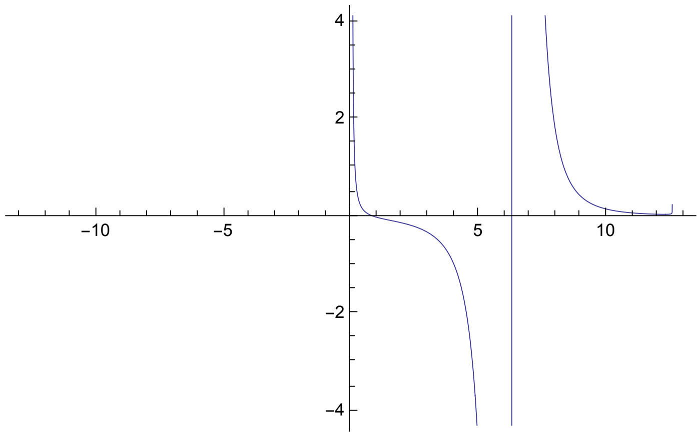
$$\left\{\{r\to 0\},\{r\to 0\},\left\{r\to-\frac{2\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right\},\left\{r\to\frac{2\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right\}\right\} \tag{72}$$

$$D\left[-\frac{2\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right]=D[r,\theta]$$

$$D\left[-\frac{2\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right]$$

$$-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}+\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

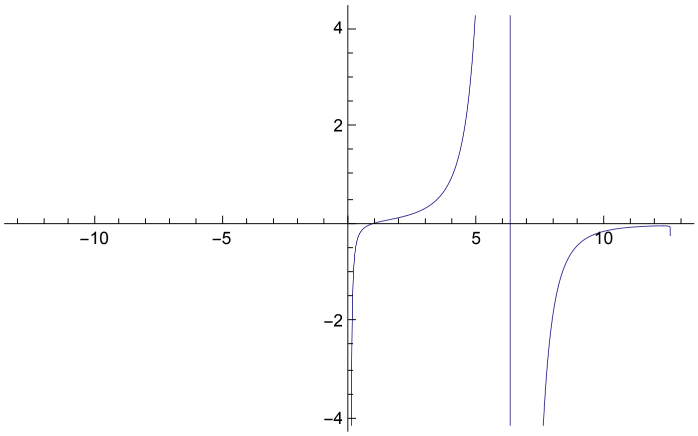
$$\text{Plot}\Big[-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}+\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\{\theta,-13,13\}\Big]$$



$$\text{D}\Big[\frac{2\pi^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\Big]$$

$$\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

$$\text{Plot}\left[\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\{\theta,-13,13\}\right]$$



$$\text{D}\left[-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}+\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\theta\right]$$

$$\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}-$$
$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Big/$$
$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)+$$
$$\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-$$
$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$
$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

$$\text{Plot}\Bigg[\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}-$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

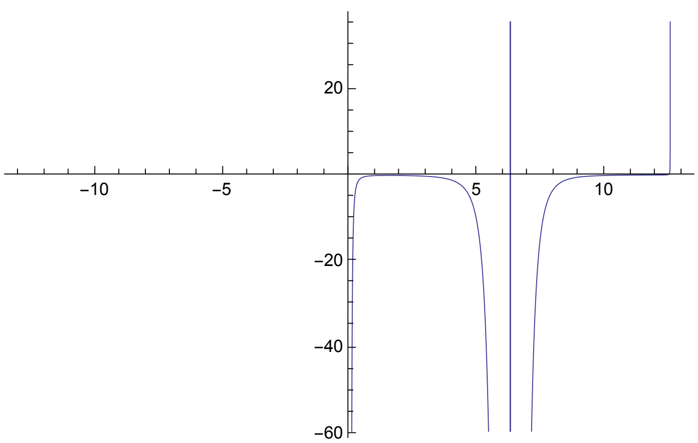
$$\left.\left.\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)+$$

$$\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\ \{\theta,-13,13\}\Bigg]$$



$$\mathrm{D}\left[\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\theta\right]$$

$$-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}+$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Bigg/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)-$$

$$\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}+$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}$$

$$\text{Plot}\Bigg[-\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)^2}{2\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)^{3/2}}+$$

$$\left(\pi^{3/2}\left(\frac{(4\pi-2\theta)^2}{4\pi^3((4\pi-\theta)\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta((4\pi-\theta)\theta)^{3/2}}+\frac{1}{\pi^3\sqrt{(4\pi-\theta)\theta}}-\right.\right.$$

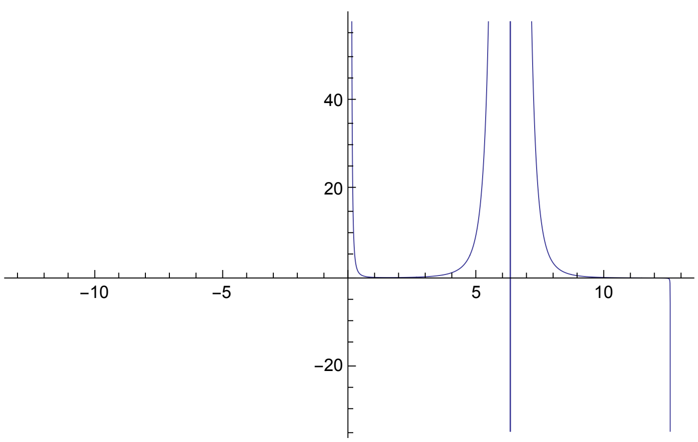
$$\left.\left.\frac{4(4\pi-2\theta)}{\pi^2\theta^2\sqrt{(4\pi-\theta)\theta}}-\frac{4}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}+\frac{8\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}\right)-$$

$$\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}+$$

$$\frac{3\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\pi^{3/2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}},\ \{\theta,-13,13\}\Bigg]$$



For more explanation on this section of the topic, please see the paper : No Time, Only True, available at : http://www.scribd.com/doc/20041709/No-Time-Only-True

If we take these solutions, or any of the solutions from the roots

The following solutions for theta come from :

$$n=\frac{\sqrt{(4\pi-\theta)\theta}}{\pi\theta^2}$$

πr_1 ^ 2 =

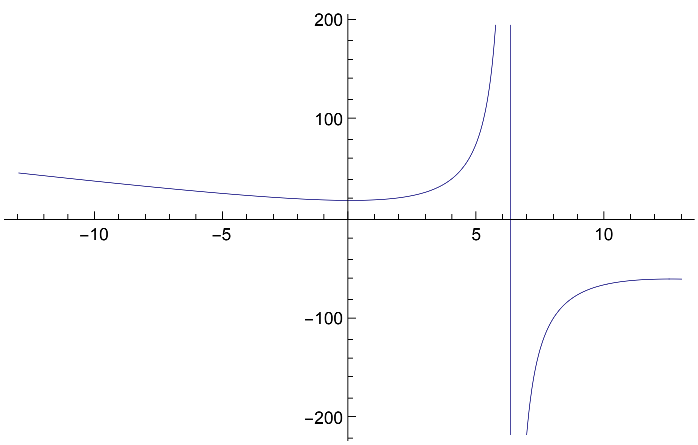
$$\pi\ (r\text{^}2 - \eta\text{^}2)\text{^}2 = \pi\left(r\text{^}2 - \left(\frac{r^2\ (4\pi - \theta)\ \theta}{4\pi^2}\right)\right)\text{^}2 == n\ (\eta\text{^}2)\ == \frac{\sqrt{(4\pi - \theta)\ \theta}}{\pi\,\theta^2}\left(\frac{r^2\ (4\pi - \theta)\ \theta}{4\pi^2}\right)$$

$$\pi r\text{^}2 - \pi\left(r\text{^}2 - \left(\frac{r^2\ (4\pi - \theta)\ \theta}{4\pi^2}\right)\right)\text{^}2 = \Delta A$$

$$\int\left(\pi\left(\frac{2\pi\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}}\right)\text{^}2 - \pi\left(\left(\frac{2\pi\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}}\right)\text{^}2 - \left(\frac{\left(\frac{2\pi\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}}\right)^2 (4\pi - \theta)\ \theta}{4\pi^2}\right)\right)\text{^}2\right) d\theta$$

$$\pi\left(-\theta - \frac{4\pi^2}{-2\pi + \theta}\right)$$

$$\text{Plot}\left[\pi\left(-\theta - \frac{4\pi^2}{-2\pi + \theta}\right),\ \{\theta,\ -13,\ 13\}\right]$$



$$\left\{\eta \to \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right\}$$

$$\frac{2\pi\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}{\sqrt{16\pi^4 - 32\pi^3\theta + 24\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}} = r$$

Alden Daniels :

"geometric interpretation where you see higher dimensions being generated through implicit tensions that somehow cause dimensions stretching to infinity, but in the process of having that in a limiting case, they are actually creating expansion of higher dimensions."

Impicit shape of consciousness relates to the genetic structure. Spin inherently generates motion.

Drawing

$$\text{Solve}\left[\pi\left(r^{\wedge}2-\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)\right)^{\wedge}2==\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi\,\theta^2}\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right),\theta\right]$$

$$\{\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,1]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,2]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,3]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,4]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,5]\},$$

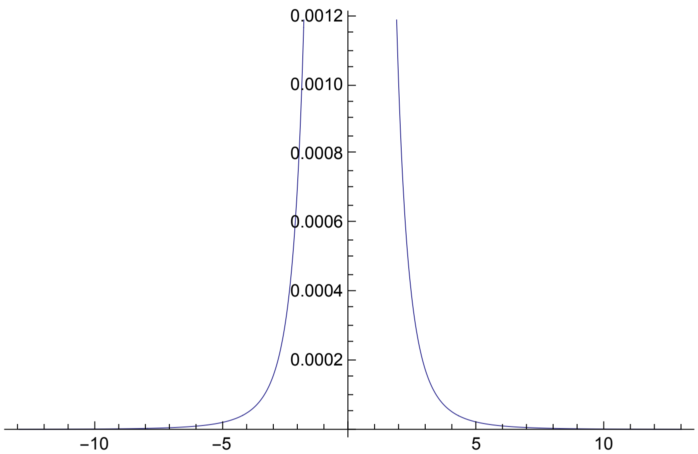
$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,6]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,7]\},$$

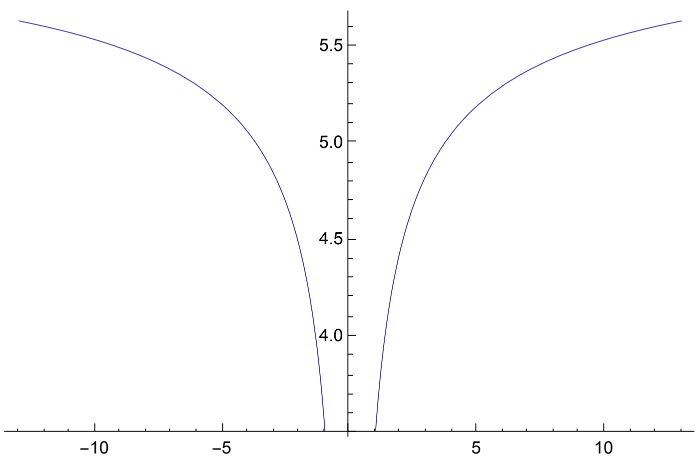
$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,8]\},$$

$$\{\theta\to\text{Root}[-1024\,\pi^3+(768\,\pi^2+256\,\pi^8\,r^4)\,\#1+(-192\,\pi-1024\,\pi^7\,r^4)\,\#1^2+(16+1792\,\pi^6\,r^4)\,\#1^3-1792\,\pi^5\,r^4\,\#1^4+1120\,\pi^4\,r^4\,\#1^5-448\,\pi^3\,r^4\,\#1^6+112\,\pi^2\,r^4\,\#1^7-16\,\pi\,r^4\,\#1^8+r^4\,\#1^9\,\&,9]\}\}$$

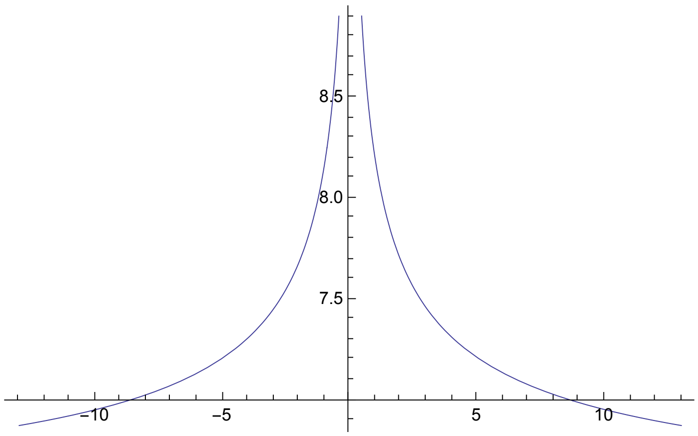
```
Plot[Root[-1024 π^3 + (768 π^2 + 256 π^8 r^4) #1 +
    (-192 π - 1024 π^7 r^4) #1^2 + (16 + 1792 π^6 r^4) #1^3 - 1792 π^5 r^4 #1^4 + 1120 π^4 r^4 #1^5 -
    448 π^3 r^4 #1^6 + 112 π^2 r^4 #1^7 - 16 π r^4 #1^8 + r^4 #1^9 &, 1], {r, -13, 13}]
```




```
Plot[Root[-1024 π^3 + (768 π^2 + 256 π^8 r^4) #1 +
    (-192 π - 1024 π^7 r^4) #1^2 + (16 + 1792 π^6 r^4) #1^3 - 1792 π^5 r^4 #1^4 + 1120 π^4 r^4 #1^5 -
    448 π^3 r^4 #1^6 + 112 π^2 r^4 #1^7 - 16 π r^4 #1^8 + r^4 #1^9 &, 2], {r, -13, 13}]
```



$$\text{Plot}\left[\text{Root}\left[-1024\,\pi^3 + \left(768\,\pi^2 + 256\,\pi^8\,r^4\right)\#1 + \left(-192\,\pi - 1024\,\pi^7\,r^4\right)\#1^2 + \left(16 + 1792\,\pi^6\,r^4\right)\#1^3 - 1792\,\pi^5\,r^4\,\#1^4 + 1120\,\pi^4\,r^4\,\#1^5 - 448\,\pi^3\,r^4\,\#1^6 + 112\,\pi^2\,r^4\,\#1^7 - 16\,\pi\,r^4\,\#1^8 + r^4\,\#1^9\,\&,\,3\right],\,\{r,\,-13,\,13\}\right]$$



The last six solutions (the last six roots for θ) plotted to emptily, and no graph was able to be made.

$$\left\{\{r\to 0\},\,\{r\to 0\},\,\left\{r\to -\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\},\,\left\{r\to \frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\}\right\} \tag{73}$$

$$r = \frac{2\,(2.99792 * 10\,^\wedge 8)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = \lambda = \frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\} \tag{74}$$

$$r = \frac{2\,h\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = \frac{2\,(c)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} == \frac{2\,(r\,/\,t)\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} == \frac{2\,(r\,/\,(6\,\theta))\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}} = \frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}$$

Where c is the speed of light.

$$\text{Solve}\left[\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}} == \frac{2\,(r\,/\,(6\,\theta))\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}},\,r\right]$$

$$\left\{\left\{r\to \frac{\sqrt{\pi}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\}\right\}$$

$$\text{Solve}\left[r == \frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \theta\right]$$

$$\{\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 1]\},$$

$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 2]\},$$

$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 3]\},$$

$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 4]\},$$

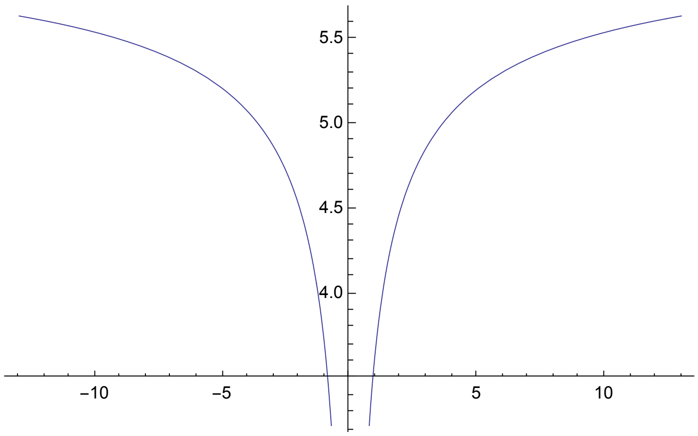
$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 5]\},$$

$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 6]\},$$

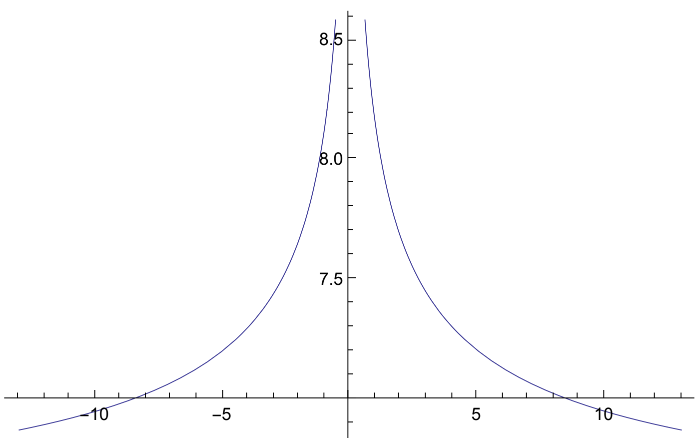
$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 7]\},$$

$$\{\theta \to \text{Root}[256\,\pi^{12}\,r^4 + (-1024\,\pi^5 - 1024\,\pi^{11}\,r^4)\,\sharp 1 + (1280\,\pi^4 + 1792\,\pi^{10}\,r^4)\,\sharp 1^2 + (-640\,\pi^3 - 1792\,\pi^9\,r^4)\,\sharp 1^3 + (160\,\pi^2 + 1120\,\pi^8\,r^4)\,\sharp 1^4 + (-20\,\pi - 448\,\pi^7\,r^4)\,\sharp 1^5 + (1 + 112\,\pi^6\,r^4)\,\sharp 1^6 - 16\,\pi^5\,r^4\,\sharp 1^7 + \pi^4\,r^4\,\sharp 1^8\ \&,\ 8]\}\}$$

$$\text{Plot}\left[\text{Root}\left[256\,\pi^{12}\,r^4+\left(-1024\,\pi^5-1024\,\pi^{11}\,r^4\right)\#1+\left(1280\,\pi^4+1792\,\pi^{10}\,r^4\right)\#1^2+\left(-640\,\pi^3-1792\,\pi^9\,r^4\right)\#1^3+\left(160\,\pi^2+1120\,\pi^8\,r^4\right)\#1^4+\left(-20\,\pi-448\,\pi^7\,r^4\right)\#1^5+\left(1+112\,\pi^6\,r^4\right)\#1^6-16\,\pi^5\,r^4\,\#1^7+\pi^4\,r^4\,\#1^8\,\&,\,1\right],\,\{r,\,-13,\,13\}\right]$$



$$\text{Plot}\left[\text{Root}\left[256\,\pi^{12}\,r^4+\left(-1024\,\pi^5-1024\,\pi^{11}\,r^4\right)\#1+\left(1280\,\pi^4+1792\,\pi^{10}\,r^4\right)\#1^2+\left(-640\,\pi^3-1792\,\pi^9\,r^4\right)\#1^3+\left(160\,\pi^2+1120\,\pi^8\,r^4\right)\#1^4+\left(-20\,\pi-448\,\pi^7\,r^4\right)\#1^5+\left(1+112\,\pi^6\,r^4\right)\#1^6-16\,\pi^5\,r^4\,\#1^7+\pi^4\,r^4\,\#1^8\,\&,\,2\right],\,\{r,\,-13,\,13\}\right]$$



The last 6 roots yielded no graph, and we are uncertain of the x intercept.

$$\text{Solve}\left[\frac{2\,(r\,/\,(6\,\theta))\,(6)\,(\theta)\,\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}==r,\,\theta\right]$$

$\{\{\theta\to 2\,\pi\}\}$

$$\text{From}\ \pi\,r_1\text{^}2=\left(r\text{^}2-\eta\text{^}2\right)\text{^}2=\pi\left(r\text{^}2-\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)\right)\text{^}2=n\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)$$

$$\text{For},\ n=\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi\,\theta^2}$$

We say the general statement that :

$$\left\{\{r\to 0\},\ \{r\to 0\},\ \left\{r\to -\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\},\right.$$

$$\left.\left\{r\to \frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\}\right\}$$

For n = 1, we say specifically that :

$$\mathbf{Solve}\left[\pi\left(r\,^\wedge 2-\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right)\right)^\wedge 2==\left(\frac{r^2\,(4\,\pi-\theta)\,\theta}{4\,\pi^2}\right),\ r\right]$$

$$\left\{\{r\to 0\},\ \{r\to 0\},\ \left\{r\to -\frac{2\,\sqrt{\pi}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\},\right.$$

$$\left.\left\{r\to \frac{2\,\sqrt{\pi}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right\}\right\}$$

So, we will now look at the velocity of our equations by taking their first derivative with respect to time.

$$\mathbf{D}\left[-\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\ \theta\right]$$

$$\mathbf{Simplify}\left[-\frac{\pi^{3/2}\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}+\right.$$

$$\left.\frac{\pi^{3/2}\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}\right]$$

$$\frac{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\left(4\,\pi^2-16\,\pi\,\theta+3\,\theta^2\right)}{\theta\,\sqrt{(-2\,\pi+\theta)^4}\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)}$$

$$\mathbf{m}\,\frac{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\left(4\,\pi^2-16\,\pi\,\theta+3\,\theta^2\right)}{\theta\,\sqrt{(-2\,\pi+\theta)^4}\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)}=\mathbf{momentum}=\mathbf{p}$$

$$\Delta p\Delta x = h/2\,\pi$$

$$x = r$$

$$\Delta m\,\frac{\sqrt{\frac{((4\,\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\left(4\,\pi^2-16\,\pi\,\theta+3\,\theta^2\right)}{\theta\,\sqrt{(-2\,\pi+\theta)^4}\left(8\,\pi^2-6\,\pi\,\theta+\theta^2\right)}\left(-\Delta\,\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right)$$

$$\text{Solve}\left[(6.62606896 * 10\,\hat{}\,{-34}) / 2\,\pi == m\, D\left[\frac{\sqrt{\frac{((4\pi-\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(4\,\pi^2 - 16\,\pi\,\theta + 3\,\theta^2\right)}{\theta\,\sqrt{(-2\,\pi+\theta)^4}\,\left(8\,\pi^2 - 6\,\pi\,\theta + \theta^2\right)}, \theta\right]\right.$$

$$\left.\left(D\left[-\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3} + \frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}, \theta\right]\right), m\right]$$

$$\left\{\left\{m \to\right.\right.$$

$$1.04082\times 10^{-33} \Big/ \left(\left(-\left(5.56833\left(-\frac{0.0161258\,(12.5664-2.\,\theta)}{\sqrt{(12.5664-1.\,\theta)\,\theta}} + \frac{0.202642\,(12.5664-2.\,\theta)}{\theta\,\sqrt{(12.5664-1.\,\theta)\,\theta}} - \right.\right.\right.\right.$$

$$\left.\left.\left.\frac{0.405285\,\sqrt{(12.5664-1.\,\theta)\,\theta}}{\theta^2}\right)\right)\Big/\right.$$

$$\left(\sqrt{1558.55 - 992.201\,\theta + 236.871\,\theta^2 - 25.1327\,\theta^3 + \theta^4}\right.$$

$$\left.\sqrt{-0.0322515\,\sqrt{(12.5664-1.\,\theta)\,\theta} + \frac{0.405285\,\sqrt{(12.5664-1.\,\theta)\,\theta}}{\theta}}\right) +$$

$$\left(5.56833\left(-992.201 + 473.741\,\theta - 75.3982\,\theta^2 + 4.\,\theta^3\right)\right.$$

$$\left.\sqrt{-0.0322515\,\sqrt{(12.5664-1.\,\theta)\,\theta} + \frac{0.405285\,\sqrt{(12.5664-1.\,\theta)\,\theta}}{\theta}}\right)\Big/$$

$$\left.\left(1558.55 - 992.201\,\theta + 236.871\,\theta^2 - 25.1327\,\theta^3 + \theta^4\right)^{3/2}\right)$$

$$\left(\frac{\sqrt{\frac{((12.5664-1.\,\theta)\,\theta)^{3/2}}{\theta^2}}\,(-50.2655 + 6.\,\theta)}{\sqrt{(-6.28319+\theta)^4}\,\theta\,\left(78.9568 - 18.8496\,\theta + \theta^2\right)} - \right.$$

$$\frac{1.\,\sqrt{\frac{((12.5664-1.\,\theta)\,\theta)^{3/2}}{\theta^2}}\,(-18.8496 + 2.\,\theta)\,\left(39.4784 - 50.2655\,\theta + 3.\,\theta^2\right)}{\sqrt{(-6.28319+\theta)^4}\,\theta\,\left(78.9568 - 18.8496\,\theta + \theta^2\right)^2} -$$

$$\frac{1.\,\sqrt{\frac{((12.5664-1.\,\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(39.4784 - 50.2655\,\theta + 3.\,\theta^2\right)}{\sqrt{(-6.28319+\theta)^4}\,\theta^2\,\left(78.9568 - 18.8496\,\theta + \theta^2\right)} -$$

$$\frac{2.\ (-6.28319+\theta)^3\ \sqrt{\frac{((12.5664-1.\ \theta)\ \theta)^{3/2}}{\theta^2}}\ \left(39.4784-50.2655\ \theta+3.\ \theta^2\right)}{\left((-6.28319+\theta)^4\right)^{3/2}\ \theta\ \left(78.9568-18.8496\ \theta+\theta^2\right)}+$$

$$\left(0.5\ \left(39.4784-50.2655\ \theta+3.\ \theta^2\right)\right.$$

$$\left.\left(\frac{1.5\ (12.5664-2.\ \theta)\ \sqrt{(12.5664-1.\ \theta)\ \theta}}{\theta^2}-\frac{2.\ ((12.5664-1.\ \theta)\ \theta)^{3/2}}{\theta^3}\right)\right)\Big/$$

$$\left(\sqrt{(-6.28319+\theta)^4}\ \theta\ \sqrt{\frac{((12.5664-1.\ \theta)\ \theta)^{3/2}}{\theta^2}}\ \left(78.9568-18.8496\ \theta+\theta^2\right)\right)\Bigg)\Bigg)\}\}$$

```
Plot[1.0408204783457682`*^-33/
  (((-(5.568327996831707` (-(0.016125767216599748` (12.566370614359172`-2.` θ))/
          Sqrt[(12.566370614359172`-1.` θ) θ] +
        (0.20264236728467555` (12.566370614359172`-2.` θ))/
          (θ Sqrt[(12.566370614359172`-1.` θ) θ]) -
        (0.4052847345693511` Sqrt[(12.566370614359172`-1.` θ) θ])/θ^2))/
     (√(1558.5454565440389`-992.2008537695941` θ+236.8705056261446` θ^2-
          25.132741228718345` θ^3+θ^4)
       Sqrt[(-0.032251534433199495` Sqrt[(12.566370614359172`-1.` θ) θ] +
          (0.4052847345693511` Sqrt[(12.566370614359172`-1.` θ) θ])/θ)]) +
    (5.568327996831707` (-992.2008537695941`+473.7410112522892` θ-
          75.39822368615503` θ^2+4.` θ^3)
       Sqrt[(-0.032251534433199495` Sqrt[(12.566370614359172`-1.` θ) θ] +
          (0.4052847345693511` Sqrt[(12.566370614359172`-1.` θ) θ])/θ)])/
```

$$\left(1558.5454565440389` - 992.2008537695941`\,\theta + 236.8705056261446`\,\theta^2 -\right.$$

$$\left.\left.25.132741228718345`\,\theta^3 + \theta^4\right)^{3/2}\right)$$

$$\left(\left(\left(\sqrt{\frac{((12.566370614359172` - 1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\;(-50.26548245743669` + 6.`\,\theta)\right)\Big/\right.\right.$$

$$\left(\sqrt{(-6.283185307179586` + \theta)^4}\;\theta\right.$$

$$\left.\left(78.95683520871486` - 18.84955592153876`\,\theta + \theta^2\right)\right) -$$

$$\left(1.`\;\sqrt{\frac{((12.566370614359172` - 1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\;(-18.84955592153876` + 2.`\,\theta)\right.$$

$$\left.\left(39.47841760435743` - 50.26548245743669`\,\theta + 3.`\,\theta^2\right)\right)\Big/$$

$$\left(\sqrt{(-6.283185307179586` + \theta)^4}\;\theta\right.$$

$$\left.\left(78.95683520871486` - 18.84955592153876`\,\theta + \theta^2\right)^2\right) -$$

$$\left(1.`\;\sqrt{\frac{((12.566370614359172` - 1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\;\left(39.47841760435743` -\right.\right.$$

$$\left.\left.50.26548245743669`\,\theta + 3.`\,\theta^2\right)\right)\Big/\;\left(\sqrt{(-6.283185307179586` + \theta)^4}\right.$$

$$\left.\theta^2\left(78.95683520871486` - 18.84955592153876`\,\theta + \theta^2\right)\right) -$$

$$\left(2.`\;(-6.283185307179586` + \theta)^3\;\sqrt{\frac{((12.566370614359172` - 1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\right.$$

$$\left.\left(39.47841760435743` - 50.26548245743669`\,\theta + 3.`\,\theta^2\right)\right)\Big/$$

$$\left(\left((-6.283185307179586` + \theta)^4\right)^{3/2}\theta\right.$$

$$\left.\left(78.95683520871486` - 18.84955592153876`\,\theta + \theta^2\right)\right) +$$

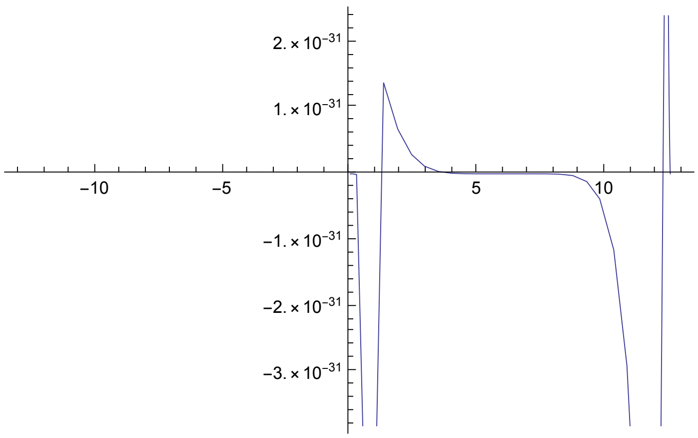
$$\left(0.5`\;\left(39.47841760435743` - 50.26548245743669`\,\theta + 3.`\,\theta^2\right)\right.$$

$$\left(\frac{1}{\theta^2}\,1.5`\;(12.566370614359172` - 2.`\,\theta)\;\sqrt{(12.566370614359172` - 1.`\,\theta)\,\theta} -\right.$$

$$\frac{2.` \left(\left(12.566370614359172` - 1.` \theta\right) \theta\right)^{3/2}}{\theta^3}\Bigg)\Bigg)\Bigg/$$

$$\left(\sqrt{\left(-6.283185307179586` + \theta\right)^4}\ \theta\ \sqrt{\frac{\left(\left(12.566370614359172` - 1.` \theta\right) \theta\right)^{3/2}}{\theta^2}}\right.$$

$$\left.\left(78.95683520871486` - 18.84955592153876`\ \theta + \theta^2\right)\right)\Bigg)\Bigg), \{\theta, -13, 13\}\Big]$$



Now we will take the first derivative of our second r value for another solution to where the mass is in terms of angle.

$$\mathrm{D}\left[\frac{2\,\pi^{3/2}\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}, \theta\right]$$

$$\frac{\pi^{3/2}\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}\ \sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}} -$$

$$\frac{\pi^{3/2}\left(-32\,\pi^3 + 48\,\pi^2\,\theta - 24\,\pi\,\theta^2 + 4\,\theta^3\right)\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\left(16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4\right)^{3/2}}$$

$$\text{Simplify}\Big[\frac{\pi^{3/2}\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}-$$

$$\frac{\pi^{3/2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\sqrt{-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}\Big]$$

$$\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)}$$

$\Delta p\Delta r = h/2\pi$

$$\text{Solve}\Big[(6.62606896*10\text{^}-34)/2\pi ==$$

$$m\,D\Big[\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)},\theta\Big]\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)},m\Big]$$

$$\text{Solve}\Big[(h)/2\pi ==$$

$$m\,D\Big[\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)},\theta\Big]\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)},m\Big]$$

$$\Big\{\Big\{m\to\left(h\,\pi\,\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)\right)\Big/\Bigg(2\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}$$

$$\left(-4\pi^2+16\pi\theta-3\theta^2\right)\Bigg(-\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}(-6\pi+2\theta)\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)^2}+$$

$$\frac{(16\pi-6\theta)\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}}{\theta\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)}-\frac{2\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}(-2\pi+\theta)^3\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta\left((-2\pi+\theta)^4\right)^{3/2}\left(8\pi^2-6\pi\theta+\theta^2\right)}-$$

$$\frac{\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\left(-4\pi^2+16\pi\theta-3\theta^2\right)}{\theta^2\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)}+$$

$$\frac{\left(-4\pi^2+16\pi\theta-3\theta^2\right)\left(\frac{3(4\pi-2\theta)\sqrt{(4\pi-\theta)\theta}}{2\theta^2}-\frac{2((4\pi-\theta)\theta)^{3/2}}{\theta^3}\right)}{2\theta\sqrt{\frac{((4\pi-\theta)\theta)^{3/2}}{\theta^2}}\sqrt{(-2\pi+\theta)^4}\left(8\pi^2-6\pi\theta+\theta^2\right)}\Bigg)\Bigg)\Big\}\Big\}$$

$$\text{Plot}\Big[\Big(1.0408204783457682\text{`}*\text{^}-33\sqrt{(-6.283185307179586\text{`}+\theta)^4}$$

$$\theta\left(78.95683520871486`-18.84955592153876`\,\theta+\theta^2\right)\Big)\Big/$$

$$\left(\sqrt{\frac{((12.566370614359172`-1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\right.$$

$$\left(-39.47841760435743`+50.26548245743669`\,\theta-3.`\,\theta^2\right)$$

$$\left(-\left(1.`\,\sqrt{\frac{((12.566370614359172`-1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\,(-18.84955592153876`+2.`\,\theta)\right.\right.$$

$$\left.\left(-39.47841760435743`+50.26548245743669`\,\theta-3.`\,\theta^2\right)\right)\Big/$$

$$\left(\sqrt{(-6.283185307179586`+\theta)^4}\,\theta\right.$$

$$\left.\left(78.95683520871486`-18.84955592153876`\,\theta+\theta^2\right)^2\right)+$$

$$\left((50.26548245743669`-6.`\,\theta)\,\sqrt{\frac{((12.566370614359172`-1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\right)\Big/$$

$$\left(\sqrt{(-6.283185307179586`+\theta)^4}\,\theta\right.$$

$$\left.\left(78.95683520871486`-18.84955592153876`\,\theta+\theta^2\right)\right)-$$

$$\left(1.`\,\sqrt{\frac{((12.566370614359172`-1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\,\left(-39.47841760435743`+\right.\right.$$

$$\left.\left.50.26548245743669`\,\theta-3.`\,\theta^2\right)\right)\Big/\left(\sqrt{(-6.283185307179586`+\theta)^4}\right.$$

$$\left.\theta^2\left(78.95683520871486`-18.84955592153876`\,\theta+\theta^2\right)\right)-$$

$$\left(2.`\,(-6.283185307179586`+\theta)^3\,\sqrt{\frac{((12.566370614359172`-1.`\,\theta)\,\theta)^{3/2}}{\theta^2}}\right.$$

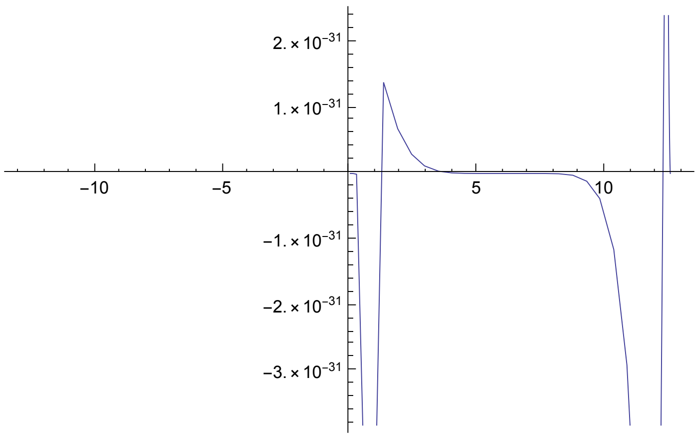
$$\left.\left(-39.47841760435743`+50.26548245743669`\,\theta-3.`\,\theta^2\right)\right)\Big/$$

$$\left(\left((-6.283185307179586`+\theta)^4\right)^{3/2}\theta\right.$$

$$\left.\left(78.95683520871486`-18.84955592153876`\,\theta+\theta^2\right)\right)+$$

$$\left(0.5`\,\left(-39.47841760435743`+50.26548245743669`\,\theta-3.`\,\theta^2\right)\right.$$

$$\left(\frac{1}{\theta^2}\,1.5\grave{}\ (12.566370614359172\grave{}-2.\grave{}\ \theta)\ \sqrt{(12.566370614359172\grave{}-1.\grave{}\ \theta)\ \theta}\ -\frac{2.\grave{}\ ((12.566370614359172\grave{}-1.\grave{}\ \theta)\ \theta)^{3/2}}{\theta^3}\right)\Bigg)\Bigg/\left(\sqrt{(-6.283185307179586\grave{}+\theta)^4}\ \theta\ \sqrt{\frac{((12.566370614359172\grave{}-1.\grave{}\ \theta)\ \theta)^{3/2}}{\theta^2}}\ (78.95683520871486\grave{}-18.84955592153876\grave{}\ \theta+\theta^2)\right)\Bigg)\Bigg),\ \{\theta,-13,13\}\Big]$$



We experience the mass of an object through its meaning and function. The shape of the cone and the equalities within the syntax of our system.

Perceptual Philosophy with William Edelglass

Parker Emmerson

Wednesday, September 16

I.From on the Soul by Aristotle

Aristotle is defining a perceivable difference for the relationship of ideas through systems of perception (the senses).To me, this project makes great sense, because when I think of the difference between sound and music, I feel like the sound is less permanent to my perception, whereas music is more structured and permanent.A sound leaves an impression, but can we really attempt to categorize something so infinitely dense like this impression by calling it a form?Within each sense, we can categorize qualities of the sense, however, the categories are a mixture of each other, and parameters may work better to discuss the elements of sense.I think of the object of sense, for example, sound, being like a well in time, just like a cup creates a well of space to hold a substance.When we perceive, we are giving something new to the system of the well, i.e.we are putting a “spoon” into the cup, and withdrawing meaning, by some sentient understanding of the material held within the well, be it waves created

by the spoon' s maker interacting with water or tasting rice and thinking of snow, because, "The senses perceive each other' s special objects incidentally; not because the percipient sense is this or that special sense, but because all form a unity." Aristotle, however, did lack an awareness of intuitive sensing, or sixth sense, i.e.the noticing of something uneasy or invisible.What is the difference between sense and vision for Aristotle, aside from pure sight due to physical stimuli?The difference between two ideas is indeed related to a mathematical description, although this allegory can be made loosely when it pertains to the perception of the properties of the meaning of ideas (structured by idea or inherent property).

II.From an Essay toward a New Theory of Vision by George Berkeley

Berkeley is refining his semantic differences between seeing and vision.Vision, to me, implies an entire accessible realm of being visionary, whereas seeing is more related to sight in particular.I think that light is necessary for sight, but vision is related to both the visual and auditory systems.Light creates a chemical reaction in the brain, but the mind can access the same neurological and chemical structures to bring about a vision without direct light stimulus to the eye.Berkeley provides an overview of perceptual theory, and provides an account of the connection between meaning of senses and development of structure for the interpretation of any sense.When Berkeley says, "Moreover it is evident that no idea which is not itself perceived can be the means of perceiving any other idea" I sincerely disagree.There is the idea of 0/1 and it is not perceived.Yet, it can be the means of perceiving 10, in the base 10 system.If Berkley' s argument held, then 1 would be the same as 10. For the system to be consistent, we must be talking about numbering the same kind of things, not different placement values.Also, I could think of the frying ice cube, and this idea is not perceived when the true ice cube is not something that can change at all, for it is a perfect cube, and when frying, would immediately melt, however it could be the means of perceiving boiling water.I think that the mind can generate new ideas through invention.When invention occurs, an idea arises that previously went unseen.This arising may indeed come from the collection and contributions of other ideas.However, if the new idea is truly new, it is thus greater than the illusion in which the idea rests and the sum of all its component ideas.Thus, it can only relate to the phenomenon, through a direct make - believe correlation.III.Thomas Reid, Powers of Man

One might have a notion and conception of an object and not be able to see it, because of its context.There is a difference between perceiving an object and a system.How does language influence perception?Can one only see visible structure?What does it mean to give the name of a word?Is the mathematical validity of measuring things to have a self evident axiom that depends on what we see, and can it be said to be true only insofar as it is true for what we see?When we discuss the God' s eye perspective, we mean that it is possible, or hypothetically plausible that we, the perceivers are actually being perceived by some other being, and thus the observer is being affected by the perception of the other.This, however, would mean that God sees humanity from outside, and creates paradox, and that the origin of all paradox would be greater than we can conceive.However, I disagree.For, God knows the liars from the truth tellers without having to ask them, without having to inquire into by observation their own statements.

IV.From The Philosophy of the Enlightenment

Cassirer first asks touches on the problem of whether a man, born blind, would be able to acquire the sense of sight.He notes that this problem allows us to ponder into whether or not perception produces the physical world.He raises issues of the mind' s being somehow involved in the perceivable world, and inquires what functions of the mind engage the relation of things to perceptions.A blind person may still have some idea or vision of geometry and mathematics without actually seeing the geometric structure.What perception of geometry would a blind person see?This idea relates loosely to Plato' s thought experiment in the cave."The idea of space is not, therefore, strictly speaking an element of sense consciousness but an expression of a process, which goes on in consciousness.Only the speed and regularity of this process cause us to overlook the intermediate stages in ordinary introspection and to anticipate the end of the process at the very start (Perception Edited by Robert Schwartz Page 33).Cassirer goes on to elaborate on other philosophers with ideas on spatiality.Spatiality is the only integration of the mass that is perceived, the time that is perceived, and the energy that is imprinted in the visual system.This is done by the giving act of inclusion through empathy and the informationally dense, expressively simple, being of truth.Can we then tie this to the perception of beauty existentially, or would that break down into objectivism?

V.Elements of Physiology by Johannes Muller

For Muller, each nerve has a particular quality of energy.He then denotes the energies of each nerve to relate to Aristotle' s categorical descriptions of sense.For me, Aristotle' s idea of category would need to be closer to the idea of enclosing quality of something in areas of parameters for phenomenal description.When I sense a strawberry, I taste it, feel it and see it.When I really experience a strawberry, all of these individual senses are combined.Thus, experience is a combination of "timbres" that have their workspace existent relationships accessible to the mind.Discussing the function of nerves in the delivery of sensation is helpful, because it allows us to differentiate ideas through the cognition of relationships.He outlines the physiological correlations between different kinds of sensations.How can this help us see the difference between sense and experience?

VI.Treatis on Physiological Optics by Helmholtz

Helmholtz proposes that phenomena regarding the visual system can be described by the use of analogy when things begin to look paradoxical.He takes into consideration the psychic faculties and suggests that the processing of the environment and its perceptual phenomena may occur through an unconscious working of analogy in the mind.I find this to be interesting and agreeable.It provides a humanist account through the recognition of biological factors regarding perceptual systems.VII.Principles of Gestalt Psychology

The facts of direct perception can be related intimately to observing and experiment.Koffka says that, "as a rule, things are what they look like" (BRP, 51).Why not just say, "things look like what

they are"?For, how can a table be seen when there is no table?Koffka introduces notions of proximal and distant, which he uses to conclude that one of two objects will only look larger than the other only if it is in the same vertical plane as the other when its retinal image is larger.The proximal stimulus allows us to see size.How does framing of the legs relatively decrease the efficacy of the retinal image in producing a depth perception?How does contour effect the perception of size when relating two objects in different perceivable planes of verticality?Recognition of an orthogonal plane of relational verticality that does not relate directly to the retinal image may be the method used for the visual system to make discernments of distance on the horizon.Is consciousness a concept and how does intentionality play into this?To observe creates an intention through cognition.Aristotle begins to try to categorize the meaning of sensation for perceptual systems of all types, "The term object of sense covers three kinds of objects, two kinds of which we call perceptible in themselves, while the remaining one is only incidentally perceptible.Of the first two kinds one consists of what is special to a single sense, the other of what is common to any and all of the senses" (De Anima, Bk II, 418 a 1 - 13).I.From The Senses Considered as Perceptual Systems, and The Ecological Approach to Visual Perception by James J.Gibson

Objects are given the ability to be able to be conceived in some terms, but not other terms.-For Gibson, information given during sensation is the information delivered to the receptor.Gibson suggests that information exists in the world already, similar to Husserl' s idea of meaning.Experience is a relation of the information given in the world and the imaginary adulated mind synnaptically relating to the realness of the idea of mind through the existence of a complex perceptual system.Gibson believes that the phenomena can be perceptually understood in terms of the parameters by which they are measured.Can residual images effect the perception of depth or change it within the processing of information through being, imbuing a perception of one' s own character of being?When Gibson says, "in the case of a perceptual system, the input - output loop can be supposed to obtain information, actively" (BRP, 78), he relates perception to the information that is learned.How will the idea of a narrative relate to this assertion?"That province of the senses which is to "furnish us with a variety of sensations" is by no means the same as that which is to 'make us perceive'" (BRP 72).By this, Reid and Gibson believe that there is another element to perception other than the information being detected by a sensing organism.If a perception is to have being, it must be loved, thus there must be an element of persona to endow it with meaning and structure.A perception exists in terms of true and only true, for when the senses go from relative rest to motion, the processes include acceleration, which is also in terms of only true, and exists only more complexly in terms of variable time.Each of these informational points of perceptual space, for Gibson, is containing a means by which the information contained within it can be understood purely in terms of actuality of the presence of a perceptual object or object of sense.The measurability of a threshold presents an interesting semantic conundrum.Threshold could mean many things."Stimulus energy varies along simple dimensions like intensity and frequency, but stimulus information varies along innumberable complex dimensions, not all amenable to physical measurement." With this idea, Gibson differentiates between the more objective elements of stimulus and the more subjective ones.However, isn' t all of the information readily available to me?The variants of energy flux at a particular receptor can be described by a grid of Boolean operators

that relate our perception of the true in our world and the actual space through which it delivers the awareness.From the Evolving Brain by R.Grant Steen, we can notice that, “the memory of a particular place is encoded in just one place cell.” It may be possible that when measuring objects in our environment, that the determination of their location through perceptual systems hinges on a single variable.The true stimuli of the world and receptor are not dependent on the actuality of anything’ s presence until a perception is founded from corroborating perceptions within definitions of concrete being.It can be shown that the easily measured variables of stimulus energy, the intensity of light, sound, odor, and touch, for example, vary from place to place and from time to time as the individual goes about his business in the environment” (BRP 73).I disagree strongly, and in fact, there is no variation in time past the first derivative of distance.II.From In and Out of the Black Box by David W.Hamlyn

What kind of a sensation is he talking about?Hamlyn is questioning the actual occurrence of perceptions.He says that sensuous elements of perception like touch allow for a vocabulary of sensation.I think sensations happen through response, but can be really expressed and introspected upon through logical statements of propositions and equalities.Hamlyn also touches on the issue of whether or not visual experience is required for perception, taking the position that sight is not required for perception, but vision is.He tries to limit the meaning of the word vision to the realm of seeing with the eyes by referring to the term seeing when discussing the lack of consciousness when there is no sensory aspect to the experience of light on the eyes.There is a sense and inference of space due to cognitive processing of complex perceptual systems.“To the extent that we are aware thereby of texture of the surface, the less are we likely to be aware of the sensations” (BPR 81).This sounds somewhat like the probability of finding a cat dead inside a box with a uranium death trigger.Perceptual space differs from physical space in that in physical space, there is never an occasion for infinity of weight, but with perceptual space, a single object of perception can take utmost, infinite priority during a given situation.Coming to awareness of an actual texture through physical sensation of touch requires that we abandon awareness of the sensations.When we are able to describe our sensational awareness’ s being true, we are less likely to be aware of these as exact specific sensations.The forms of spatial perception proper are dependent on the information in light that is more easily specified to an exact location with relation to the environment than when the form itself is more general without any qualities of light able to fixed to their structure.III.From Perception and Cognition by John Heil

Heil begins proposing his theory by giving the layout of a theory he wishes to denounce in part, if not entirely.This account, which he rejects, is the account of sensory modalities by Grice.He says that theories that are based in the use of modalities for pinpointing the characteristics of sensation are, “burdened with two major, and a host of minor liabilities” (BRP 89).These theories are ones that he argues are based on an inner evidence, or, an “internal feature” (BPR 89).One of these is that they are hard pressed to find a series of components to perceptual experiences that designate a perception.I think that neuroscience has made progress doing this by analyzing the brain, but I’ m sure that the same areas of the brain can be involved in multiple perceptual experiences.The other major “pitfall” is that all individuals do not perceive the world exactly the same.I do think that modes are relevant to discussing the perceptual system, but I think that they are general categories of linguistic expression

for stimuli, and do not capture the entire essence of the perceptual symphony.For instance, analogously, modalities of the physical stimuli of sound do not encompass all of the possible tonality.Heil acknowledges a character to senses and goes on to say that sensatory modalities are the physical characteristic of the stimuli, not some inner - workings of the mind to interpret information provided like, “features we become aware of by means of them” (BRP 88).Perception, I am presently convinced, can be afforded by a mind interpreting its physical surroundings.Heil is expanding the act of seeing to include any detection of the physical environment by an individual by the perceptual system due to the sense of light.How would a T - perceiver respond to visual illusions?IV.From The Will by Brian O’ Shaughnessy

O’ Shaughnessy presents an account of sense that comes from awareness.Are we made aware of depth by inference?Awareness is a cognitive process, but also a potentially inferential one.When we are aware of space, we are also aware of material, time, and energy.Is there a sense that exists through the awareness of one of these in terms of any of the other three that can be said to infer an absence and a presence?The author’ s project is to examine the will of the body and its relation to perceptual sensation.O’ Shaughnessy would like to allow for the recognition that sensation occurs during the aftereffect of light or physical stimuli, not just during their immediate presence.Does O’ Shaughnessy think that motions of the perceptual system are psychological?He talks about depth perception of a monocular system.A depth perception for a monocular visual experience requires multiple, sequential observations in which physical stimulus to the eye gives information to bring about awareness of the characteristics of the environment’ s actuality.When the author talks about hallucination, I cannot follow his logic entirely, for when he says, “For a mental image is a seeming seeing, but not in the sense of being the same experience as seeing” (BPR 107), isn’ t it that a hallucination is the belief in an actual presence, and a is belief related to the perception of the world insofar as we can rely on the visual system?The afterimage is a reality in so far as it takes up space in the mind and this space is translated into a characteristic informative experience through embodied mind’ s culminating vision of mind by anthropomorphic tendencies and the relinquishing of them into pure information.This resembles Gibson’ s input - output loop.V.From The Analysis of Sensation by Ernst Mach

Mach begins by verifying a belief in the space - sense, an area of parameterized space relating the sense of an individual to the stimulus in the world.The space - sense provides a workspace for the individual senses like sense of sight and touch to enable a perceptual experience.“The perception of Depth depends on extra - occular experiences” (BRP 118) is an idea that makes a great deal of sense to me, because when we experience or perceive truth, we use multiple faculties to make sense of a phenomenon.VI.From Molyneux’ s Question by Michael J.Morgan

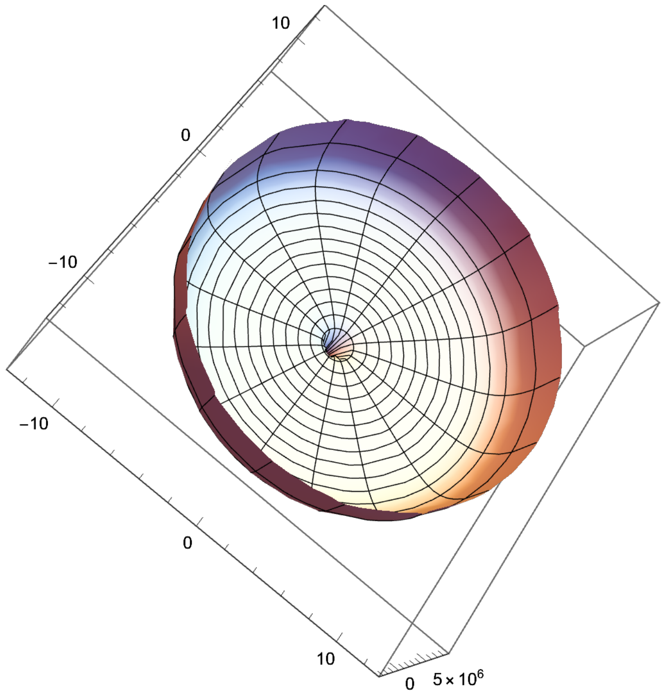
Morgan introduces the discussion with a discussion of Berkeley’ s theory, which, from the interpretation of it by G.M.Stratton, suggested that inverted perception created by wearing a set of prismatic glasses would eventually go back to normal for the perceiver.Merleau - Ponty provides a description of what the experience is like.Merleau - Ponty reports that the vision changed gradually, but sounds were

still hard to place unless the object was identified.Morgan suggests that the experiment concludes that, “perceptual space is not at all like the space of the physicist, an indifferent, isomorphic three - dimensional manifold, in which objects are situated sensible to feeling as to sight, and in which things are the same no matter how oriented” (BRP 121).When we experience the world, the laws of physics are evident and consequential.The theories and propositions that pertain to the delivery of the meaning and stimulus in and due to the physical reality are equally valid when finding analogies to decipher meaning from the world for the pursuit of happiness, eternality, and knowledge.VII.Molyneux’ s Question by Gareth Evans

If the man can eventually come to perceive relationships mathematically and gain enough knowledge through time, accustoming to the new perception of angles through sight, the answer is yes.It would be painful and hard, but plausible.A blind person can hear an amp and feel it at the same time.I think that Berkeley would be mistaken when thinking that touch could not have the same textural sense as sound.For Berkeley, sound and touch must occupy different areas of space - sense.If the blind man sees four dots, he can recognize the idea of four corners, which is in his database of prior experience.Vision with the eyes is a more immediate experience than perception with touch (feeling takes time), but that does not mean that the concept of the space taken up by a square cannot be conceived by a blind person and translated into mathematical language, then reapplied in a new method of perceiving the environment.Evans thinks that the notion of similarity will not apply.I agree, but I do think that the notion of realization could happen through a recognition of the parameters of the object with the newly acquired sensation.The conclusion would lead to the idea of language’ s being a super - structure to the mind.We can tell a lot about something just by seeing it.

$$r = \frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi - \theta}} = \frac{2\pi\, r\, \mathrm{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} = \frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi - \theta)\,\theta}\, \mathrm{Csc}[\theta]}{\pi\, \sqrt{4\pi - \theta}}$$

$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400},\{\theta,-4\pi,4\pi\}\right]$$



$$\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\left[\theta==2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\beta\right]$$

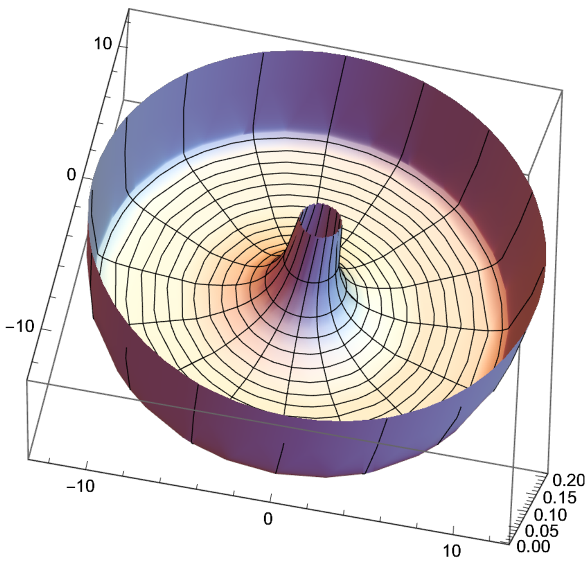
$$\left\{\left\{\beta\to-\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right\},\left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right\}\right\}$$

$$r=\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\pi\theta-\theta^2}\,\text{Csc}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]}{8\pi^2\sqrt{\theta}}$$

$$\left\{\left\{r\to-\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\},\left\{r\to\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

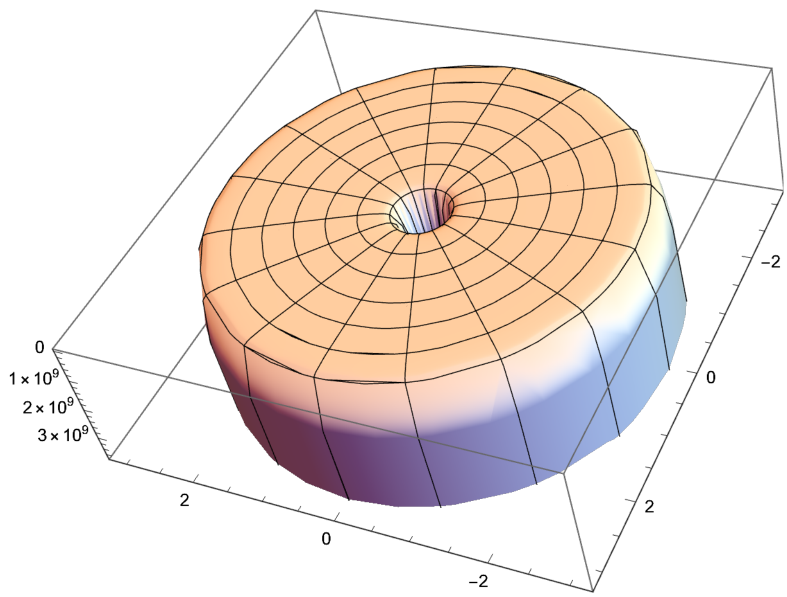
$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$\texttt{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}\;\texttt{Csc}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{8\,\pi^2\,\sqrt{\theta}},\{\theta,-13,13\}\right]$$

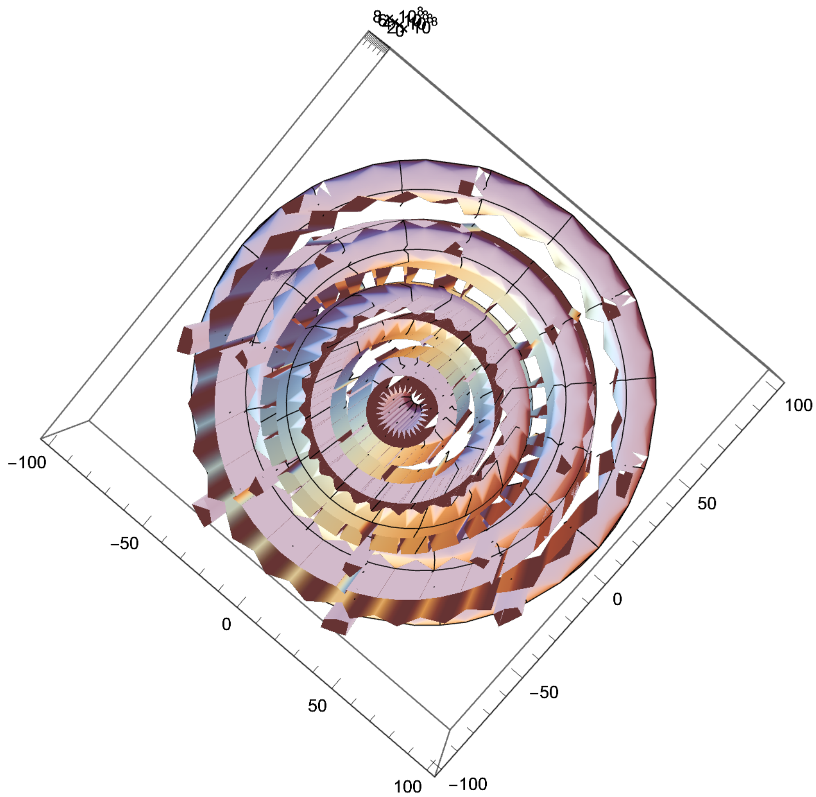


```
RevolutionPlot3D[
```

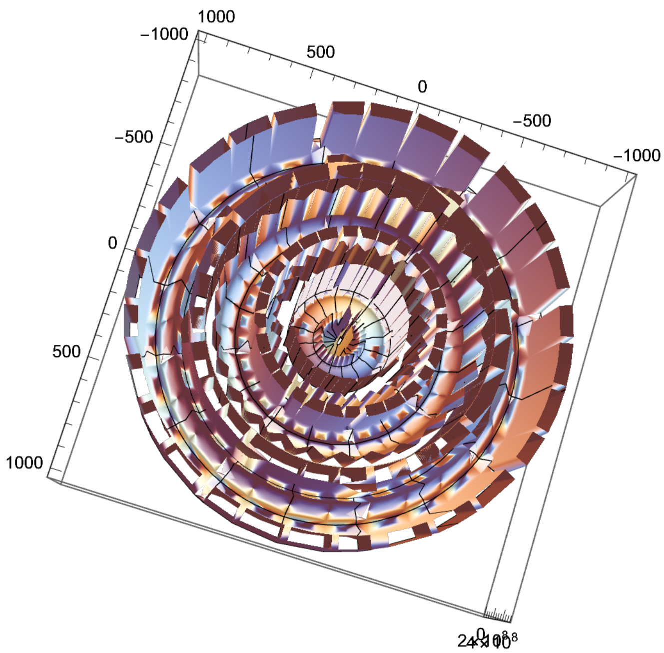
$$\frac{1}{1166400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}+\frac{1620\,c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\ \{\beta,-\pi,\pi\}\Big]$$



$$\text{RevolutionPlot3D}\Big[\frac{1}{1\,166\,400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\,\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}+\frac{1620\,c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\{\beta,-100,100\}\Big]$$



$$\text{RevolutionPlot3D}\Big[\frac{1}{1\,166\,400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}+\frac{1620\,c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\ \{\beta,-1000,1000\}\Big]$$



$$\text{SphericalPlot3D}\Big[\frac{1}{1\,166\,400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}+\frac{1620\,c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\ \{\theta,-13,13\}\ \{\beta,-13,13\}\Big]$$

From $\eta == \dfrac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$,

$$\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}=2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

$$\mathrm{Solve}\left[\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right),\,r\right]$$

$$\{\{r\to-\eta\,\mathrm{Csc}[\beta]\},\,\{r\to\eta\,\mathrm{Csc}[\beta]\}\}$$

$$\mathrm{Solve}\left[\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right),\,\eta\right]$$

$$\{\{\eta\to-r\,\mathrm{Sin}[\beta]\},\,\{\eta\to r\,\mathrm{Sin}[\beta]\}\}$$

$$\mathrm{Solve}\left[\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right),\,\beta\right]$$

$$\left\{\left\{\beta\to-\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\},\,\left\{\beta\to\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}\right\}$$

$$\text{From }\mathrm{D}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]=\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}=\frac{2\,\pi\,\eta}{\theta},$$

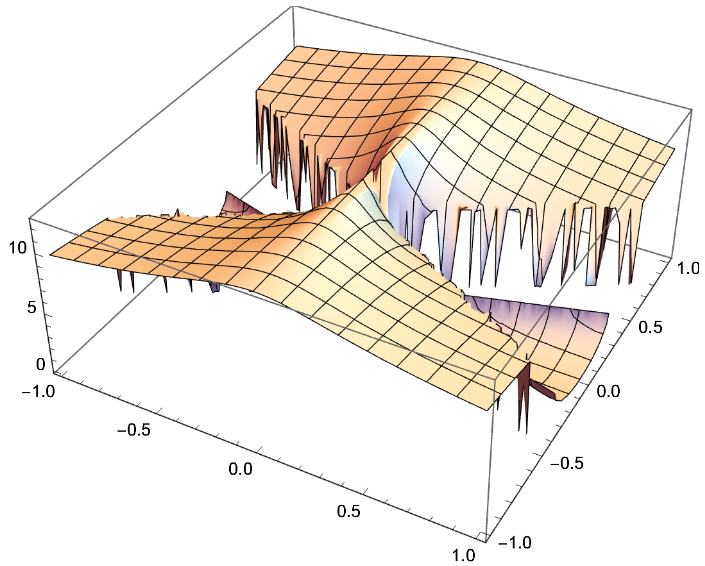
$$\theta=\frac{4\,\pi}{3}+\frac{-4\,\pi^2\,r^4+12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}-$$

$$\frac{2\,\pi\left(r^6-18\,r^4\,\eta^2+3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2+11\,r^8\,\eta^4+r^6\,\eta^6}\right)^{1/3}}{3\,r^2}==$$

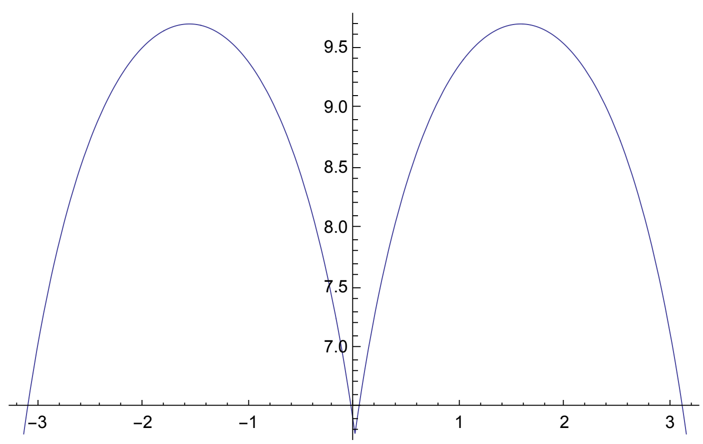
$$\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+$$

$$\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}$$

$$\text{Plot3D}\left[\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2 \eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2},\{r,-1,1\},\{\eta,-1,1\}\right]$$



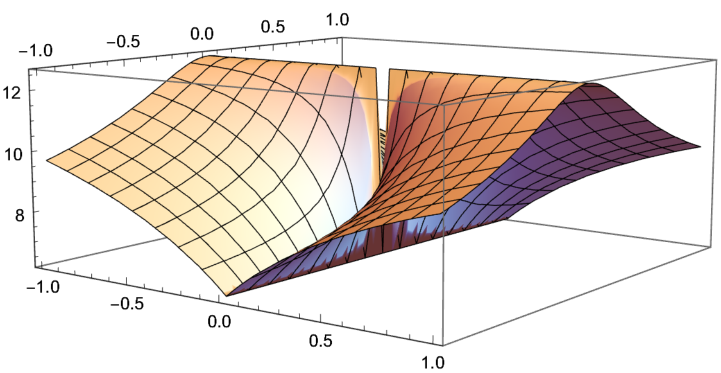
$$\text{Plot}\left[\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3},\{\beta,-\pi,\pi\}\right]$$



$$\theta = \frac{4\,\pi}{3} + \frac{-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2\,\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} - \frac{2\,\pi\,\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2} ==$$

$$\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^2\right) \Big/ \left(6\,\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^2 + 3\,\sqrt{3}\,\sqrt{\left(-\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^2 + 11\,\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^4 + \pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^6\right)}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^2 + 3\,\sqrt{3}\,\sqrt{\left(-\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^2 + 11\,\pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^4 + \pi^6\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right]^6\right)}\right)^{1/3}$$

$$\text{Plot3D}\Big[\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2\right) \Big/ \left(6\left(-\pi^3 + 18\,\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2 + 3\,\sqrt{3}\,\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2 + 11\,\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4 + \pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2 + 3\,\sqrt{3}\,\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2 + 11\,\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4 + \pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3},\ \{\eta, -1, 1\},\ \{r, -1, 1\}\Big]$$



$$\text{Solve}\Big[\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18 r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11 r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18 r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11 r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3 r^2}==$$

$$\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2\right)\Big/$$

$$\left(6\left(-\pi^3+18\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+11\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3}\right)+$$

$$\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+11\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3},\ r\Big]$$

{{}}

$$\text{Solve}\Big[\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2}==$$

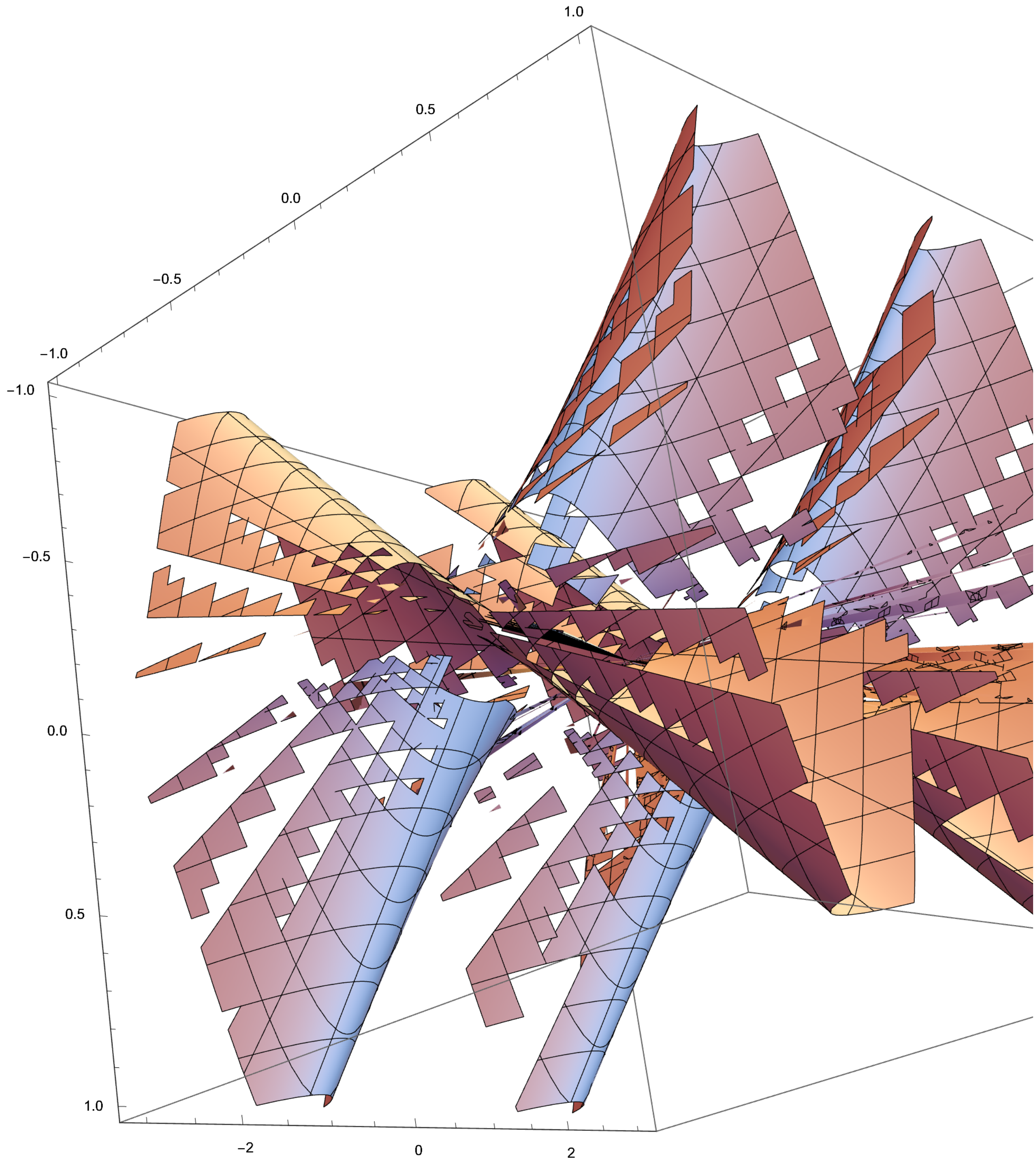
$$\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+11\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3}\right)+$$

$$\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+3\sqrt{3}\sqrt{\left(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^2+11\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{r^2}}\Big]\Big]^6\right)}\right)^{1/3},\ \eta\Big]$$

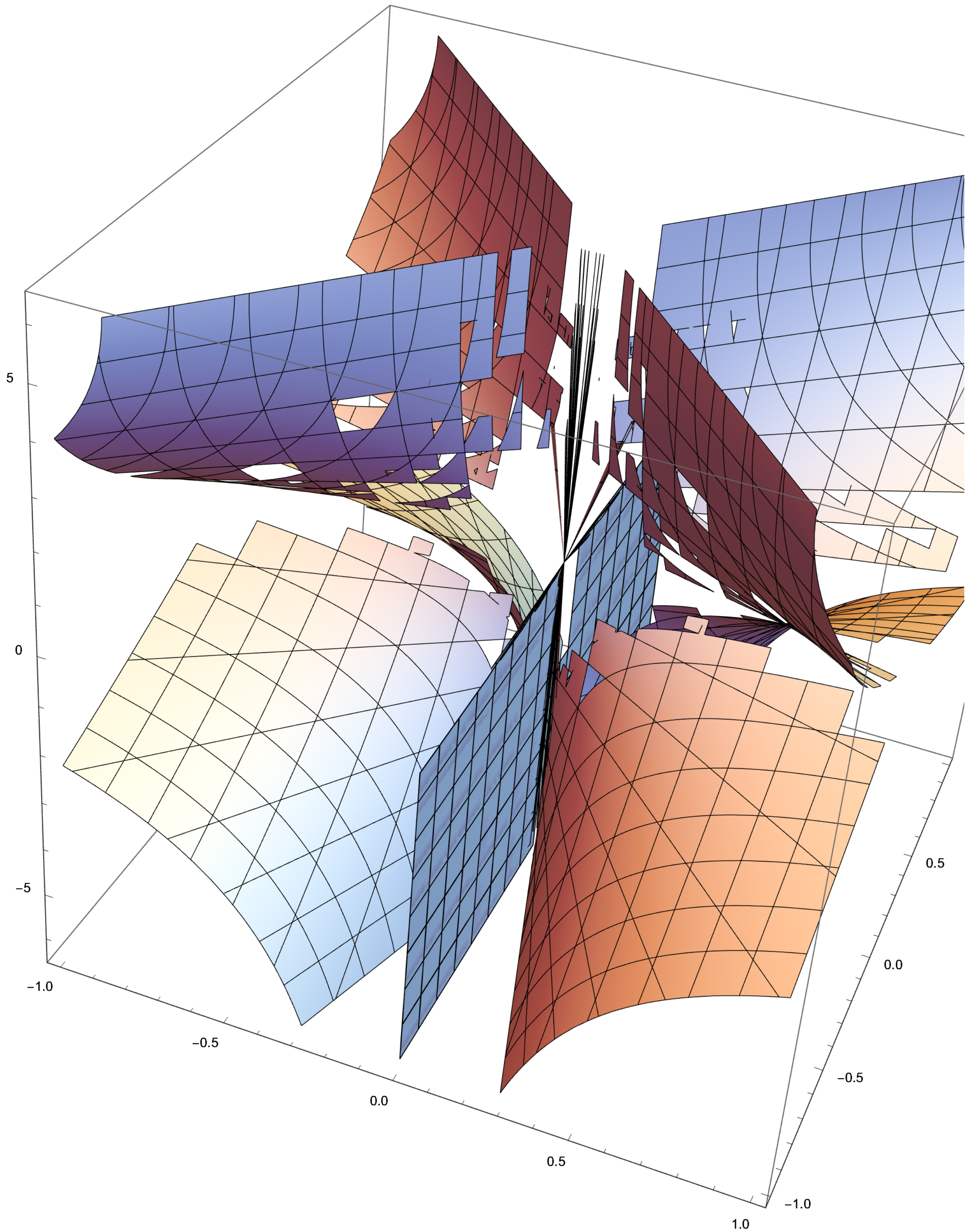
{{}}

$$
\begin{aligned}
&\text{Solve}\Big[\frac{4\,\pi}{3}+\left(-4\,\pi^2\,(\eta\,\text{Csc}[\beta])^4+12\,\pi^2\,(\eta\,\text{Csc}[\beta])^2\,(\text{r}\,\text{Sin}[\beta])^2\right)\Big/\\
&\quad\Big(6\,\pi\,(\eta\,\text{Csc}[\beta])^2\,\Big((\eta\,\text{Csc}[\beta])^6-18\,(\eta\,\text{Csc}[\beta])^4\,(\text{r}\,\text{Sin}[\beta])^2+3\,\sqrt{3}\,\sqrt{}\Big(-(\eta\,\text{Csc}[\beta])^{10}\\
&\qquad\qquad(\text{r}\,\text{Sin}[\beta])^2+11\,(\eta\,\text{Csc}[\beta])^8\,(\text{r}\,\text{Sin}[\beta])^4+(\eta\,\text{Csc}[\beta])^6\,(\text{r}\,\text{Sin}[\beta])^6\Big)\Big)^{1/3}\Big)-\\
&\quad\frac{1}{3\,(\eta\,\text{Csc}[\beta])^2}\,2\,\pi\,\Big((\eta\,\text{Csc}[\beta])^6-18\,(\eta\,\text{Csc}[\beta])^4\,(\text{r}\,\text{Sin}[\beta])^2+3\,\sqrt{3}\,\sqrt{}\Big(-(\eta\,\text{Csc}[\beta])^{10}\\
&\qquad\qquad(\text{r}\,\text{Sin}[\beta])^2+11\,(\eta\,\text{Csc}[\beta])^8\,(\text{r}\,\text{Sin}[\beta])^4+(\eta\,\text{Csc}[\beta])^6\,(\text{r}\,\text{Sin}[\beta])^6\Big)\Big)^{1/3}==\\
&\quad\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^2\right)\Big/\Bigg(6\,\Bigg(-\pi^3+18\,\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^2+\\
&\qquad\qquad 3\,\sqrt{3}\,\sqrt{\Bigg(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^2+
11\,\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^6\Bigg)}\Bigg)^{1/3}\Bigg)+\\
&\quad\frac{2}{3}\,\Bigg(-\pi^3+18\,\pi^3\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^2+3\,\sqrt{3}\,\sqrt{\Bigg(-\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^2+\\
&\qquad\qquad 11\,\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^4+\pi^6\,\text{Sin}\Big[\text{ArcSin}\Big[\sqrt{\frac{\eta^2}{\text{r}^2}}\Big]\Big]^6\Bigg)}\Bigg)^{1/3},\ \eta\Big]
\end{aligned}
$$

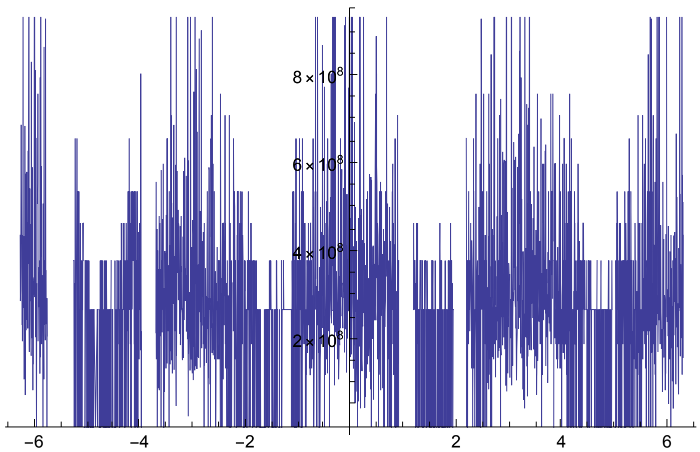
$$
\begin{aligned}
&\text{ContourPlot3D}\Big[\frac{4\,\pi}{3}+\left(-4\,\pi^2\,(\eta\,\text{Csc}[\beta])^4+12\,\pi^2\,(\eta\,\text{Csc}[\beta])^2\,(\text{r}\,\text{Sin}[\beta])^2\right)\Big/\\
&\quad\Big(6\,\pi\,(\eta\,\text{Csc}[\beta])^2\,\Big((\eta\,\text{Csc}[\beta])^6-18\,(\eta\,\text{Csc}[\beta])^4\,(\text{r}\,\text{Sin}[\beta])^2+3\,\sqrt{3}\,\sqrt{}\Big(-(\eta\,\text{Csc}[\beta])^{10}\\
&\qquad\qquad(\text{r}\,\text{Sin}[\beta])^2+11\,(\eta\,\text{Csc}[\beta])^8\,(\text{r}\,\text{Sin}[\beta])^4+(\eta\,\text{Csc}[\beta])^6\,(\text{r}\,\text{Sin}[\beta])^6\Big)\Big)^{1/3}\Big)-\\
&\quad\frac{1}{3\,(\eta\,\text{Csc}[\beta])^2}\,2\,\pi\,\Big((\eta\,\text{Csc}[\beta])^6-18\,(\eta\,\text{Csc}[\beta])^4\,(\text{r}\,\text{Sin}[\beta])^2+\\
&\qquad 3\,\sqrt{3}\,\sqrt{}\Big(-(\eta\,\text{Csc}[\beta])^{10}\,(\text{r}\,\text{Sin}[\beta])^2+11\,(\eta\,\text{Csc}[\beta])^8\,(\text{r}\,\text{Sin}[\beta])^4+\\
&\qquad\qquad(\eta\,\text{Csc}[\beta])^6\,(\text{r}\,\text{Sin}[\beta])^6\Big)\Big)^{1/3},\ \{\text{r},-1,1\},\ \{\eta,-1,1\},\ \{\beta,-\pi,\pi\}\Big]
\end{aligned}
$$


1.0
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0
−2
0
2

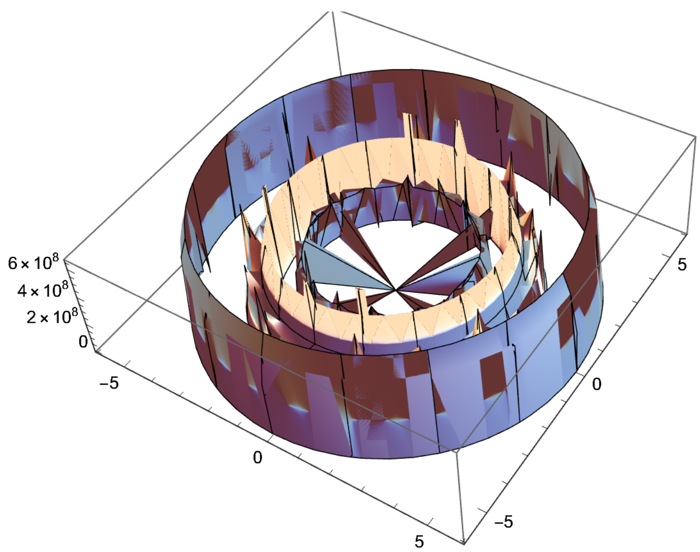
$$
\begin{aligned}
&\text{ContourPlot3D}\Big[\frac{4\,\pi}{3}+\Bigg(-4\,\pi^2\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^4+\\
&\quad 12\,\pi^2\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2\Bigg)\Big/\\
&\quad\Bigg(6\,\pi\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2\Bigg(\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6-\\
&\qquad 18\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^4\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2+\\
&\qquad 3\,\sqrt{3}\,\sqrt{\Bigg(-\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^{10}\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2+}\\
&\qquad\quad 11\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^8\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^4+\\
&\qquad\quad \left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6\Bigg)\Bigg)^{1/3}\Bigg)-\\
&\quad \frac{1}{3\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2}\,2\,\pi\,\Bigg(\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6-\\
&\qquad 18\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^4\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2+\\
&\qquad 3\,\sqrt{3}\,\sqrt{\Bigg(-\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^{10}\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^2+}\\
&\qquad\quad 11\left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^8\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^4+\\
&\qquad\quad \left(\eta\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6\left(\text{r}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right)^6\Bigg)\Bigg)^{1/3},\\
&\{\text{r},-1,1\},\{\eta,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\Big]
\end{aligned}
$$


5
0
−5
−1.0
−0.5
0.0
0.5
1.0
0.5
0.0
−0.5
−1.0

$$\text{Plot}\left[\left(\sqrt{\left(-1.1294090667581471\grave{}*\wedge 18 \times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176\grave{}*\wedge 16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+3.5481432270250993\grave{}*\wedge 18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\grave{}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+39.47841760435743\grave{}\,\text{Sin}[\beta]^2\right)}\right),\{\beta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\Big[\left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176\grave{}*\hat{}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\grave{}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+39.47841760435743\grave{}\,\text{Sin}[\beta]^2\right)}\right),\{\beta,-2\,\pi,2\,\pi\}\Big]$$



$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

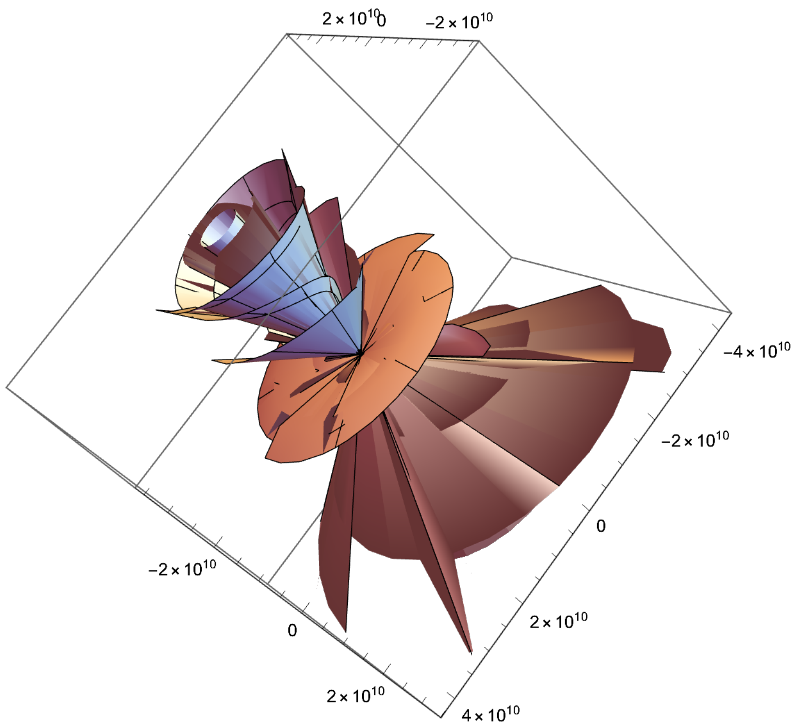
$$\text{RevolutionPlot3D}\Big[\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big/2\,\pi\right)\left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176\grave{}*\hat{}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\grave{}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+39.47841760435743\grave{}\,\text{Sin}[\beta]^2\right)}\right),\{\beta,-2\,\pi,2\,\pi\}\Big]$$

$$\text{if } r = vt = \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) \middle/ 2\pi\right)$$
$$\left(\sqrt{\left(-1.1294090667581471\text{`}*\text{^}18 \times 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + 8.987551787368176\text{`}*\text{^}16\right.}\right.$$
$$\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\right) \Big/$$
$$\left(\sqrt{\left(-12.566370614359172\text{`}\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + \right.}\right.$$
$$\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)$$

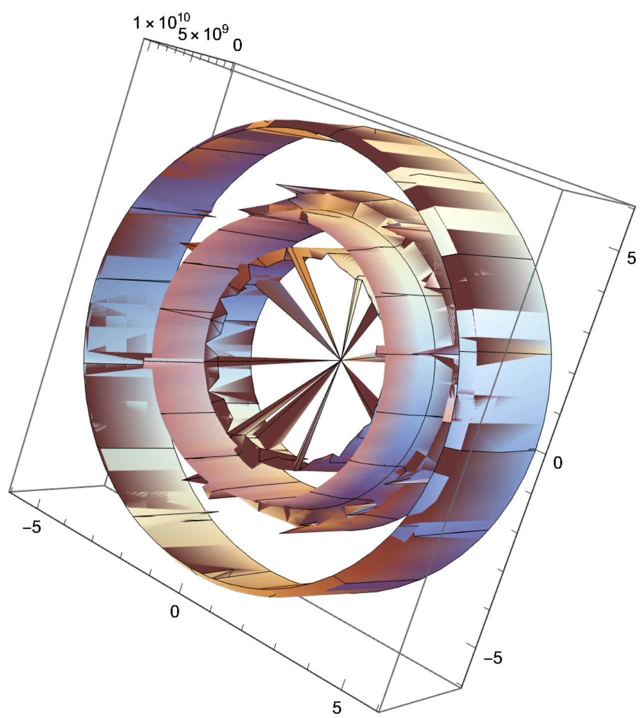
$$\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} = \frac{1}{2\pi}$$

$$\left(\sqrt{\left(4\pi\left(\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) \middle/ 2\pi\right)\left(\sqrt{\left(-1.1294090667581471\text{`}*\text{^}18 \times\right.}\right.\right.\right.}\right.$$
$$2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + 8.987551787368176\text{`}*\text{^}16$$
$$\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\right) \Big/$$
$$\left(\sqrt{\left(-12.566370614359172\text{`}\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + \right.}\right.$$
$$\left.\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\right)^2 \theta -$$
$$\left(\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) \middle/ 2\pi\right)\left(\sqrt{\left(-1.1294090667581471\text{`}*\text{^}18 \times 2\right.}\right.\right.$$
$$\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + 8.987551787368176\text{`}*\text{^}16$$
$$\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\right) \Big/$$
$$\left(\sqrt{\left(-12.566370614359172\text{`}\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + \right.}\right.$$
$$\left.\left.\left.\left.\left.\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\right)^2 \theta^2\right)\right)$$

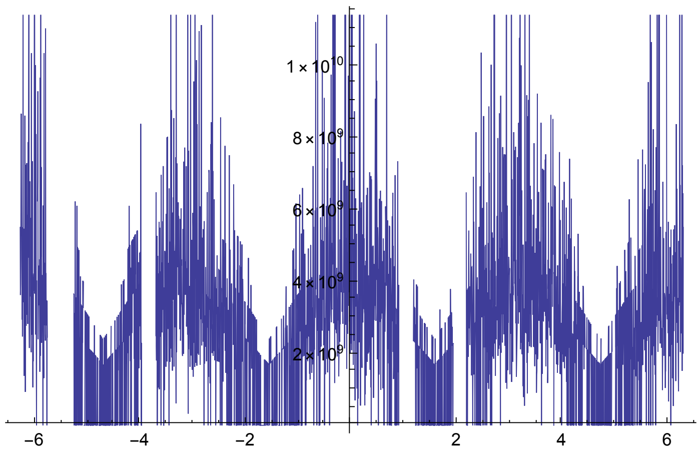
```
SphericalPlot3D[
 (√(4 π (((2 (π + √(π^2 - π^2 Sin[β]^2))) / 2 π) (√(-1.1294090667581471`*^18 × 2
          (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16
          (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
      (√(-12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
          (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743` Sin[β]^2)))^2 θ -
    (((2 (π + √(π^2 - π^2 Sin[β]^2))) / 2 π) (√(-1.1294090667581471`*^18 × 2
          (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16
          (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
      (√(-12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
          (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 39.47841760435743`
          Sin[β]^2)))^2 θ^2))), {β, -π, π}, {θ, -2 π, 2 π}]
```


2 × 10^10
0
−2 × 10^10
−4 × 10^10
−2 × 10^10
0
2 × 10^10
4 × 10^10
−2 × 10^10
0
2 × 10^10

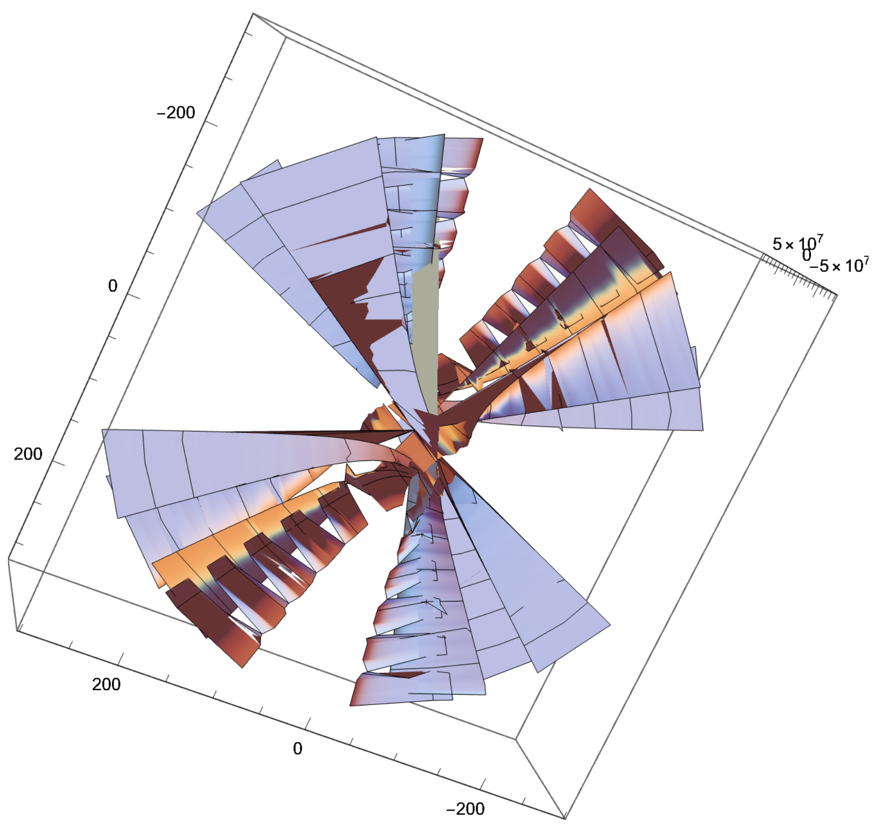
```
RevolutionPlot3D[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)
  (Sqrt[(-1.1294090667581471`*^18 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 8.987551787368176`*^16
        (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + 3.5481432270250993`*^18 Sin[β]^2)] /
    (Sqrt[(-12.566370614359172` (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
        39.47841760435743` Sin[β]^2)]), {β, -2 π, 2 π}]
```



```
RevolutionPlot[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)
  (Sqrt[(-1.1294090667581471`*^18 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 8.987551787368176`*^16
        (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + 3.5481432270250993`*^18 Sin[β]^2)] /
   (Sqrt[(-12.566370614359172` (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
        39.47841760435743` Sin[β]^2)]), {β, -2 π, 2 π}]
```



```
RevolutionPlot3D[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / k)
  (Sqrt[(-1.1294090667581471`*^18 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 8.987551787368176`*^16
      (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + 3.5481432270250993`*^18 Sin[β]^2)] /
  (Sqrt[(-12.566370614359172` (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      39.47841760435743` Sin[β]^2)]), {k, -100 π, 100 π}, {β, -2 π, 2 π}]
```



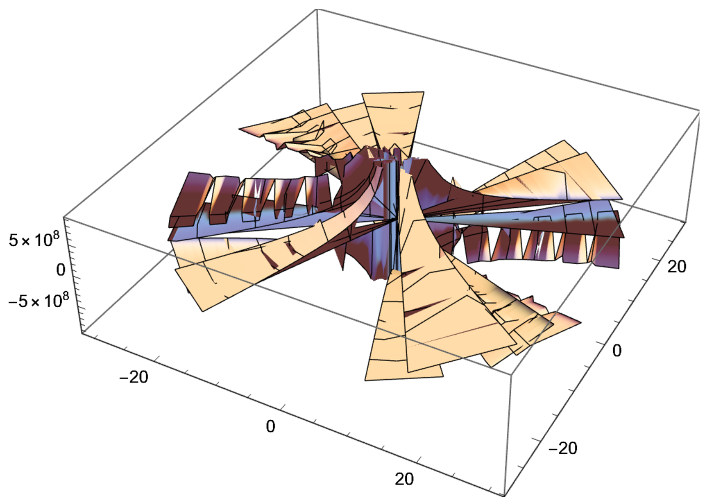
$$\text{RevolutionPlot3D}\Big[\Big(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big/\,k\Big)$$

$$\left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176`*^{\wedge}16\right.}\right.$$

$$\left.\left.\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(\sqrt{\left(-12.566370614359172`\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+\right.}\right.$$

$$\left.\left.39.47841760435743`\,\text{Sin}[\beta]^2\right)\right),\ \{k,-10\,\pi,10\,\pi\},\ \{\beta,-2\,\pi,2\,\pi\}\Big]$$



$$\text{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

$$\text{D}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\,\theta\right]$$

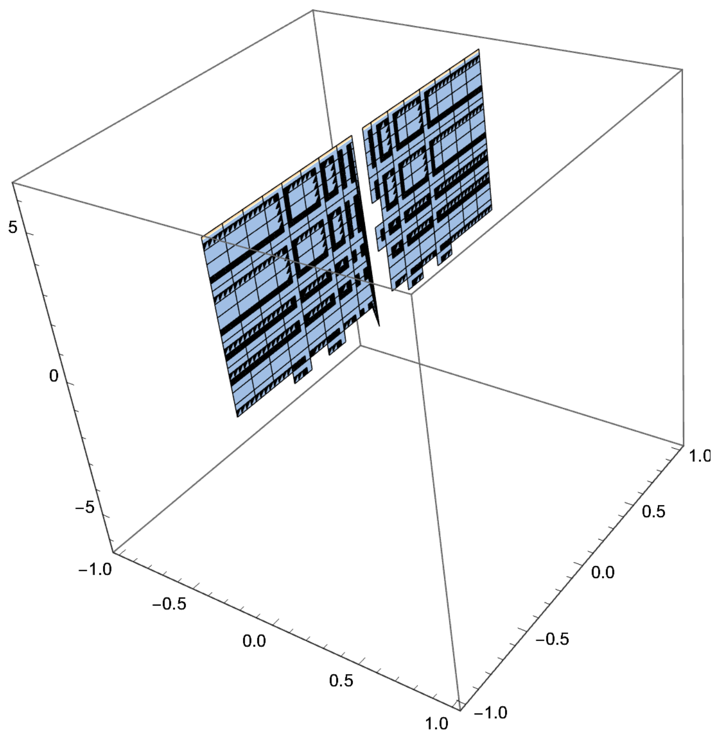
$$-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2}{2\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

$$\int\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2}{2\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)d\theta$$

$$-m\,\frac{r^2\,(-2\,\pi+\theta)}{2\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}$$

$$m \int F\, dt = -m \frac{r^2 (-2\pi + \theta)}{2\pi \sqrt{r^2 (4\pi - \theta)\, \theta}} = W$$

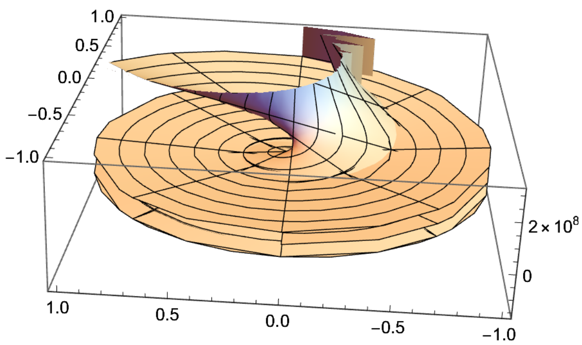
$$\text{ContourPlot3D}\left[-m \frac{r^2 (-2\pi + \theta)}{2\pi \sqrt{r^2 (4\pi - \theta)\, \theta}}, \{m, -1, 1\}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$




```
D[(√(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), θ]
```

$$\left(-1.12941 \times 10^{18} + 1.79751 \times 10^{17}\, \theta\right) \Big/ \left(2 \sqrt{39.4784 - 12.5664\, \theta + \theta^2}\, \sqrt{3.54814 \times 10^{18} - 1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2}\right) - \frac{(-12.5664 + 2\,\theta) \sqrt{3.54814 \times 10^{18} - 1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2}}{2 \left(39.4784 - 12.5664\, \theta + \theta^2\right)^{3/2}}$$

$$\text{RevolutionPlot3D}\Big[m\,(-1.1294090667581471`*^18 + 1.7975103574736352`*^17\,\theta)\Big/\Big(2\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + \theta^2}\,\sqrt{(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2)}\Big) - \Big((-12.566370614359172` + 2\,\theta)\,\sqrt{(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2)}\Big)\Big/\Big(2\,(39.47841760435743` - 12.566370614359172`\,\theta + \theta^2)^{3/2}\Big),\ \{m, -1, 1\},\ \{\theta, -2\pi, 2\pi\}\Big]$$



$$\text{Solve}\Big[m\,(-1.1294090667581471`*^18 + 1.7975103574736352`*^17\,\theta)\Big/\Big(2\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + \theta^2}\,\sqrt{(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2)}\Big) - \Big((-12.566370614359172` + 2\,\theta)\,\sqrt{(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2)}\Big)\Big/\Big(2\,(39.47841760435743` - 12.566370614359172`\,\theta + \theta^2)^{3/2}\Big) == F,\ \theta\Big]$$

$$\Bigg\{\Bigg\{\theta \to -\frac{0.25\,\left(2.99792\times10^{8} - 25.1327\,F - 2.99792\times10^{8}\,m\right)}{F} - 0.5\sqrt{\Bigg(\frac{0.25\,\left(2.99792\times10^{8} - 25.1327\,F - 2.99792\times10^{8}\,m\right)^2}{F^2} - \frac{1.\,\left(-5.65095\times10^{9} + 236.871\,F + 5.65095\times10^{9}\,m\right)}{F} + \frac{1}{F}\,2.45695\times10^{-29}\,\left(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m\right) + \Big(0.547258\,\big(-2.66941\times10^{31} + 2.43558\times10^{24}\,F + 1.\,F^2 + 5.33882\times10^{31}\,m - 2.43558\times10^{24}\,F\,m - 2.66941\times10^{31}\,m^2\big)\Big)\Big/\Big(F\,\Big(3.66307\times10^{29}\,F\,\left(4.81708\times10^{38} - 1.34611\times10^{31}\,F - 4.81708\times10^{38}\,m\right)^2 - 9.\,\left(4.81708\times10^{38} - 1.34611\times10^{31}\,F - 4.81708\times10^{38}\,m\right)\,\left(4.06727\times10^{36} - 3.40974\times10^{29}\,F - 4.06727\times10^{36}\,m\right)\,\left(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + \right.$$

$$7.66662\times10^{37}\,m)+2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-$$

$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$

$$\sqrt{}\Big(-4.\,(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+$$

$$\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$

$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$

$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$

$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$

$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$

$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\Big)^2\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{F}\,1.95008\times10^{-29}\,\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$

$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$

$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$

$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-$$

$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$

$$\sqrt{}\Big(-4.\,(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+$$

$$\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$

$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$

$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$

$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$

$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$

$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^2\Big)\Big)^{1/3}\Big)-$$

$$0.5\sqrt{\Bigg(\frac{0.5\left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^{2}}{F^{2}}-}$$

$$\frac{1.\left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)}{F}-$$

$$\frac{1}{F}$$

$$2.45695\times10^{-29}$$

$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)-$$

$$\Big(0.547258\,\big(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^{2}+$$

$$5.33882\times10^{31}\,m-2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^{2}\big)\Big)\Big/$$

$$\Big(F\,\Big(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^{2}-$$

$$9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$$

$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$

$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+2.$$

$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+27.$$

$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times10^{29}$$

$$F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+$$

$$\sqrt{\Big(-4.\,\big(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^{2}+}$$

$$9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^{2}\big)^{3}+$$

$$\Big(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^{2}-$$

$$9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$$

$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$

$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$

$$2.\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$

$$27.\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times$$

$$10^{29}\,F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^{2}\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{F}\,1.95008\times10^{-29}\,\Big(3.66307\times10^{29}\,F\,\big(4.81708\times10^{38}-1.34611\times10^{31}\,F-$$

$$4.81708\times10^{38}\,m\big)^{2}-9.\,\big(4.81708\times10^{38}-1.34611\times10^{31}\,F-$$

$$4.81708\times10^{38}\,m)\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$
$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$
$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-$$
$$9.7682\times10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+$$
$$\sqrt{}\Big(-4.\ \big(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^{2}+$$
$$9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^{2}\big)^{3}+$$
$$\Big(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^{2}-$$
$$9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$$
$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$
$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$
$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times$$
$$10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^{2}\Big)\Big)^{1/3}-$$
$$\Bigg(0.25\ \Bigg(-\frac{8.\ \left(3.5506\times10^{10}-992.201\,F-3.5506\times10^{10}\,m\right)}{F}-$$
$$\frac{1.\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^{3}}{F^{3}}+$$
$$\frac{1}{F^{2}}\,4.\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)$$
$$\left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)\Bigg)\Bigg)\Big/$$
$$\Bigg(\sqrt{}\Bigg(\frac{0.25\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^{2}}{F^{2}}-$$
$$\frac{1.\ \left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)}{F}+$$
$$\frac{1}{F}\,2.45695\times10^{-29}\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$\big(0.547258\ \big(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^{2}+$$
$$5.33882\times10^{31}\,m-2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^{2}\big)\big)\Big/$$
$$\Big(F\ \Big(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^{2}-$$

$$9.\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-$$
$$9.7682\times10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)+$$
$$\sqrt{}\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\ F+1.76788\times10^{28}\ F^2+$$
$$9.43837\times10^{59}\ m-4.30581\times10^{52}\ F\ m-4.71919\times10^{59}\ m^2)^3+$$
$$\Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-$$
$$4.81708\times10^{38}\ m)^2-9.\ (4.81708\times10^{38}-$$
$$1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-$$
$$9.7682\times10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+$$
$$7.66662\times10^{37}\ m)\ (-1.00889\times10^{39}+2.11447\times10^{31}\ F+$$
$$1.00889\times10^{39}\ m)\Big)^2\Big)\Big)^{1/3}\Big)+\frac{1}{F}\ 1.95008\times10^{-29}$$
$$\Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)^2-$$
$$9.\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-$$
$$9.7682\times10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)+$$
$$\sqrt{}\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\ F+1.76788\times10^{28}\ F^2+$$
$$9.43837\times10^{59}\ m-4.30581\times10^{52}\ F\ m-4.71919\times10^{59}\ m^2)^3+$$
$$\Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-$$
$$4.81708\times10^{38}\ m)^2-9.$$
$$(4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$

$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\;+$$
$$2.\;(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^{3}\;+$$
$$27.\;(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^{2}$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\;-$$
$$9.7682\times10^{29}\,F\;(-7.66662\times10^{37}+3.21361\times10^{30}\,F\;+$$
$$7.66662\times10^{37}\,m)\;(-1.00889\times10^{39}\;+$$
$$2.11447\times10^{31}\,F+1.00889\times10^{39}\,m))^{2}))^{1/3}))))\},$$

$$\{\theta\to-\frac{0.25\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)}{F}\;-$$
$$0.5$$
$$\sqrt{\Big(\frac{0.25\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)^{2}}{F^{2}}\;-}$$
$$\frac{1.\;(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m)}{F}\;+$$
$$\frac{1}{F}$$
$$2.45695\times$$
$$10^{-29}$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F\;+$$
$$7.66662\times10^{37}\,m)\;+$$
$$(0.547258\;(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^{2}+5.33882\times10^{31}\,m\;-$$
$$2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^{2}))\Big/$$
$$(F\;(3.66307\times10^{29}\,F\;(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^{2}\;-$$
$$9.\;(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\;+2.$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^{3}+27.$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^{2}$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\;-9.7682\times10^{29}$$
$$F\;(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\;+$$
$$\sqrt{(-4.\;(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^{2}\;+}$$
$$9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^{2})^{3}\;+$$
$$(3.66307\times10^{29}\,F\;(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^{2}\;-$$
$$9.\;(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$

$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$

$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$

$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+$

$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2$

$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times$

$10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$

$\left.\left.\left.\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\right)^2\right)\right)^{1/3}\Big)+$

$\frac{1}{F}\,1.95008\times10^{-29}\ \Big(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-\right.$

$\left.4.81708\times10^{38}\,m\right)^2-9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-\right.$

$\left.4.81708\times10^{38}\,m\right)\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$

$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$

$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+$

$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2$

$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-$

$9.7682\times10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$

$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+$

$\sqrt{}\Big(-4.\ \left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+\right.$

$\left.9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2\right)^3+$

$\Big(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-$

$9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$

$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$

$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$

$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+$

$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2$

$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times$

$10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$

$\left.\left.\left.\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\right)^2\right)\right)^{1/3}\Big)+$

$0.5\ \sqrt{}\Bigg(\Bigg(\frac{0.5\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^2}{F^2}-$

$\frac{1.\ \left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)}{F}-$

$\frac{1}{F}$

$2.45695\times$

$$
\begin{aligned}
&10^{-29} \\
&\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+\right. \\
&\quad\left.7.66662\times10^{37}\,m\right)- \\
&\left(0.547258\left(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^2+5.33882\times10^{31}\,m-\right.\right. \\
&\quad\left.\left.2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^2\right)\right)\Big/ \\
&\left(F\left(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-\right.\right. \\
&\quad 9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right) \\
&\quad\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right) \\
&\quad\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+2. \\
&\quad\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+27. \\
&\quad\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2 \\
&\quad\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times10^{29} \\
&\quad F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right) \\
&\quad\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+ \\
&\quad\sqrt{}\left(-4.\left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+\right.\right. \\
&\qquad\left.9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2\right)^3+ \\
&\qquad\left(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-\right. \\
&\qquad 9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right) \\
&\qquad\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right) \\
&\qquad\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+ \\
&\qquad 2.\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+ \\
&\qquad 27.\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2 \\
&\qquad\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times \\
&\qquad 10^{29}\,F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right) \\
&\qquad\left.\left.\left.\left.\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\right)^2\right)\right)^{1/3}\right)- \\
&\frac{1}{F}\,1.95008\times10^{-29}\left(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-\right.\right. \\
&\quad\left.4.81708\times10^{38}\,m\right)^2-9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-\right. \\
&\quad\left.4.81708\times10^{38}\,m\right)\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right) \\
&\quad\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+ \\
&\quad 2.\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+ \\
&\quad 27.\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2 \\
&\quad\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)- \\
&\quad 9.7682\times10^{29}\,F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right) \\
&\quad\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+ \\
&\quad\sqrt{}\left(-4.\left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+\right.\right.
\end{aligned}
$$

$$9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+$$
$$(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$
$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$
$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$
$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times$$
$$10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m))^2))^{1/3}-$$
$$\Bigg(0.25\,\Bigg(-\frac{8.\,(3.5506\times10^{10}-992.201\,F-3.5506\times10^{10}\,m)}{F}-$$
$$\frac{1.\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)^3}{F^3}+$$
$$\frac{1}{F^2}\,4.\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)$$
$$(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m)\Bigg)\Bigg)\Big/$$
$$\Bigg(\sqrt{\Bigg(\frac{0.25\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)^2}{F^2}-}$$
$$\frac{1.\,(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m)}{F}+$$
$$\frac{1}{F}\,2.45695\times10^{-29}\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$
$$(0.547258\,(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^2+$$
$$5.33882\times10^{31}\,m-2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^2))\Big/$$
$$(F\,(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$
$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$
$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$
$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-$$
$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$

$$\sqrt{\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\,(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\,(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\Big)^2\Big)}\Bigg)^{1/3}\Bigg)+\frac{1}{F}\,1.95008\times10^{-29}$$

$$\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\,(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\,(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$

$$\sqrt{\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\,(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\,(-1.00889\times10^{39}+}$$

$$2.11447\times 10^{31}\ F+1.00889\times 10^{39}\ m))^{2}))^{1/3}))))\},$$

$$\{\theta\to -\frac{0.25\ (2.99792\times 10^{8}-25.1327\ F-2.99792\times 10^{8}\ m)}{F}+$$

$$0.5$$

$$\sqrt{}\Bigg(\frac{0.25\ (2.99792\times 10^{8}-25.1327\ F-2.99792\times 10^{8}\ m)^{2}}{F^{2}}-$$

$$\frac{1.\ (-5.65095\times 10^{9}+236.871\ F+5.65095\times 10^{9}\ m)}{F}+$$

$$\frac{1}{F}$$

$$2.45695\times$$

$$10^{-29}$$

$$(-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+$$

$$7.66662\times 10^{37}\ m)+$$

$$(0.547258\ (-2.66941\times 10^{31}+2.43558\times 10^{24}\ F+1.\ F^{2}+5.33882\times 10^{31}\ m-$$

$$2.43558\times 10^{24}\ F\ m-2.66941\times 10^{31}\ m^{2}))\Big/$$

$$(F\ (3.66307\times 10^{29}\ F\ (4.81708\times 10^{38}-1.34611\times 10^{31}\ F-4.81708\times 10^{38}\ m)^{2}-$$

$$9.\ (4.81708\times 10^{38}-1.34611\times 10^{31}\ F-4.81708\times 10^{38}\ m)$$

$$(4.06727\times 10^{36}-3.40974\times 10^{29}\ F-4.06727\times 10^{36}\ m)$$

$$(-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)+2.$$

$$(-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)^{3}+27.$$

$$(4.06727\times 10^{36}-3.40974\times 10^{29}\ F-4.06727\times 10^{36}\ m)^{2}$$

$$(-1.00889\times 10^{39}+2.11447\times 10^{31}\ F+1.00889\times 10^{39}\ m)-9.7682\times 10^{29}$$

$$F\ (-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)$$

$$(-1.00889\times 10^{39}+2.11447\times 10^{31}\ F+1.00889\times 10^{39}\ m)+$$

$$\sqrt{}\,(-4.\ (-4.71919\times 10^{59}+4.30581\times 10^{52}\ F+1.76788\times 10^{28}\ F^{2}+$$

$$9.43837\times 10^{59}\ m-4.30581\times 10^{52}\ F\ m-4.71919\times 10^{59}\ m^{2})^{3}+$$

$$(3.66307\times 10^{29}\ F\ (4.81708\times 10^{38}-1.34611\times 10^{31}\ F-4.81708\times 10^{38}\ m)^{2}-$$

$$9.\ (4.81708\times 10^{38}-1.34611\times 10^{31}\ F-4.81708\times 10^{38}\ m)$$

$$(4.06727\times 10^{36}-3.40974\times 10^{29}\ F-4.06727\times 10^{36}\ m)$$

$$(-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)+$$

$$2.\ (-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)^{3}+$$

$$27.\ (4.06727\times 10^{36}-3.40974\times 10^{29}\ F-4.06727\times 10^{36}\ m)^{2}$$

$$(-1.00889\times 10^{39}+2.11447\times 10^{31}\ F+1.00889\times 10^{39}\ m)-9.7682\times$$

$$10^{29}\ F\ (-7.66662\times 10^{37}+3.21361\times 10^{30}\ F+7.66662\times 10^{37}\ m)$$

$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^2\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{F}\,1.95008\times10^{-29}\Big(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+2.\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+27.\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times10^{29}\,F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+\sqrt{\Big(-4.\left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2\right)^3+\Big(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-9.\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+2.\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+27.\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times10^{29}\,F\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^2\Big)}\Big)^{1/3}\Big)-$$

$$0.5\sqrt{\Big(\frac{0.5\left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^2}{F^2}-\frac{1.\left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)}{F}-\frac{1}{F}\,2.45695\times10^{-29}\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)-\Big(0.547258\left(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^2+5.33882\times10^{31}\,m-2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^2\right)\Big)\Big/}$$

$$\Big(F\Big(3.66307\times10^{29}\,F\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-$$

$$9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+\sqrt{\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+\big(3.66307\times10^{29}\,F\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\big)^2\Big)}\Big)^{1/3}\Big)-$$

$$\frac{1}{F}\,1.95008\times10^{-29}\ \Big(3.66307\times10^{29}\,F\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}\,F\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)\ (-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+\sqrt{\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+\big(3.66307\times10^{29}\,F\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)\ (4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$

$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2 \left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times 10^{29}\,F\,\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right) \left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\Big)^2\Big)\Big)^{1/3}+$$

$$\Bigg(0.25\,\Bigg(-\frac{8.\ \left(3.5506\times10^{10}-992.201\,F-3.5506\times10^{10}\,m\right)}{F}-\frac{1.\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^3}{F^3}+\frac{1}{F^2}\,4.\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)\left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)\Bigg)\Bigg)\Big/$$

$$\Bigg(\sqrt{\Bigg(\frac{0.25\,\left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^2}{F^2}-\frac{1.\ \left(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m\right)}{F}+\frac{1}{F}\,2.45695\times10^{-29}\,\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+}$$

$$\Big(0.547258\,\left(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^2+5.33882\times10^{31}\,m-2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^2\right)\Big)\Big/$$

$$\Big(F\,\Big(3.66307\times10^{29}\,F\,\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^3+$$

$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^2\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-9.7682\times10^{29}\,F\,\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+$$

$$\sqrt{\Big(-4.\ \left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2\right)^3+}$$

$$\Big(3.66307\times10^{29}\,F\,\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^2-9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$

$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$
$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-$$
$$9.7682\times10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+\right.$$
$$\left.7.66662\times10^{37}\,m\right)\ \left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+\right.$$
$$\left.\left.\left.\left.1.00889\times10^{39}\,m\right)\right)^{2}\right)\right)^{1/3}\right)+\frac{1}{F}\,1.95008\times10^{-29}$$
$$\left(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)^{2}-\right.$$
$$9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$$
$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$
$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$
$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-$$
$$9.7682\times10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)+$$
$$\sqrt{\left(-4.\ \left(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^{2}+\right.\right.}$$
$$\left.9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^{2}\right)^{3}+$$
$$\left(3.66307\times10^{29}\,F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\,F-\right.\right.$$
$$\left.4.81708\times10^{38}\,m\right)^{2}-9.$$
$$\left(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m\right)$$
$$\left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)$$
$$\left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)+$$
$$2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m\right)^{3}+$$
$$27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m\right)^{2}$$
$$\left(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)-$$
$$9.7682\times10^{29}\,F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\,F+\right.$$
$$\left.7.66662\times10^{37}\,m\right)\ \left(-1.00889\times10^{39}+\right.$$
$$\left.\left.\left.\left.\left.\left.\left.2.11447\times10^{31}\,F+1.00889\times10^{39}\,m\right)\right)^{2}\right)\right)^{1/3}\right)\right)\right)\right\},$$

$$\left\{\theta\to-\frac{0.25\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)}{F}+\right.$$
$$0.5$$
$$\sqrt{\left(\frac{0.25\ \left(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m\right)^{2}}{F^{2}}-\right.}$$

$$\frac{1. \left(-5.65095\times 10^{9}+236.871\,F+5.65095\times 10^{9}\,m\right)}{F}+$$

$$\frac{1}{F}\,2.45695\times 10^{-29}\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)+$$

$$\Big(0.547258\left(-2.66941\times 10^{31}+2.43558\times 10^{24}\,F+1.\,F^{2}+5.33882\times 10^{31}\,m-2.43558\times 10^{24}\,F\,m-2.66941\times 10^{31}\,m^{2}\right)\Big)\Big/$$

$$\Big(F\Big(3.66307\times 10^{29}\,F\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)^{2}-$$
$$9.\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)$$
$$\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)+2.\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)^{3}+27.$$
$$\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)^{2}\left(-1.00889\times 10^{39}+2.11447\times 10^{31}\,F+1.00889\times 10^{39}\,m\right)-9.7682\times 10^{29}$$
$$F\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)\left(-1.00889\times 10^{39}+2.11447\times 10^{31}\,F+1.00889\times 10^{39}\,m\right)+$$
$$\sqrt{\Big(-4.\left(-4.71919\times 10^{59}+4.30581\times 10^{52}\,F+1.76788\times 10^{28}\,F^{2}+9.43837\times 10^{59}\,m-4.30581\times 10^{52}\,F\,m-4.71919\times 10^{59}\,m^{2}\right)^{3}+}$$
$$\Big(3.66307\times 10^{29}\,F\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)^{2}-$$
$$9.\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)$$
$$\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)+2.\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)^{3}+$$
$$27.\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)^{2}\left(-1.00889\times 10^{39}+2.11447\times 10^{31}\,F+1.00889\times 10^{39}\,m\right)-9.7682\times$$
$$10^{29}\,F\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)$$
$$\left(-1.00889\times 10^{39}+2.11447\times 10^{31}\,F+1.00889\times 10^{39}\,m\right)\Big)^{2}\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{F}\,1.95008\times 10^{-29}\Big(3.66307\times 10^{29}\,F\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)^{2}-9.\left(4.81708\times 10^{38}-1.34611\times 10^{31}\,F-4.81708\times 10^{38}\,m\right)\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)$$
$$\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)+$$
$$2.\left(-7.66662\times 10^{37}+3.21361\times 10^{30}\,F+7.66662\times 10^{37}\,m\right)^{3}+$$
$$27.\left(4.06727\times 10^{36}-3.40974\times 10^{29}\,F-4.06727\times 10^{36}\,m\right)^{2}$$

$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-$$
$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$
$$\sqrt{\Big(-4.\,(-4.71919\times10^{59}+4.30581\times10^{52}\,F+1.76788\times10^{28}\,F^2+}$$
$$9.43837\times10^{59}\,m-4.30581\times10^{52}\,F\,m-4.71919\times10^{59}\,m^2)^3+$$
$$\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$
$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+$$
$$2.\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+$$
$$27.\,(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times$$
$$10^{29}\,F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)\Big)^2\Big)\Big)^{1/3}\Bigg)+$$

$$0.5\sqrt{\Bigg(\frac{0.5\,(2.99792\times10^{8}-25.1327\,F-2.99792\times10^{8}\,m)^2}{F^2}-}$$
$$\frac{1.\,(-5.65095\times10^{9}+236.871\,F+5.65095\times10^{9}\,m)}{F}-$$
$$\frac{1}{F}$$
$$2.45695\times$$
$$10^{-29}$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+$$
$$7.66662\times10^{37}\,m)-$$
$$\Big(0.547258\,(-2.66941\times10^{31}+2.43558\times10^{24}\,F+1.\,F^2+5.33882\times10^{31}\,m-$$
$$2.43558\times10^{24}\,F\,m-2.66941\times10^{31}\,m^2)\Big)\Big/$$
$$\Big(F\,\Big(3.66307\times10^{29}\,F\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)^2-$$
$$9.\,(4.81708\times10^{38}-1.34611\times10^{31}\,F-4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)+2.$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)^3+27.$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\,F-4.06727\times10^{36}\,m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)-9.7682\times10^{29}$$
$$F\,(-7.66662\times10^{37}+3.21361\times10^{30}\,F+7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\,F+1.00889\times10^{39}\,m)+$$

$$\sqrt{}\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\ F+1.76788\times10^{28}\ F^2+$$
$$9.43837\times10^{59}\ m-4.30581\times10^{52}\ F\ m-4.71919\times10^{59}\ m^2)^3+$$
$$\Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)^2-$$
$$9.\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-9.7682\times$$
$$10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)\Big)^2\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{F}\ 1.95008\times10^{-29}\ \Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-$$
$$4.81708\times10^{38}\ m)^2-9.\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-$$
$$4.81708\times10^{38}\ m)\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-$$
$$9.7682\times10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)+$$
$$\sqrt{}\Big(-4.\ (-4.71919\times10^{59}+4.30581\times10^{52}\ F+1.76788\times10^{28}\ F^2+$$
$$9.43837\times10^{59}\ m-4.30581\times10^{52}\ F\ m-4.71919\times10^{59}\ m^2)^3+$$
$$\Big(3.66307\times10^{29}\ F\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)^2-$$
$$9.\ (4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m)$$
$$(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)$$
$$(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)+$$
$$2.\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)^3+$$
$$27.\ (4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m)^2$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)-9.7682\times$$
$$10^{29}\ F\ (-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m)$$
$$(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m)\Big)^2\Big)\Big)^{1/3}+$$

$$\Big(0.25\ \Big(-\frac{8.\ (3.5506\times10^{10}-992.201\ F-3.5506\times10^{10}\ m)}{F}-$$

$$
\begin{aligned}
&\frac{1.\ \left(2.99792\times10^{8}-25.1327\ F-2.99792\times10^{8}\ m\right)^{3}}{F^{3}}+\\
&\frac{1}{F^{2}}\ 4.\ \left(2.99792\times10^{8}-25.1327\ F-2.99792\times10^{8}\ m\right)\\
&\quad\left(-5.65095\times10^{9}+236.871\ F+5.65095\times10^{9}\ m\right)\Big)\Big)\Big/\\
&\left(\sqrt{\left(\frac{0.25\ \left(2.99792\times10^{8}-25.1327\ F-2.99792\times10^{8}\ m\right)^{2}}{F^{2}}-\right.}\right.\\
&\frac{1.\ \left(-5.65095\times10^{9}+236.871\ F+5.65095\times10^{9}\ m\right)}{F}+\\
&\frac{1}{F}\ 2.45695\times10^{-29}\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)+\\
&\Big(0.547258\ \big(-2.66941\times10^{31}+2.43558\times10^{24}\ F+1.\ F^{2}+\\
&\quad 5.33882\times10^{31}\ m-2.43558\times10^{24}\ F\ m-2.66941\times10^{31}\ m^{2}\big)\Big)\Big/\\
&\Big(F\ \Big(3.66307\times10^{29}\ F\ \left(4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m\right)^{2}-\\
&\quad 9.\ \left(4.81708\times10^{38}-1.34611\times10^{31}\ F-4.81708\times10^{38}\ m\right)\\
&\quad \left(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m\right)\\
&\quad \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)+\\
&\quad 2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)^{3}+\\
&\quad 27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m\right)^{2}\\
&\quad \left(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m\right)-\\
&\quad 9.7682\times10^{29}\ F\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)\\
&\quad \left(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m\right)+\\
&\quad \sqrt{\Big(-4.\ \big(-4.71919\times10^{59}+4.30581\times10^{52}\ F+1.76788\times10^{28}\ F^{2}+}\\
&\qquad 9.43837\times10^{59}\ m-4.30581\times10^{52}\ F\ m-4.71919\times10^{59}\ m^{2}\big)^{3}+\\
&\qquad \Big(3.66307\times10^{29}\ F\ \big(4.81708\times10^{38}-1.34611\times10^{31}\ F-\\
&\qquad\quad 4.81708\times10^{38}\ m\big)^{2}-9.\ \big(4.81708\times10^{38}-\\
&\qquad\quad 1.34611\times10^{31}\ F-4.81708\times10^{38}\ m\big)\\
&\qquad \left(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m\right)\\
&\qquad \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)+\\
&\qquad 2.\ \left(-7.66662\times10^{37}+3.21361\times10^{30}\ F+7.66662\times10^{37}\ m\right)^{3}+\\
&\qquad 27.\ \left(4.06727\times10^{36}-3.40974\times10^{29}\ F-4.06727\times10^{36}\ m\right)^{2}\\
&\qquad \left(-1.00889\times10^{39}+2.11447\times10^{31}\ F+1.00889\times10^{39}\ m\right)-\\
&\qquad 9.7682\times10^{29}\ F\ \big(-7.66662\times10^{37}+3.21361\times10^{30}\ F+\\
&\qquad\quad 7.66662\times10^{37}\ m\big)\ \big(-1.00889\times10^{39}+2.11447\times10^{31}\ F+
\end{aligned}
$$

$$1.00889\times10^{39}\,m))^{2}))^{1/3}) + \frac{1}{F}\,1.95008\times10^{-29}$$

$$(3.66307\times10^{29}\,F\,(4.81708\times10^{38} - 1.34611\times10^{31}\,F - 4.81708\times10^{38}\,m)^{2} -$$
$$9.\,(4.81708\times10^{38} - 1.34611\times10^{31}\,F - 4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36} - 3.40974\times10^{29}\,F - 4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m) +$$
$$2.\,(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m)^{3} +$$
$$27.\,(4.06727\times10^{36} - 3.40974\times10^{29}\,F - 4.06727\times10^{36}\,m)^{2}$$
$$(-1.00889\times10^{39} + 2.11447\times10^{31}\,F + 1.00889\times10^{39}\,m) -$$
$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m)$$
$$(-1.00889\times10^{39} + 2.11447\times10^{31}\,F + 1.00889\times10^{39}\,m) +$$
$$\sqrt{}\,(-4.\,(-4.71919\times10^{59} + 4.30581\times10^{52}\,F + 1.76788\times10^{28}\,F^{2} +$$
$$9.43837\times10^{59}\,m - 4.30581\times10^{52}\,F\,m - 4.71919\times10^{59}\,m^{2})^{3} +$$
$$(3.66307\times10^{29}\,F\,(4.81708\times10^{38} - 1.34611\times10^{31}\,F -$$
$$4.81708\times10^{38}\,m)^{2} - 9.$$
$$(4.81708\times10^{38} - 1.34611\times10^{31}\,F - 4.81708\times10^{38}\,m)$$
$$(4.06727\times10^{36} - 3.40974\times10^{29}\,F - 4.06727\times10^{36}\,m)$$
$$(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m) +$$
$$2.\,(-7.66662\times10^{37} + 3.21361\times10^{30}\,F + 7.66662\times10^{37}\,m)^{3} +$$
$$27.\,(4.06727\times10^{36} - 3.40974\times10^{29}\,F - 4.06727\times10^{36}\,m)^{2}$$
$$(-1.00889\times10^{39} + 2.11447\times10^{31}\,F + 1.00889\times10^{39}\,m) -$$
$$9.7682\times10^{29}\,F\,(-7.66662\times10^{37} + 3.21361\times10^{30}\,F +$$
$$7.66662\times10^{37}\,m)\,(-1.00889\times10^{39} +$$
$$2.11447\times10^{31}\,F + 1.00889\times10^{39}\,m))^{2}))^{1/3}))))\}\}$$

Plot3D$\Big[-\dfrac{0.25\text{`}\,(2.99792458\text{`}*\verb|^|8 - 25.132741228718345\text{`}\,F - 2.99792458\text{`}*\verb|^|8\,m)}{F} +$

$0.5\text{`}\,\sqrt{}\,\Big(\dfrac{1}{F^{2}}0.25\text{`}\,(2.99792458\text{`}*\verb|^|8 - 25.132741228718345\text{`}\,F - 2.99792458\text{`}*\verb|^|8\,m)^{2} - \dfrac{1}{F}$

$1.\text{`}\,(-5.650954701926559\text{`}*\verb|^|9 + 236.8705056261446\text{`}\,F + 5.650954701926559\text{`}*\verb|^|9\,m) +$

$\dfrac{1}{F}\,2.4569527253904567\text{`}*\verb|^|{-29}\,(-7.666617057149543\text{`}*\verb|^|37 +$

$3.2136082388873443\text{`}*\verb|^|30\,F + 7.666617057149543\text{`}*\verb|^|37\,m) +$

$(0.5472575866507531\text{`}\,(-2.6694115421499734\text{`}*\verb|^|31 +$

$2.4355817514735585\text{`}*\verb|^|24\,F + 1.\text{`}\,F^{2} + 5.338823084299947\text{`}*\verb|^|31\,m -$

$2.4355817514735585\text{`}*\verb|^|24\,F\,m - 2.6694115421499734\text{`}*\verb|^|31\,m^{2}))\,\Big/$

```
(F (3.663074143426886`*^29 F (4.817077564925441`*^38 - 1.346113071307215`*^31
        F - 4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
      1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
    (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
      4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
      3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
   2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m)^3 + 27.` (4.0672666714599653`*^36 -
       3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)^2
    (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
      1.0088863659827983`*^39 m) - 9.768197715805029`*^29
    F (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
      7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
      2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) +
   √(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
          1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
          4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
      (3.663074143426886`*^29 F (4.817077564925441`*^38 -
              1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
         9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
            4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
            3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
          (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
            7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
             3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
         27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
             4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
            2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
         9.768197715805029`*^29 F (-7.666617057149543`*^37 +
            3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
          (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
            1.0088863659827983`*^39 m))^2))^(1/3)) +
 1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F (4.817077564925441`*^38 -
          1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
     9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
        4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
        3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
      (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
        7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
         3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
     27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
```

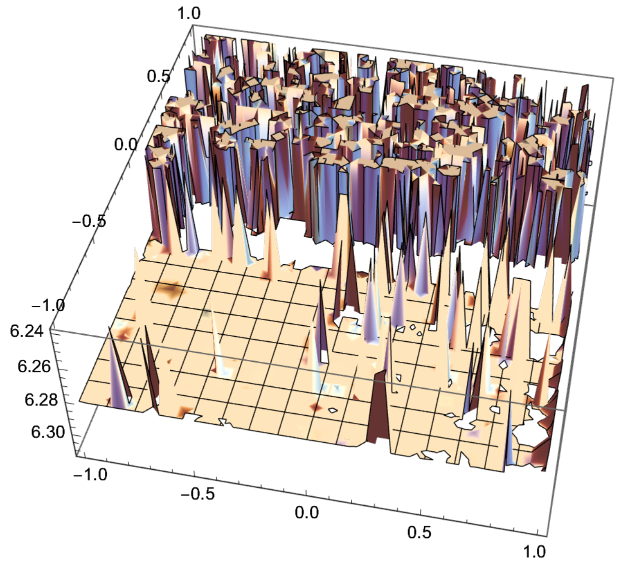
```
4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
   2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
9.768197715805029`*^29 F (-7.666617057149543`*^37 +
   3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
 (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
   1.0088863659827983`*^39 m) +
√(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
      1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
      4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
   (3.663074143426886`*^29 F (4.817077564925441`*^38 -
        1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
     9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
        4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
        3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
      (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
        7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
        3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
     27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
        4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
        2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
     9.768197715805029`*^29 F (-7.666617057149543`*^37 +
        3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
      (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
        1.0088863659827983`*^39 m))^2))^(1/3)) -
0.5` √((0.5` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^2)/F^2 -
   1/F
    1.`
     (-5.650954701926559`*^9 + 236.8705056261446` F +
       5.650954701926559`*^9 m) -
   1/F 2.4569527253904567`*^-29 (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m) -
   (0.5472575866507531` (-2.6694115421499734`*^31 + 2.4355817514735585`*^24 F +
        1.` F^2 + 5.338823084299947`*^31 m -
        2.4355817514735585`*^24 F m - 2.6694115421499734`*^31 m^2)) /
    (F (3.663074143426886`*^29 F (4.817077564925441`*^38 -
           1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
```

```
9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
    4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
    3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
  (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
    7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
     3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
     4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
    2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
9.768197715805029`*^29 F (-7.666617057149543`*^37 +
    3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
  (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
    1.0088863659827983`*^39 m) +
√(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
        1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
        4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
   (3.663074143426886`*^29 F (4.817077564925441`*^38 -
          1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
      9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
          4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
          3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
        (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
          7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
           3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
      27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
           4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
          2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
      9.768197715805029`*^29 F (-7.666617057149543`*^37 +
          3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
        (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
          1.0088863659827983`*^39 m))^2))^(1/3)) -
1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F
    (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
       4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
      1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
    (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
      4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
      3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
  2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m)^3 +
  27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
```

```
    4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
      2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
  9.768197715805029`*^29 F (-7.666617057149543`*^37 +
      3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
    (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
      1.0088863659827983`*^39 m) +
  √(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
          1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
          4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
     (3.663074143426886`*^29 F (4.817077564925441`*^38 -
            1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
        9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
            4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
            3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
          (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
            7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
             3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
        27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
             4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
            2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
        9.768197715805029`*^29 F (-7.666617057149543`*^37 +
            3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
          (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
            1.0088863659827983`*^39 m))^2))^(1/3) +
(0.25` (-(1/F) 8.` (3.550599555468236`*^10 - 992.2008537695941` F -
          3.550599555468236`*^10 m) - (1/F^3)
      1.` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^3 +
      (1/F^2) 4.` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)
       (-5.650954701926559`*^9 + 236.8705056261446` F +
         5.650954701926559`*^9 m))) /
 (√((1/F^2) 0.25` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^2 -
      (1/F) 1.` (-5.650954701926559`*^9 + 236.8705056261446`
            F + 5.650954701926559`*^9 m) +
      (1/F) 2.4569527253904567`*^-29 (-7.666617057149543`*^37 +
         3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
```

```
(0.5472575866507531` (-2.6694115421499734`*^31 +
      2.4355817514735585`*^24 F + 1.` F^2 + 5.338823084299947`*^31 m -
      2.4355817514735585`*^24 F m - 2.6694115421499734`*^31 m^2)) /
  (F (3.663074143426886`*^29 F (4.817077564925441`*^38 -
           1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
        9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
           4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
           3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
         (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
           7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
            3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
        27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
            4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
           2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
        9.768197715805029`*^29 F (-7.666617057149543`*^37 +
           3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
         (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
           1.0088863659827983`*^39 m) +
        √(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
                 1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
                 4.3058051241377837`*^52 F m - 4.719187064719918`*^59
                  m^2)^3 + (3.663074143426886`*^29 F
                 (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
                     4.817077564925441`*^38 m)^2 - 9.`
                 (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
                    4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
                    3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
                 (-7.666617057149543`*^37 + 3.2136082388873443`*^30
                     F + 7.666617057149543`*^37 m) + 2.`
                 (-7.666617057149543`*^37 + 3.2136082388873443`*^30
                      F + 7.666617057149543`*^37 m)^3 + 27.`
                 (4.0672666714599653`*^36 - 3.409744242531742`*^29
                      F - 4.0672666714599653`*^36 m)^2
                 (-1.0088863659827983`*^39 + 2.11446946785997`*^31
                     F + 1.0088863659827983`*^39 m) -
               9.768197715805029`*^29 F (-7.666617057149543`*^37 +
                    3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
                 (-1.0088863659827983`*^39 + 2.11446946785997`*^31
                     F + 1.0088863659827983`*^39 m))^2))^(1/3)) +
1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F
```

```
(4.817077564925441`*^38 - 1.346113071307215`*^31 F -
    4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
   1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
 (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
   4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
   3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
    7.666617057149543`*^37 m)^3 + 27.` (4.0672666714599653`*^36 -
    3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)^2
 (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
   1.0088863659827983`*^39 m) - 9.768197715805029`*^29 F
 (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
   7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
   2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) +
√(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
        1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
        4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
   (3.663074143426886`*^29 F (4.817077564925441`*^38 -
           1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
      9.` (4.817077564925441`*^38 - 1.346113071307215`*^31
           F - 4.817077564925441`*^38 m)
        (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
          4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
          3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
      2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30
           F + 7.666617057149543`*^37 m)^3 + 27.`
        (4.0672666714599653`*^36 - 3.409744242531742`*^29
           F - 4.0672666714599653`*^36 m)^2
        (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
          1.0088863659827983`*^39 m) - 9.768197715805029`*^29 F
        (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
          7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
          2.11446946785997`*^31 F + 1.0088863659827983`*^39
          m))^2))^(1/3))))), {F, -1, 1}, {m, -1, 1}]
```




```
Plot3D[-(0.25` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m))/F +
  0.5` Sqrt[(1/F^2 0.25` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^2 - 1/F
      1.` (-5.650954701926559`*^9 + 236.8705056261446` F + 5.650954701926559`*^9 m) +
     1/F 2.4569527253904567`*^-29 (-7.666617057149543`*^37 +
        3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
     (0.5472575866507531` (-2.6694115421499734`*^31 +
          2.4355817514735585`*^24 F + 1.` F^2 + 5.338823084299947`*^31 m -
          2.4355817514735585`*^24 F m - 2.6694115421499734`*^31 m^2)) /
      (F (3.663074143426886`*^29 F (4.817077564925441`*^38 - 1.346113071307215`*^31
                F - 4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
               1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
             (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
               4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
               3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
           2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
                7.666617057149543`*^37 m)^3 + 27.` (4.0672666714599653`*^36 -
                3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)^2
             (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
               1.0088863659827983`*^39 m) - 9.768197715805029`*^29
             F (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
               7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
               2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) +
           Sqrt[(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
                    1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
```

```
            4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
        (3.663074143426886`*^29 F (4.817077564925441`*^38 -
              1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
          9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
             4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
             3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
           (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
             7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
              3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
          27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
              4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
             2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
          9.768197715805029`*^29 F (-7.666617057149543`*^37 +
             3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
           (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
             1.0088863659827983`*^39 m))^2))^(1/3)) +
1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F (4.817077564925441`*^38 -
        1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
    9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
       4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
       3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
     (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
        3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
    27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
        4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
       2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
    9.768197715805029`*^29 F (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
     (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
       1.0088863659827983`*^39 m) +
    √((-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
            1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
            4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
        (3.663074143426886`*^29 F (4.817077564925441`*^38 -
              1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
          9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
             4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
             3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
           (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
             7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
```

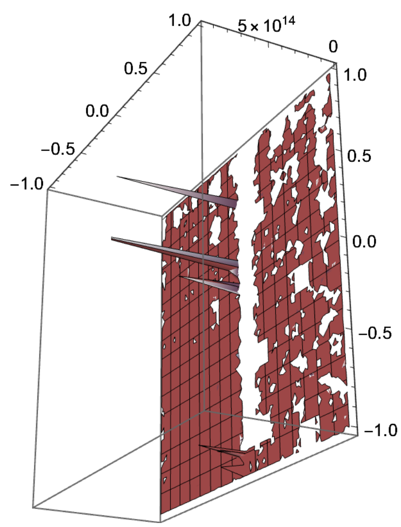
```
          3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
      27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
          4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
         2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
      9.768197715805029`*^29 F (-7.666617057149543`*^37 +
         3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
       (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
         1.0088863659827983`*^39 m))^2))^(1/3)) +
0.5` Sqrt[(0.5` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^2/F^2 -
   1/F
    1.`
     (-5.650954701926559`*^9 + 236.8705056261446` F +
       5.650954701926559`*^9 m) -
   1/F 2.4569527253904567`*^-29 (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m) -
   (0.5472575866507531` (-2.6694115421499734`*^31 + 2.4355817514735585`*^24 F +
        1.` F^2 + 5.338823084299947`*^31 m -
        2.4355817514735585`*^24 F m - 2.6694115421499734`*^31 m^2)) /
    (F (3.663074143426886`*^29 F (4.817077564925441`*^38 -
            1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
        9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
           4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
           3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
         (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
           7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
            3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
        27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
            4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
           2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
        9.768197715805029`*^29 F (-7.666617057149543`*^37 +
           3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
         (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
           1.0088863659827983`*^39 m) +
        Sqrt[(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
                1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
                4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
```

```
(3.663074143426886`*^29 F (4.817077564925441`*^38 -
        1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
    9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
       4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
       3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
     (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
        3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
    27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
        4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
       2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
    9.768197715805029`*^29 F (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
     (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
       1.0088863659827983`*^39 m))^2))^(1/3)) -

1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F
    (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
       4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
      1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
    (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
      4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
      3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
   2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m)^3 +
   27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
       4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
      2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
   9.768197715805029`*^29 F (-7.666617057149543`*^37 +
      3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
    (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
      1.0088863659827983`*^39 m) +
   √((-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
          1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
          4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
      (3.663074143426886`*^29 F (4.817077564925441`*^38 -
             1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
         9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
            4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
            3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
          (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
            7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
```

```
          3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
        27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
          4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
          2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
        9.768197715805029`*^29 F (-7.666617057149543`*^37 +
          3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
        (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
          1.0088863659827983`*^39 m))^2))^(1/3) +
(0.25` (-1/F 8.` (3.550599555468236`*^10 - 992.2008537695941` F -
        3.550599555468236`*^10 m) - 1/F^3
    1.` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^3 +
    1/F^2 4.` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)
     (-5.650954701926559`*^9 + 236.8705056261446` F +
       5.650954701926559`*^9 m))) /
 (√((1/F^2 0.25` (2.99792458`*^8 - 25.132741228718345` F - 2.99792458`*^8 m)^2 -
    1/F 1.` (-5.650954701926559`*^9 + 236.8705056261446`
        F + 5.650954701926559`*^9 m) +
    1/F 2.4569527253904567`*^-29 (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
    (0.5472575866507531` (-2.6694115421499734`*^31 +
        2.4355817514735585`*^24 F + 1.` F^2 + 5.338823084299947`*^31 m -
        2.4355817514735585`*^24 F m - 2.6694115421499734`*^31 m^2)) /
     (F (3.663074143426886`*^29 F (4.817077564925441`*^38 -
            1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
         9.` (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
            4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
            3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
          (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
            7.666617057149543`*^37 m) + 2.` (-7.666617057149543`*^37 +
             3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)^3 +
         27.` (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
             4.0672666714599653`*^36 m)^2 (-1.0088863659827983`*^39 +
            2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) -
         9.768197715805029`*^29 F (-7.666617057149543`*^37 +
            3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
```

```
(-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
  1.0088863659827983`*^39 m) +
√(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
      1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
      4.3058051241377837`*^52 F m - 4.719187064719918`*^59
      m^2)^3 + (3.663074143426886`*^29 F
      (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
        4.817077564925441`*^38 m)^2 - 9.`
      (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
       4.817077564925441`*^38 m) (4.0672666714599653`*^36 -
       3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)
      (-7.666617057149543`*^37 + 3.2136082388873443`*^30
        F + 7.666617057149543`*^37 m) + 2.`
      (-7.666617057149543`*^37 + 3.2136082388873443`*^30
         F + 7.666617057149543`*^37 m)^3 + 27.`
      (4.0672666714599653`*^36 - 3.409744242531742`*^29
         F - 4.0672666714599653`*^36 m)^2
      (-1.0088863659827983`*^39 + 2.11446946785997`*^31
        F + 1.0088863659827983`*^39 m) -
     9.768197715805029`*^29 F (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F + 7.666617057149543`*^37 m)
      (-1.0088863659827983`*^39 + 2.11446946785997`*^31
        F + 1.0088863659827983`*^39 m))^2))^(1/3)) +

1/F 1.9500846704604729`*^-29 (3.663074143426886`*^29 F
  (4.817077564925441`*^38 - 1.346113071307215`*^31 F -
     4.817077564925441`*^38 m)^2 - 9.` (4.817077564925441`*^38 -
    1.346113071307215`*^31 F - 4.817077564925441`*^38 m)
  (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
    4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
    3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
 2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
     7.666617057149543`*^37 m)^3 + 27.` (4.0672666714599653`*^36 -
     3.409744242531742`*^29 F - 4.0672666714599653`*^36 m)^2
  (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
    1.0088863659827983`*^39 m) - 9.768197715805029`*^29 F
  (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
    7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
    2.11446946785997`*^31 F + 1.0088863659827983`*^39 m) +
√(-4.` (-4.719187064719918`*^59 + 4.3058051241377837`*^52 F +
        1.7678754250530559`*^28 F^2 + 9.438374129439836`*^59 m -
        4.3058051241377837`*^52 F m - 4.719187064719918`*^59 m^2)^3 +
```

```
(3.663074143426886`*^29 F (4.817077564925441`*^38 -
        1.346113071307215`*^31 F - 4.817077564925441`*^38 m)^2 -
   9.` (4.817077564925441`*^38 - 1.346113071307215`*^31
        F - 4.817077564925441`*^38 m)
     (4.0672666714599653`*^36 - 3.409744242531742`*^29 F -
       4.0672666714599653`*^36 m) (-7.666617057149543`*^37 +
       3.2136082388873443`*^30 F + 7.666617057149543`*^37 m) +
   2.` (-7.666617057149543`*^37 + 3.2136082388873443`*^30
         F + 7.666617057149543`*^37 m)^3 + 27.`
     (4.0672666714599653`*^36 - 3.409744242531742`*^29
         F - 4.0672666714599653`*^36 m)^2
     (-1.0088863659827983`*^39 + 2.11446946785997`*^31 F +
       1.0088863659827983`*^39 m) - 9.768197715805029`*^29 F
     (-7.666617057149543`*^37 + 3.2136082388873443`*^30 F +
       7.666617057149543`*^37 m) (-1.0088863659827983`*^39 +
       2.11446946785997`*^31 F + 1.0088863659827983`*^39
       m))^2))^(1/3)))), {F, -1, 1}, {m, -1, 1}]
```

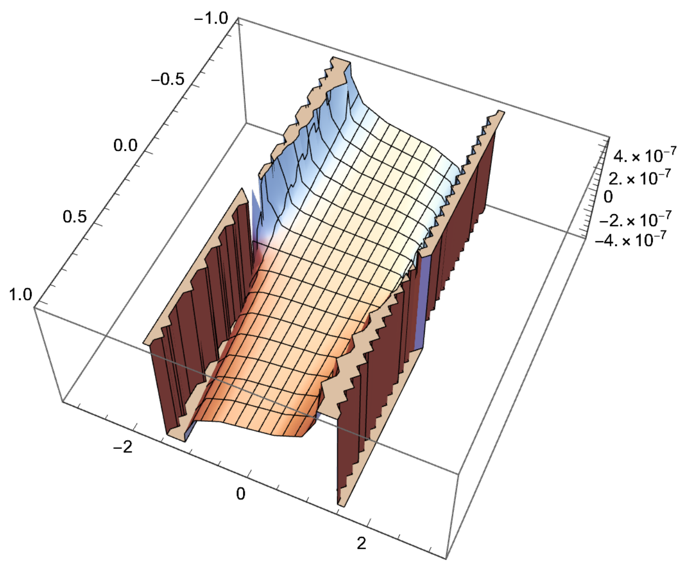


$$\int m \left((-1.1294090667581471`*^18 + 1.7975103574736352`*^17\, \theta) \Big/ \left(2 \sqrt{39.47841760435743` - 12.566370614359172`\, \theta + \theta^2}\ \sqrt{\left(3.5481432270250993`*^18 - 1.1294090667581471`*^18\, \theta + 8.987551787368176`*^16\, \theta^2\right)}\right) - \left((-12.566370614359172` + 2\,\theta) \sqrt{\left(3.5481432270250993`*^18 - 1.1294090667581471`*^18\, \theta + 8.987551787368176`*^16\, \theta^2\right)}\right) \Big/ \left(2 \left(39.47841760435743` - 12.566370614359172`\, \theta + \theta^2\right)^{3/2}\right)\right) d\theta$$

$$\int (2\pi)\left(m\left(\left(-1.1294090667581471`*^{\wedge}18+1.7975103574736352`*^{\wedge}17\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)\Big/\left(2\sqrt{\left(39.47841760435743`-12.566370614359172`\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\sqrt{\left(3.5481432270250993`*^{\wedge}18-1.1294090667581471`*^{\wedge}18\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176`*^{\wedge}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)-\left(\left(-12.566370614359172`+2\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\sqrt{\left(3.5481432270250993`*^{\wedge}18-1.1294090667581471`*^{\wedge}18\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+8.987551787368176`*^{\wedge}16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/\left(2\left(39.47841760435743`-12.566370614359172`\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)^{3/2}\right)\right)\right)\,d\beta$$

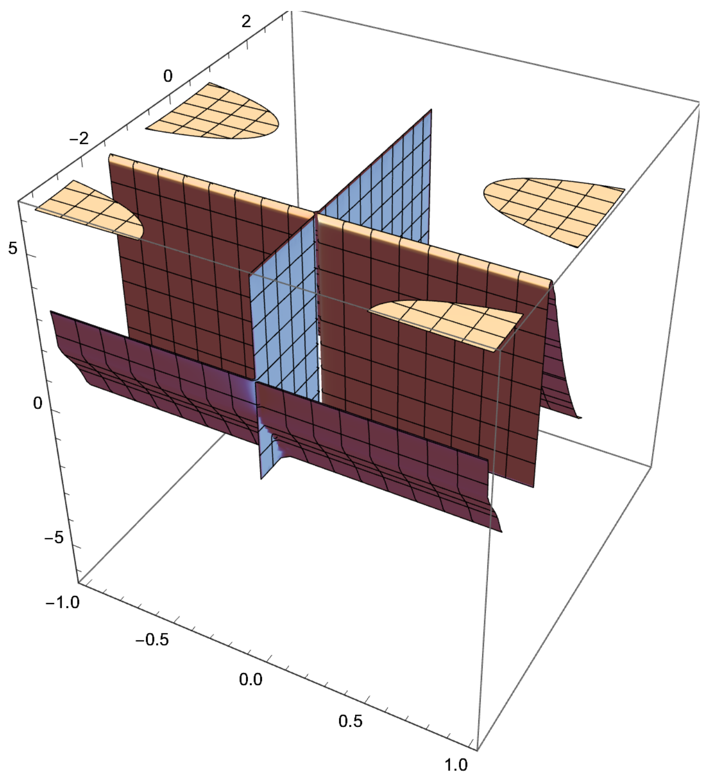
$$m\left(-2.16301\times 10^{-8}\sqrt{\text{Cos}[\beta]^2}\,(\text{Log}[1.-1.\,\text{Tan}[0.5\,\beta]]-1.\,\text{Log}[1.+\text{Tan}[0.5\,\beta]])\,\text{Sec}[\beta]+0.125\sqrt{1.+\text{Cos}[2.\,\beta]}\,\text{Sec}[\beta]^5\left((0.+0.\,i)\,\text{Cos}[\beta]+5.16921\times 10^{-18}\,\text{Sin}[\beta]\right)\sqrt{39.4784+39.4784\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\sqrt{3.54814\times 10^{18}+3.54814\times 10^{18}\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}+\sqrt{39.4784+39.4784\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\sqrt{3.54814\times 10^{18}+3.54814\times 10^{18}\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\left(\text{Sec}[\beta]^4\left((0.+0.\,i)+6.09197\times 10^{-19}\,\text{Tan}[\beta]\right)+\text{Sec}[\beta]^2\left((0.+0.\,i)+1.21839\times 10^{-18}\,\text{Tan}[\beta]\right)\right)\right)$$

```
Plot3D[m (-2.1630149725479812`*^-8 √(Cos[β]^2)
    (Log[1.`-1.` Tan[0.5` β]] - 1.` Log[1.`+Tan[0.5` β]]) Sec[β] + 0.125`
    √(1.`+Cos[2.` β]) Sec[β]^5 ((0.`+0.` ⅈ) Cos[β] + 5.169208853894573`*^-18 Sin[β])
    √(39.47841760435743`+39.47841760435743` Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β])
    √(3.5481432270250993`*^18 +
       3.5481432270250993`*^18 Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β]) +
   √(39.47841760435743`+39.47841760435743` Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β])
    √(3.5481432270250993`*^18 +
       3.5481432270250993`*^18 Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β])
    (Sec[β]^4 ((0.`+0.` ⅈ) + 6.091971056597322`*^-19 Tan[β]) + Sec[β]^2
       ((0.`+0.` ⅈ) + 1.2183942113194644`*^-18 Tan[β]))), {m, -1, 1}, {β, -π, π}]
```



$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right)$

```
ContourPlot3D[
 m (-2.1630149725479812`*^-8 Sqrt[Cos[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^2] (Log[1.` - 1.` Tan[0.5` β]] -
       1.` Log[1.` + Tan[0.5` ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]]) Sec[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]] +
    0.125` Sqrt[1.` + Cos[2.` ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]] Sec[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^5
     ((0.` + 0.` I) Cos[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]] +
       5.169208853894573`*^-18 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]])
     √(39.47841760435743` + 39.47841760435743` Cos[2.` β] + (0.` + 0.` I) Sin[2.` β])
     √(3.5481432270250993`*^18 +
        3.5481432270250993`*^18 Cos[2.` β] + (0.` + 0.` I) Sin[2.` β]) +
    √(39.47841760435743` + 39.47841760435743` Cos[2.` β] + (0.` + 0.` I) Sin[2.` β])
     √(3.5481432270250993`*^18 + 3.5481432270250993`*^18 Cos[2.` β] + (0.` + 0.` I)
         Sin[2.` β]) (Sec[β]^4 ((0.` + 0.` I) + 6.091971056597322`*^-19 Tan[β]) +
       Sec[β]^2 ((0.` + 0.` I) + 1.2183942113194644`*^-18 Tan[β]))),
 {m, -1, 1}, {β, -π, π}, {θ, -2 π, 2 π}]
```

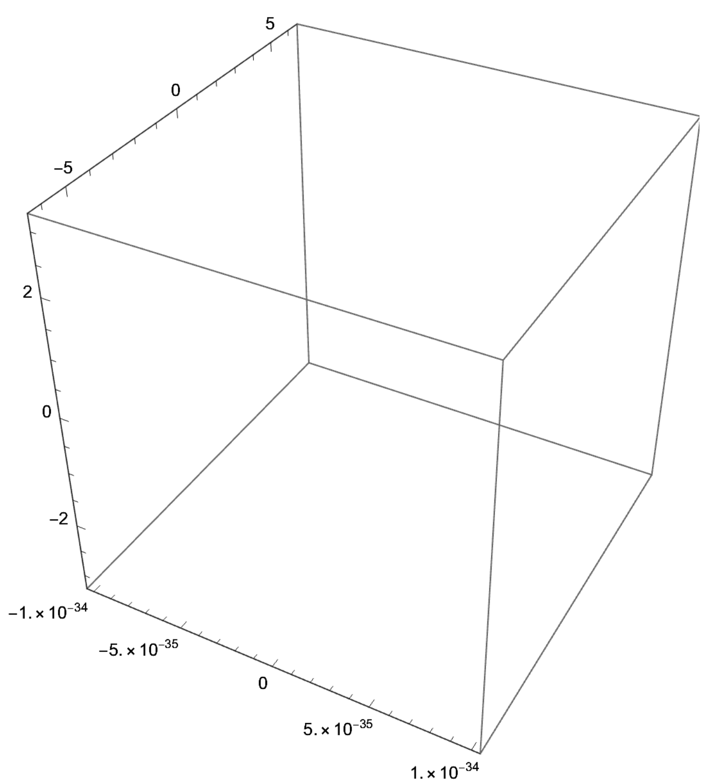

2
0
−2
5
0
−5
−1.0
−0.5
0.0
0.5
1.0

$$\text{Solve}\Big[-m\left(\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2}{2\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)==$$

$$\begin{aligned}&m\Big(-2.1630149725479812\grave{}*\hat{}-8\,\sqrt{\text{Cos}[\beta]^2}\\
&\quad(\text{Log}[1.\grave{}-1.\grave{}\,\text{Tan}[0.5\grave{}\,\beta]]-1.\grave{}\,\text{Log}[1.\grave{}+\text{Tan}[0.5\grave{}\,\beta]])\,\text{Sec}[\beta]+0.125\grave{}\\
&\quad\sqrt{1.\grave{}+\text{Cos}[2.\grave{}\,\beta]}\,\text{Sec}[\beta]^5\,((0.\grave{}+0.\grave{}\,i)\,\text{Cos}[\beta]+5.169208853894573\grave{}*\hat{}-18\,\text{Sin}[\beta])\\
&\quad\sqrt{}(39.47841760435743\grave{}+39.47841760435743\grave{}\,\text{Cos}[2.\grave{}\,\beta]+(0.\grave{}+0.\grave{}\,i)\,\text{Sin}[2.\grave{}\,\beta])\\
&\quad\sqrt{}(3.5481432270250993\grave{}*\hat{}18+\\
&\qquad 3.5481432270250993\grave{}*\hat{}18\,\text{Cos}[2.\grave{}\,\beta]+(0.\grave{}+0.\grave{}\,i)\,\text{Sin}[2.\grave{}\,\beta])+\\
&\quad\sqrt{}(39.47841760435743\grave{}+39.47841760435743\grave{}\,\text{Cos}[2.\grave{}\,\beta]+(0.\grave{}+0.\grave{}\,i)\,\text{Sin}[2.\grave{}\,\beta])\\
&\quad\sqrt{}(3.5481432270250993\grave{}*\hat{}18+3.5481432270250993\grave{}*\hat{}18\,\text{Cos}[2.\grave{}\,\beta]+(0.\grave{}+0.\grave{}\,i)\\
&\qquad\text{Sin}[2.\grave{}\,\beta])\,\Big(\text{Sec}[\beta]^4\,((0.\grave{}+0.\grave{}\,i)+6.091971056597322\grave{}*\hat{}-19\,\text{Tan}[\beta])+\\
&\quad\text{Sec}[\beta]^2\,((0.\grave{}+0.\grave{}\,i)+1.2183942113194644\grave{}*\hat{}-18\,\text{Tan}[\beta])\Big)\Big),m\Big]\end{aligned}$$

$$\begin{aligned}&\Big\{\Big\{m\to 0.\Big/\Big(-1.\left(\frac{0.0397887\,\left(12.5664\,r^2-2.\,r^2\,\theta\right)^2}{\left(12.5664\,r^2\,\theta-1.\,r^2\,\theta^2\right)^{3/2}}-\frac{0.159155\,r^2}{\sqrt{12.5664\,r^2\,\theta-1.\,r^2\,\theta^2}}\right)-\\
&\quad 1.\,\Big(-2.16301\times10^{-8}\,\sqrt{\text{Cos}[\beta]^2}\,(\text{Log}[1.-1.\,\text{Tan}[0.5\,\beta]]-1.\,\text{Log}[1.+\text{Tan}[0.5\,\beta]])\,\text{Sec}[\\
&\qquad\beta]+0.125\,\sqrt{1.+\text{Cos}[2.\,\beta]}\,\text{Sec}[\beta]^5\,\left((0.+0.\,i)\,\text{Cos}[\beta]+5.16921\times10^{-18}\,\text{Sin}[\beta]\right)\\
&\qquad\sqrt{39.4784+39.4784\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\\
&\qquad\sqrt{3.54814\times10^{18}+3.54814\times10^{18}\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}+\\
&\qquad\sqrt{39.4784+39.4784\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\\
&\qquad\sqrt{3.54814\times10^{18}+3.54814\times10^{18}\,\text{Cos}[2.\,\beta]+(0.+0.\,i)\,\text{Sin}[2.\,\beta]}\\
&\qquad\Big(\text{Sec}[\beta]^4\,\left((0.+0.\,i)+6.09197\times10^{-19}\,\text{Tan}[\beta]\right)+\\
&\qquad\quad\text{Sec}[\beta]^2\,\left((0.+0.\,i)+1.21839\times10^{-18}\,\text{Tan}[\beta]\right)\Big)\Big)\Big)\Big\}\Big\}\end{aligned}$$

```
ContourPlot3D[0.` / (-1.` ((0.039788735772973836` (12.566370614359172` r^2 - 2.` r^2 θ)^2) /
      (12.566370614359172` r^2 θ - 1.` r^2 θ^2)^(3/2) -
     (0.15915494309189535` r^2) / Sqrt[12.566370614359172` r^2 θ - 1.` r^2 θ^2]) -
   1.` (-2.1630149725479812`*^-8 Sqrt[Cos[β]^2] (Log[1.` - 1.` Tan[0.5` β]] -
        1.` Log[1.` + Tan[0.5` β]]) Sec[β] + 0.125` Sqrt[1.` + Cos[2.` β]]
      Sec[β]^5 ((0.` + 0.` ⅈ) Cos[β] + 5.169208853894573`*^-18 Sin[β])
      √(39.47841760435743` + 39.47841760435743` Cos[2.` β] +
        (0.` + 0.` ⅈ) Sin[2.` β]) √(3.5481432270250993`*^18 +
        3.5481432270250993`*^18 Cos[2.` β] + (0.` + 0.` ⅈ) Sin[2.` β]) +
     √(39.47841760435743` + 39.47841760435743` Cos[2.` β] + (0.` + 0.` ⅈ) Sin[2.` β])
      √(3.5481432270250993`*^18 + 3.5481432270250993`*^18 Cos[2.` β] + (0.` + 0.` ⅈ)
          Sin[2.` β]) (Sec[β]^4 ((0.` + 0.` ⅈ) + 6.091971056597322`*^-19 Tan[β]) +
        Sec[β]^2 ((0.` + 0.` ⅈ) + 1.2183942113194644`*^-18 Tan[β])))),
 {r, -1 * 10^-34, 1 * 10^-34}, {θ, -2 π, 2 π}, {β,
  -π,
  π}]
```



$$\text{Solve}\left[-m\left(\frac{\left(4\pi r^2-2r^2\theta\right)^2}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{r^2}{2\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)==\right.$$

```
  m (-2.1630149725479812`*^-8 Sqrt[Cos[β]^2]
      (Log[1.`-1.` Tan[0.5` β]] - 1.` Log[1.`+Tan[0.5` β]]) Sec[β] + 0.125`
      Sqrt[1.`+Cos[2.` β]] Sec[β]^5 ((0.`+0.` ⅈ) Cos[β] + 5.169208853894573`*^-18 Sin[β])
      √(39.47841760435743`+39.47841760435743` Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β])
      √(3.5481432270250993`*^18 +
         3.5481432270250993`*^18 Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β]) +
     √(39.47841760435743`+39.47841760435743` Cos[2.` β] + (0.`+0.` ⅈ) Sin[2.` β])
      √(3.5481432270250993`*^18 + 3.5481432270250993`*^18 Cos[2.` β] + (0.`+0.` ⅈ)
          Sin[2.` β]) (Sec[β]^4 ((0.`+0.` ⅈ) + 6.091971056597322`*^-19 Tan[β]) +
       Sec[β]^2 ((0.`+0.` ⅈ) + 1.2183942113194644`*^-18 Tan[β]))), θ]
```

$$\text{Solve}\left[2.53303\times10^{-36}\,m == \left(-3.88304\times10^{-14}+6.79531\times10^{-8}\,i\right)m,\ 6.28318\right]$$

$$\frac{\sqrt{r}\ \sqrt{\theta}\ \sqrt{4\pi r-r\theta}}{2\pi}$$

$$\text{Solve}\left[\frac{\sqrt{r}\ \sqrt{\theta}\ \sqrt{4\pi r-r\theta}}{2\pi}==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\ \theta\right]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}==r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v\to-\frac{1.\ \sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\text{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{v\to\frac{\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\text{Sin}[\beta]^2}}\right\}\right\}$$

```
c := 2.99792458 (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==h,\,v\right]$$

$$\left\{\left\{v\to-\frac{1.\,\sqrt{3.54814\times10^{18}\,h^2-1.12941\times10^{18}\,r^2\,\theta+8.98755\times10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,h^2-12.5664\,r^2\,\theta+r^2\,\theta^2}}\right\},\right.$$

$$\left.\left\{v\to\frac{\sqrt{3.54814\times10^{18}\,h^2-1.12941\times10^{18}\,r^2\,\theta+8.98755\times10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,h^2-12.5664\,r^2\,\theta+r^2\,\theta^2}}\right\}\right\}$$

```
(√ (3.5481432270250993`*^18 h^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
 (√39.47841760435743` h^2 - 12.566370614359172` r^2 θ + r^2 θ^2)
```

```
3.5481432270250993`*^18 / c^2
```

```
39.47841760435743` / π
```

12.5664

$4\,\pi^2\,c^2$

$$\frac{\sqrt{4\,\pi^2\,c^2\,\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}$$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$

$$\frac{\sqrt{4\,\pi^2\,c^2\,h^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,h^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}$$

$$\frac{\sqrt{4\,\pi^2\,c^2\,\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}$$

$$\frac{\sqrt{-4\,c^2\,\pi\,r^2\,\theta+c^2\,r^2\,\theta^2+c^2\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}}{\sqrt{-4\,\pi\,r^2\,\theta+r^2\,\theta^2+\frac{1}{4}\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}}==v$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi^2\,c^2\,h^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,h^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}==v,\ c\right]$$

$$\left\{\left\{c\to-\frac{v\,\sqrt{h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}{\sqrt{4\,h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}\right\},\ \left\{c\to\frac{v\,\sqrt{h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}{\sqrt{4\,h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[c==\frac{c\,\sqrt{(r\,\text{Sin}[0])^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}{\sqrt{4\,(r\,\text{Sin}[0])^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}},\ \theta\right]$$

$$\{\{\}\}$$

$$v==c\,\sqrt{4\,h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}\Big/\sqrt{h^2\,\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}$$

$$\blacksquare\ c\,\sqrt{4\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}\Big/\sqrt{\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2\pi^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}$$

```
ContourPlot3D[c Sqrt[4 (h)^2 π^2 - 4 π r^2 θ + r^2 θ^2] / Sqrt[(h)^2 π^2 - 4 π r^2 θ + r^2 θ^2],
 {h, -1, 1}, {r, -1, 1}, {θ, -2, 2}, PlotTheme → {"Classic", "ClassicLights"}]
```

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

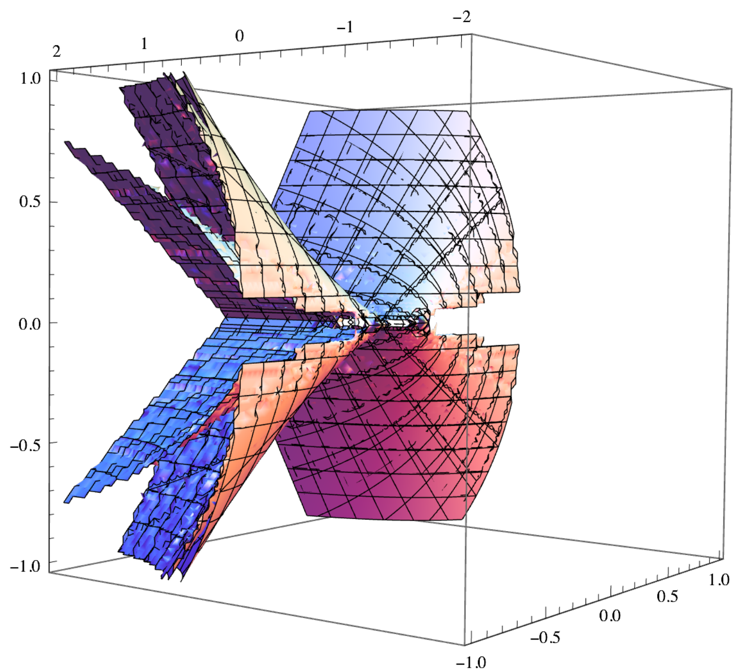
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

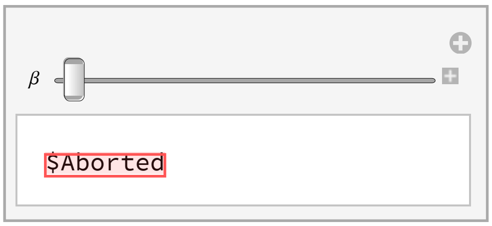
General: Further output of Power::infy will be suppressed during this calculation.

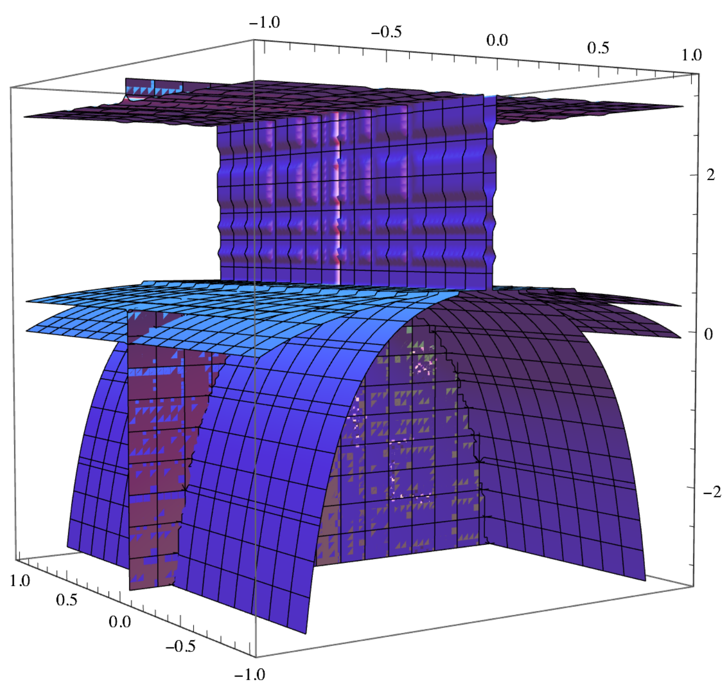
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.



```
Manipulate[ContourPlot3D[Sqrt[4 π^2 c^2 (r Sin[β])^2 - 4 π c^2 r^2 θ + c^2 r^2 θ^2] / Sqrt[π^2 (r Sin[β])^2 - 4 π r^2 θ + r^2 θ^2], {c, -1, 1},
  {r, -1, 1}, {θ, -π, π}, PlotTheme → {"Classic", "ClassicLights"}], {β, -1, 1}]
```





Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

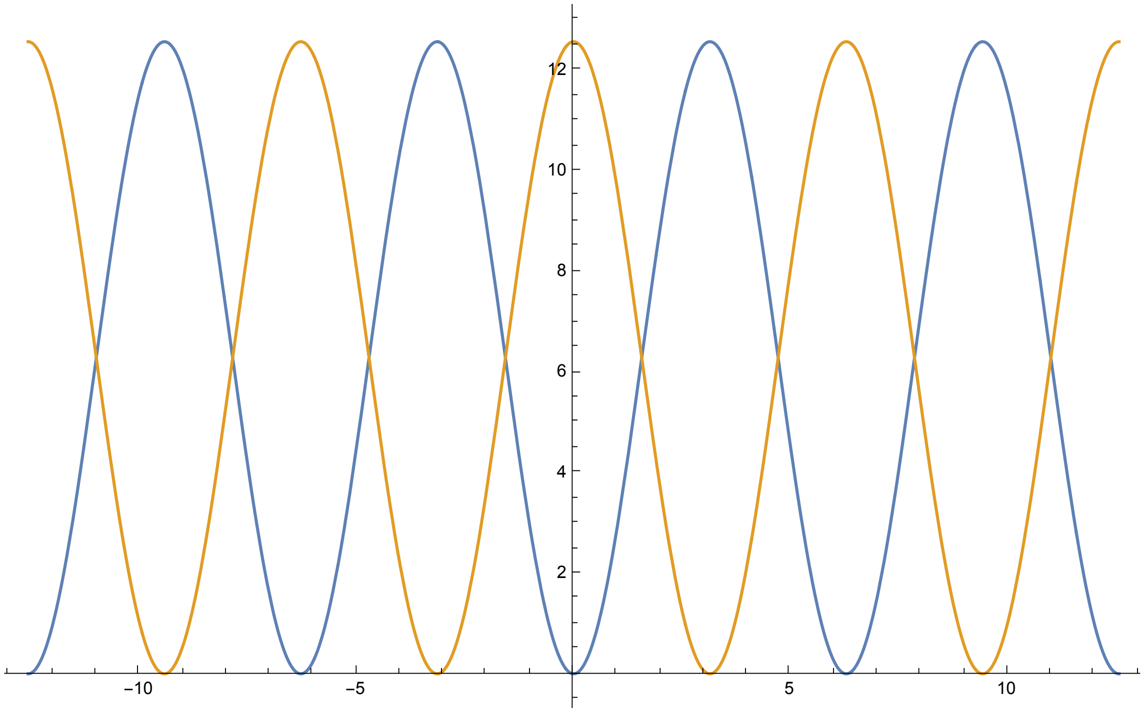
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{\left(\frac{\sqrt{4\pi^2c^2h^2-4\pi c^2r^2\theta+c^2r^2\theta^2}}{\sqrt{\pi^2h^2-4\pi r^2\theta+r^2\theta^2}}\right)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{\left(\frac{\sqrt{4\pi^2c^2h^2-4\pi c^2r^2\theta+c^2r^2\theta^2}}{\sqrt{\pi^2h^2-4\pi r^2\theta+r^2\theta^2}}\right)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r\,\text{Sin}[\beta],\theta\right]$$

$$\{\{\theta\to-2\,(-\pi+\pi\,\text{Cos}[\beta])\},\{\theta\to2\,(\pi+\pi\,\text{Cos}[\beta])\}\}$$

```
Plot[{-2 (-π + π Cos[β]), 2 (π + π Cos[β])}, {β, -4 π, 4 π}]
```




```
1.1294090667581471`*^18 / c^2
```

π^2

```
8.987551787368176`*^16 / c^2
```

1.

$4\,\pi\,c^2$

1.12941×10^{18}

```
3.7673031346177063`*^9 /
```

```
c := 2.99792458 (10^8)
```

$$\int\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}\,d\theta$$

$$\frac{1}{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\;\sqrt{r\,(4\,\pi-\theta)}\;\sqrt{\frac{\sqrt{1-1.11265\times10^{-17}\,v^2}\;\theta}{1.-1.11265\times10^{-17}\,v^2}}$$
$$\left(0.5\,\sqrt{12.5664-1.\,\theta}\;\theta^{3/2}-3.14159\,\sqrt{(12.5664-1.\,\theta)\,\theta}+39.4784\,\mathrm{ArcSin}\left[0.282095\,\sqrt{\theta}\right]\right)$$

$$\text{Solve}\Big[\frac{1}{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}\,\sqrt{r\,\sqrt{1-\text{1.1126500560536185`*\textasciicircum-17}\,v^2}}\,\sqrt{r\,(4\,\pi-\theta)}\,\sqrt{\frac{\sqrt{1-\text{1.1126500560536185`*\textasciicircum-17}\,v^2}\,\theta}{\text{1.`}-\text{1.1126500560536185`*\textasciicircum-17}\,v^2}}\,\Big(\text{0.5`}\,\sqrt{\text{12.566370614359172`}-\text{1.`}\,\theta}\,\theta^{3/2}-\text{3.141592653589793`}\,\sqrt{(\text{12.566370614359172`}-\text{1.`}\,\theta)\,\theta}+\text{39.47841760435743`}\,\text{ArcSin}\big[\text{0.28209479177387814`}\,\sqrt{\theta}\big]\Big)==\Big(\sqrt{\big(\text{3.5481432270250993`*\textasciicircum18}\,h^2-\text{1.1294090667581471`*\textasciicircum18}\,r^2\,\theta+\text{8.987551787368176`*\textasciicircum16}\,r^2\,\theta^2\big)}\Big)\Big/\Big(\sqrt{\text{39.47841760435743`}\,h^2-\text{12.566370614359172`}\,r^2\,\theta+r^2\,\theta^2}\Big),\,v\Big]$$

$$\text{Solve}\Big[\frac{1}{2\,\pi}\sqrt{\Big(\text{9.102860909133264`*\textasciicircum28}+\text{8.679267028916372`*\textasciicircum27}\,\text{Sin}[\beta]^2+\text{2.0633200682788`*\textasciicircum13}\,\sqrt{\text{1.9463574830253733`*\textasciicircum31}-\text{1.9463574830253735`*\textasciicircum31}\,\text{Sin}[\beta]^2}\Big)}\,\sqrt{1-\frac{\left(\frac{\sqrt{4\,\pi^2\,c^2\,h^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,h^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}\right)^2}{c^2}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{\left(\frac{\sqrt{4\,\pi^2\,c^2\,h^2-4\,\pi\,c^2\,r^2\,\theta+c^2\,r^2\,\theta^2}}{\sqrt{\pi^2\,h^2-4\,\pi\,r^2\,\theta+r^2\,\theta^2}}\right)^2}{c^2}}}}\,\sqrt{\Big(4\,\pi\,\Big(\text{9.102860909133264`*\textasciicircum28}+\text{8.679267028916372`*\textasciicircum27}\,\text{Sin}[\beta]^2+\text{2.0633200682788`*\textasciicircum13}\,\sqrt{\text{1.9463574830253733`*\textasciicircum31}-\text{1.9463574830253735`*\textasciicircum31}\,\text{Sin}[\beta]^2}\Big)-\Big(\text{9.102860909133264`*\textasciicircum28}+\text{8.679267028916372`*\textasciicircum27}\,\text{Sin}[\beta]^2+\text{2.0633200682788`*\textasciicircum13}\,\sqrt{\text{1.9463574830253733`*\textasciicircum31}-\text{1.9463574830253735`*\textasciicircum31}\,\text{Sin}[\beta]^2}\Big)\,\theta\Big)}==\Big(\text{9.102860909133264`*\textasciicircum28}+\text{8.679267028916372`*\textasciicircum27}\,\text{Sin}[\beta]^2+\text{2.0633200682788`*\textasciicircum13}\,\sqrt{\text{1.9463574830253733`*\textasciicircum31}-\text{1.9463574830253735`*\textasciicircum31}\,\text{Sin}[\beta]^2}\Big)\,\text{Sin}[\beta],\,r\Big]$$

$$\{\{\}\}$$

$$\text{Solve}[r==2\,\pi\,r-2\,\pi\,x-\theta\,r,\,r]$$

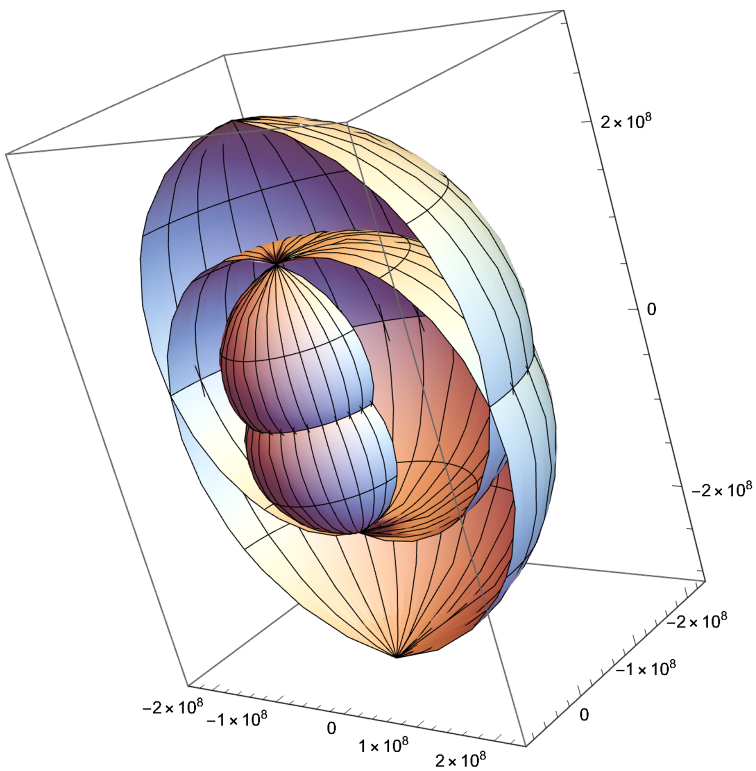
$$\left\{\left\{r\to\frac{2\,\pi\,x}{-1+2\,\pi-\theta}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{\left(\frac{\sqrt{4\pi^2 c^2 h^2-4\pi c^2 r^2 \theta+c^2 r^2 \theta^2}}{\sqrt{\pi^2 h^2-4\pi r^2 \theta+r^2\theta^2}}\right)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{\left(\frac{\sqrt{4\pi^2 c^2 h^2-4\pi c^2 r^2 \theta+c^2 r^2 \theta^2}}{\sqrt{\pi^2 h^2-4\pi r^2 \theta+r^2\theta^2}}\right)^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ c\right]$$

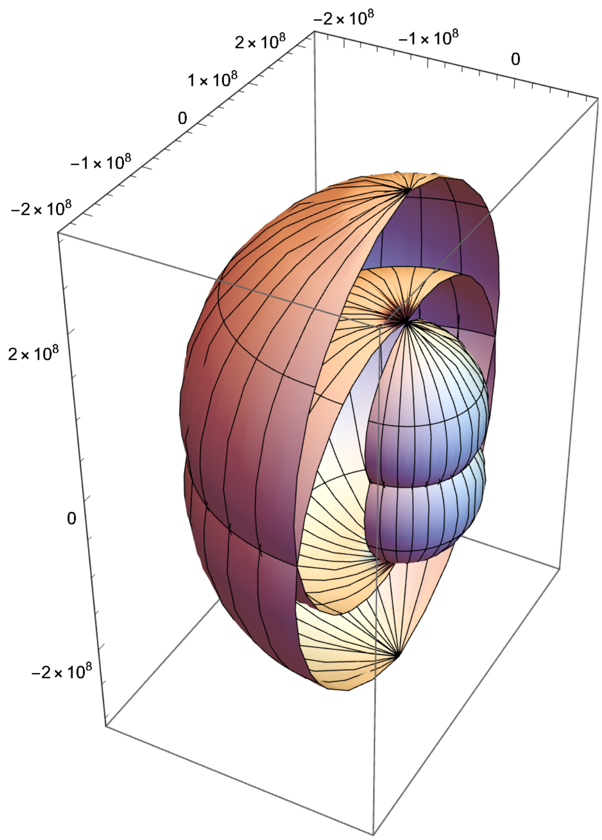
{}

$$\left(\left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}\right)\right)$$

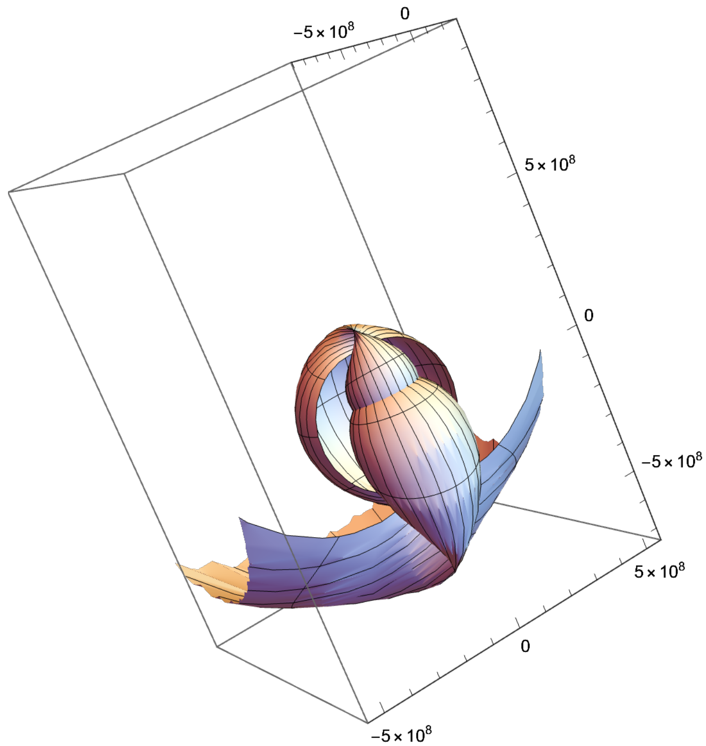
$$\text{SphericalPlot3D}\left[\left(\left(\sqrt{}\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right)\right)(\theta/(2\pi)),\ \{\theta, -2\pi, 2\pi\},\ \{\beta, -\pi/2, \pi/2\}\right]$$



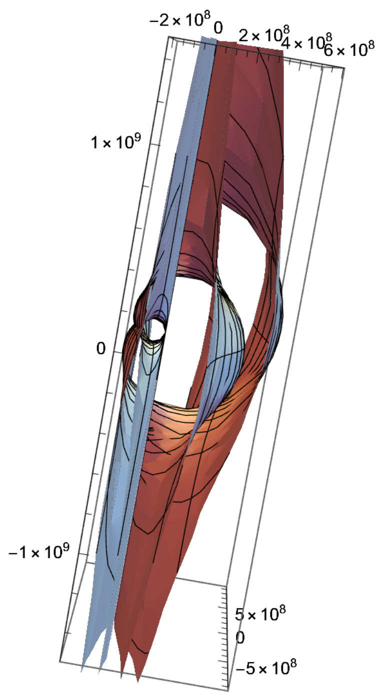
```
SphericalPlot3D[
 ((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16
        θ^2)) / (√(39.47841760435743` - 12.566370614359172` θ + θ^2)))
  (θ / (2 π)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



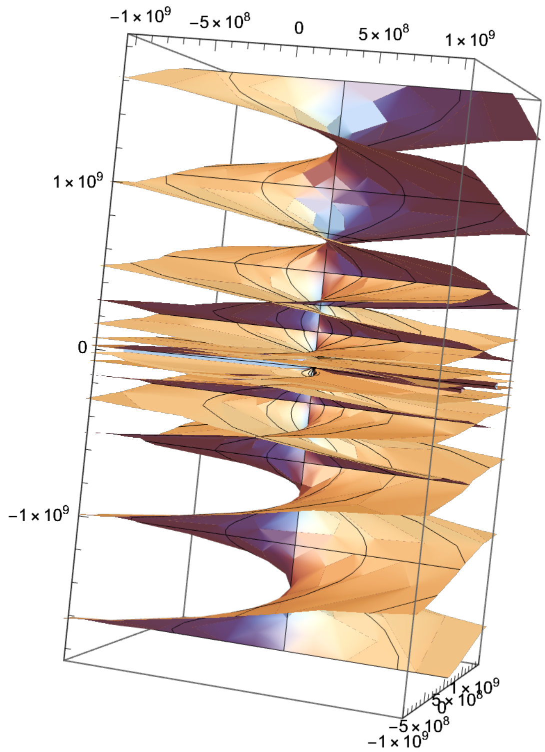
```
SphericalPlot3D[
 ((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
    (√(39.47841760435743` - 12.566370614359172` θ + θ^2)))
  (θ / (2 π)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



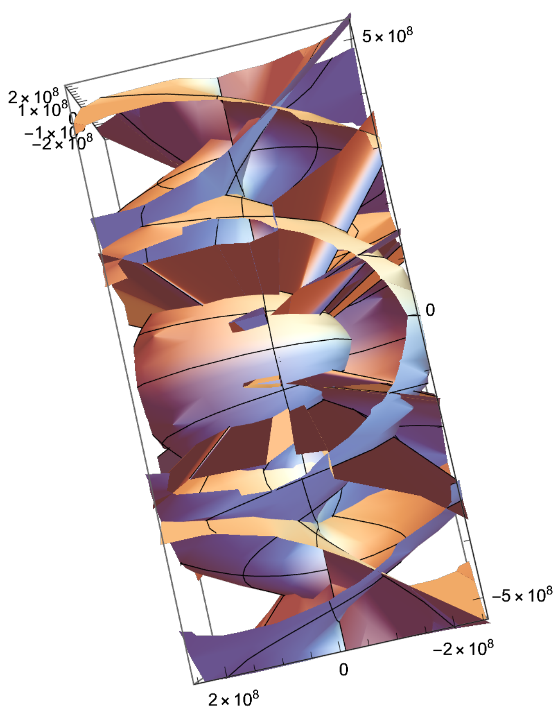
```
SphericalPlot3D[(-(1.` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
    (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))) (θ / (2 π)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



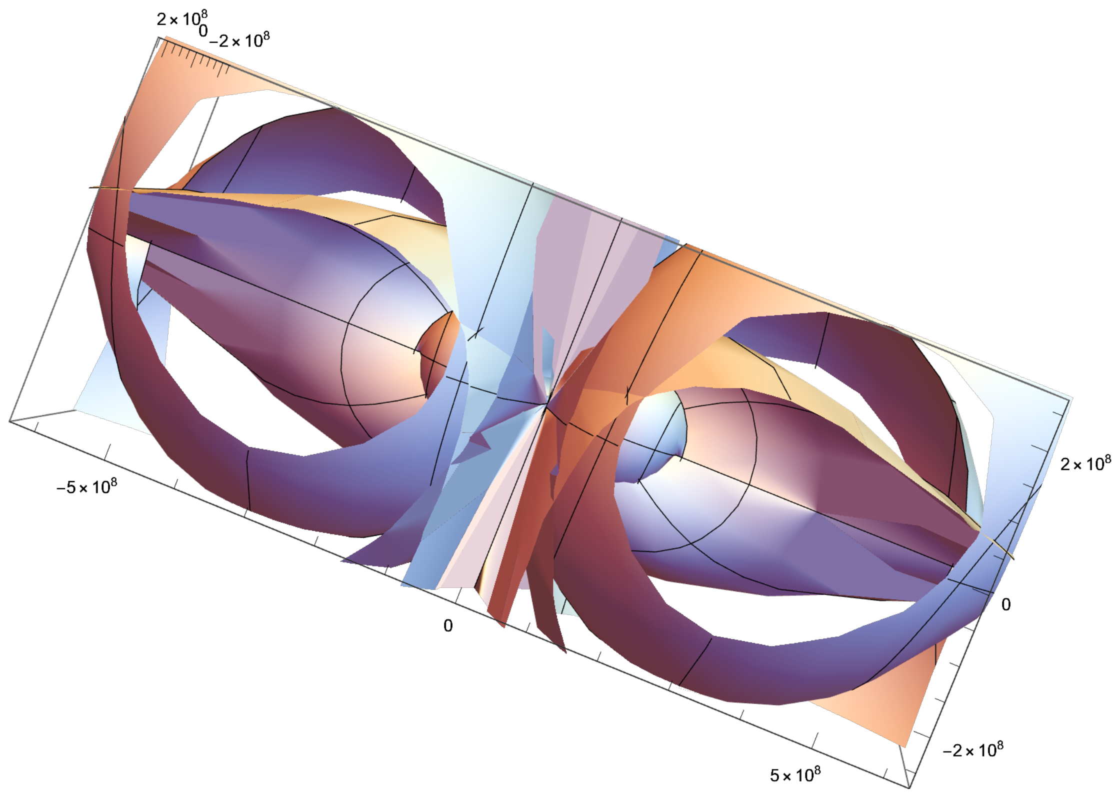
```
SphericalPlot3D[(-(1.` √(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (θ)^2)) /
    (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))) (θ / (2 π)), {β, -π, π}, {θ, -4 π, 4 π}]
```



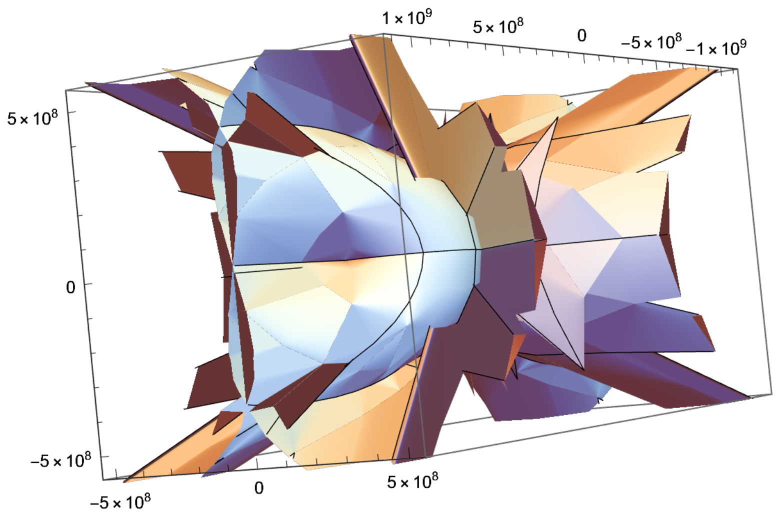
```
SphericalPlot3D[(-(1.` √(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (θ)^2)) /
    (√(39.47841760435743` - 12.566370614359172` (θ) + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)))
  (θ / (2 π)), {β, -π, π}, {θ, -4 π, 4 π}]
```



```
SphericalPlot3D[(-(1.` √(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        8.987551787368176`*^16 ((2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
    (√(39.47841760435743` - 12.566370614359172` θ + θ^2)))
  (θ / (2 π)), {β, -π, π}, {θ, -4 π,
  4 π}]
```



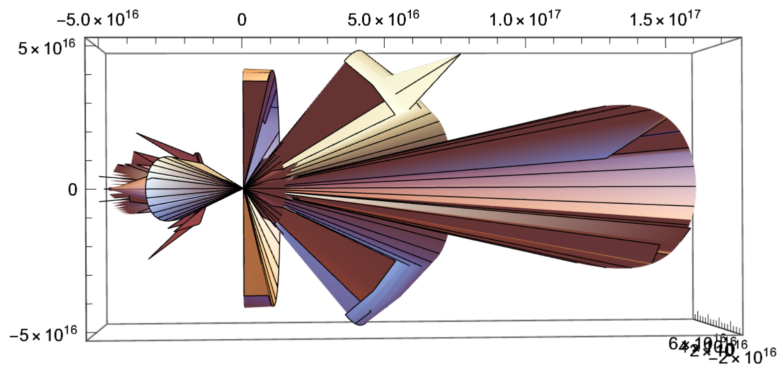
```
SphericalPlot3D[
 (((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
    (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)))
  (θ / (2 π)), {β, -π, π}, {θ, -4 π, 4 π}]
```



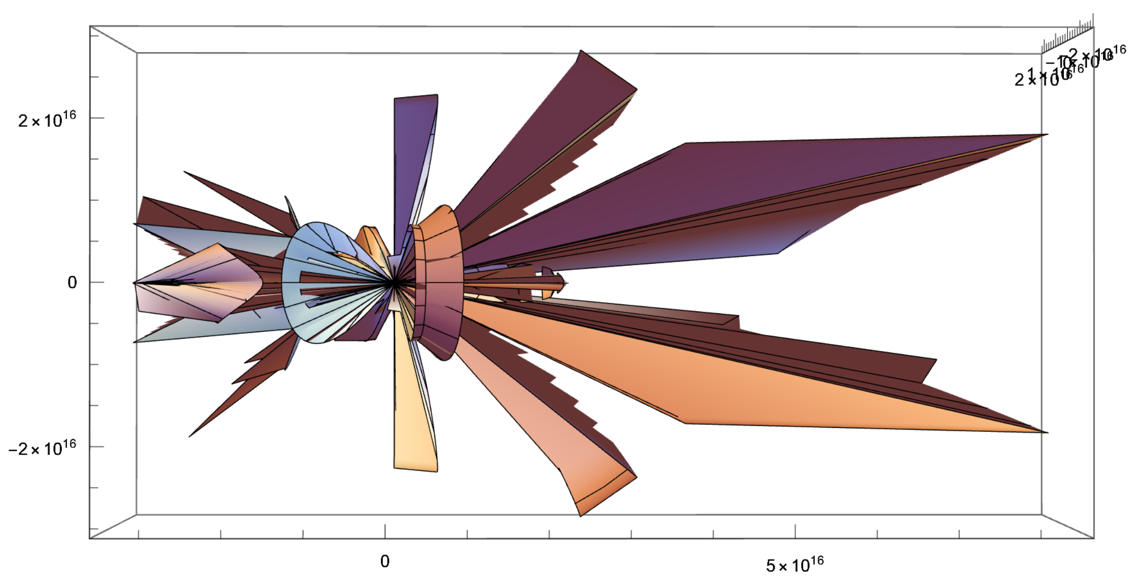
$$\beta \to \mathrm{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right] = \mathrm{ArcSin}\left[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta - \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\right] \text{ where,}$$

$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

```
SphericalPlot3D[
 (Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
       3.5481432270250993`*^18 Sin[β]^2)]/
   (Sqrt[(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[ArcSin[(4 π r θ - r θ^2)/(4 π^2)]]^2)]),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[ArcSin[(4 π r θ - r θ^2)/(4 π^2)]]^2)),
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} \Big/ \left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right) = 1\,/\,0 = \infty$$

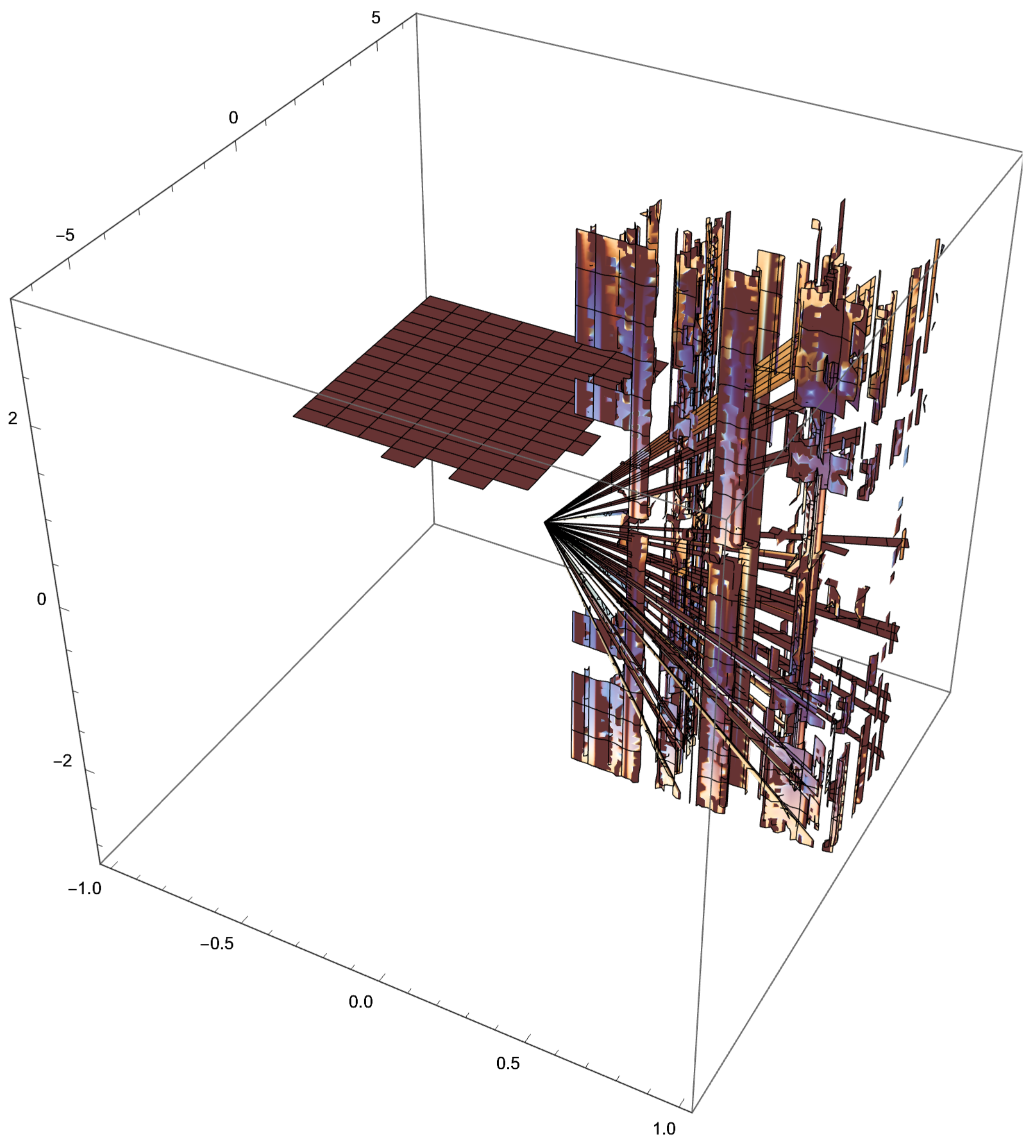
$$\mathrm{Solve}\left[\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} \Big/ \left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right) == (\eta\,/\,r),\ r\right]$$

{}

```
Solve[ (2 π Sin[β] / Sqrt[4 π θ - θ^2]) / (2 π r - r θ - 2 π Sqrt[r^2 - (4 π r^2 θ - r^2 θ^2)/(4 π^2)]) == (η / r), η]
```

$$\left\{\left\{\eta \to -\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}\,\left(-2\,\pi\,r+\sqrt{r^2\,(2\,\pi-\theta)^2}+r\,\theta\right)}\right\}\right\}$$

```
ContourPlot3D[- 2 π r Sin[β] / (Sqrt[(4 π - θ) θ] (-2 π r + Sqrt[r^2 (2 π - θ)^2] + r θ)),
 {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```



$$\text{Solve}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\Bigg/\left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right)==\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\Bigg/\left(2\,\pi\,r-r\,\theta-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right),\ r\right]$$

{}

$$\text{Solve}\left[\frac{\frac{2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta\right)}{2\,\pi}\,\sqrt{4\,\pi-\theta_1}\,\sqrt{\theta_1}}{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}==\beta,\ \theta\right]$$

$$\left\{\left\{\theta\to\text{InverseFunction[Subscript, 1, 2]}\left[2\,\pi\left(1-\sqrt{1-\beta^2}\right),\ 1\right]\right\},\ \left\{\theta\to\text{InverseFunction[Subscript, 1, 2]}\left[2\,\pi\left(1+\sqrt{1-\beta^2}\right),\ 1\right]\right\}\right\}$$

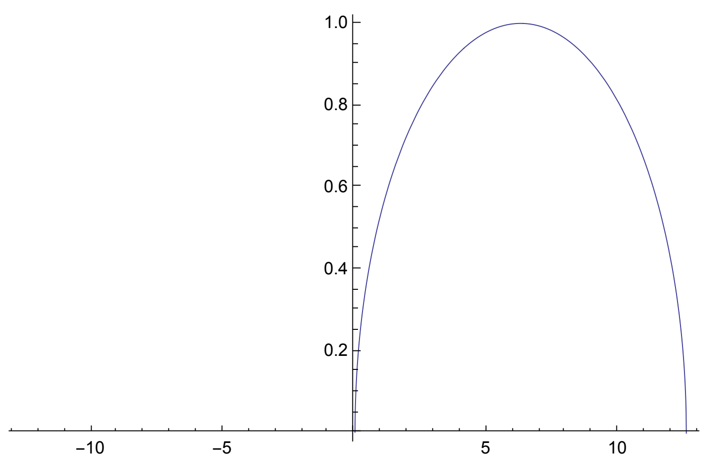
$$\text{Solve}\left[\frac{\frac{2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta\right)}{2\,\pi}\,\sqrt{4\,\pi-\theta_1}\,\sqrt{\theta_1}}{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}==\beta,\ \theta_1\right]$$

$$\left\{\left\{\theta_1\to 2\,\pi\left(1-\sqrt{1-\beta^2}\right)\right\},\ \left\{\theta_1\to 2\,\pi\left(1+\sqrt{1-\beta^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\theta_1==2\,\pi\left(1+\sqrt{1-\beta^2}\right),\ \beta\right]$$

$$\left\{\left\{\beta\to-\frac{\sqrt{4\,\pi\,\theta_1-\theta_1^2}}{2\,\pi}\right\},\ \left\{\beta\to\frac{\sqrt{4\,\pi\,\theta_1-\theta_1^2}}{2\,\pi}\right\}\right\}$$

$$\text{Plot}\left[\frac{\sqrt{4\,\pi\,\theta_1-\theta_1^2}}{2\,\pi},\ \{\theta_1,\ -4\,\pi,\ 4\,\pi\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,\theta_1-\theta_1^2}}{2\,\pi}==\frac{\sqrt{4\,\pi\,2\left(\pi+\sqrt{\pi^2-\frac{1}{4}\,(4\,\pi-\theta)\,\theta}\right)-\left(2\left(\pi+\sqrt{\pi^2-\frac{1}{4}\,(4\,\pi-\theta)\,\theta}\right)\right)^2}}{2\,\pi},\,\theta_1\right]$$

$$\{\{\theta_1\to 4\,\pi-\theta\},\,\{\theta_1\to\theta\}\}$$

FORMS

$$e^{\sqrt{-\frac{\sqrt{4\,\pi^2+4\,\pi\,\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\,\pi+\gamma}}\,\theta}}$$

THETA

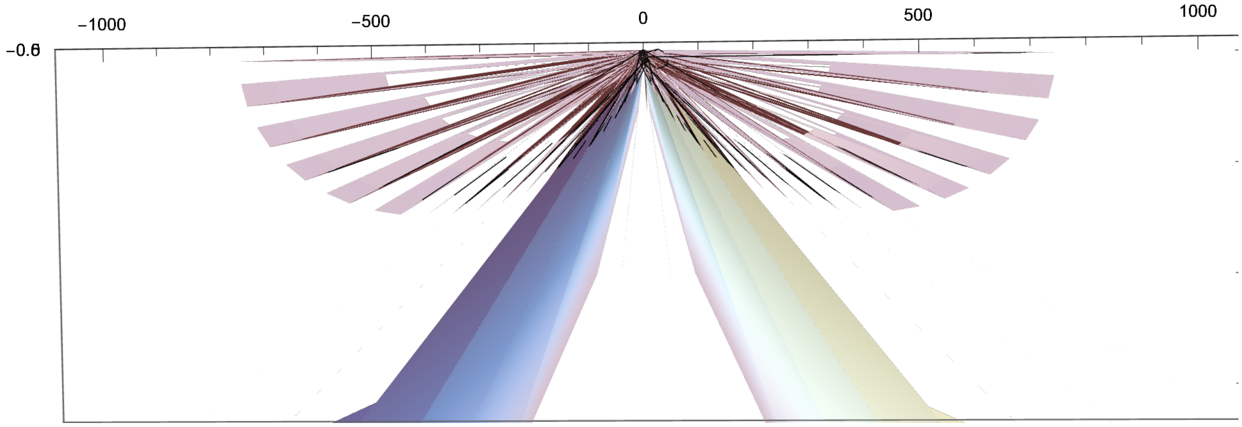
$$\text{Solve}\left[e^{\sqrt{-\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\theta}}==e^{\sqrt{-\frac{\sqrt{4\,\pi^2+4\,\pi\,\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\,\pi+\gamma}}\,\theta}},\,\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,\pi\,\gamma}{2\,\pi+\gamma}\right\},\,\left\{\theta\to\frac{2\,\pi\,(4\,\pi+\gamma)}{2\,\pi+\gamma}\right\}\right\}$$

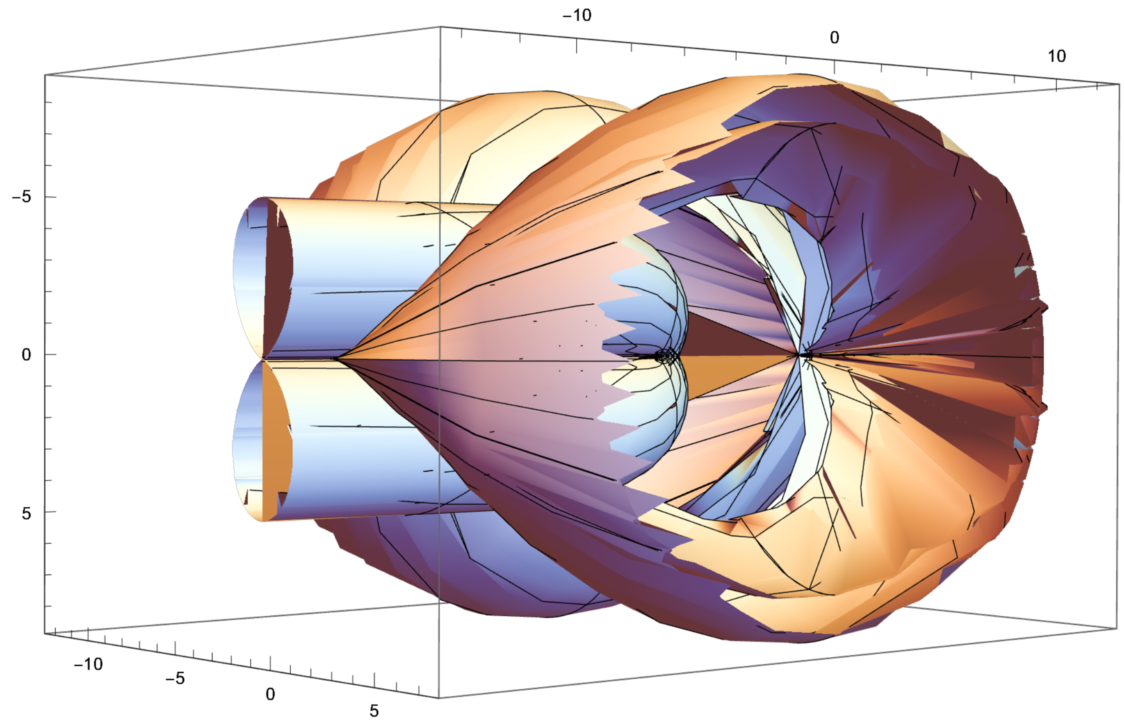
$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\,\pi\,\theta-\theta^2}}{2\,\pi\,\text{Sin}[\beta]}\,\theta}}==e^{\sqrt{-\frac{\sqrt{4\,\pi^2+4\,\pi\,\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\,\pi+\gamma}}\,\theta}},\,\theta\right]$$

$$\left\{\{\theta\to 0\},\,\left\{\theta\to\frac{1}{2\,\left(4\,\pi\,\gamma+\gamma^2\right)}\left(16\,\pi^2\,\gamma+4\,\pi\,\gamma^2-\sqrt{\left(\left(-16\,\pi^2\,\gamma-4\,\pi\,\gamma^2\right)^2-4\,\left(4\,\pi\,\gamma+\gamma^2\right)\,\left(16\,\pi^4\,\text{Sin}[\beta]^4+16\,\pi^3\,\gamma\,\text{Sin}[\beta]^4+4\,\pi^2\,\gamma^2\,\text{Sin}[\beta]^4\right)\right)}\right)\right\},\right.$$
$$\left.\left\{\theta\to\frac{1}{2\,\left(4\,\pi\,\gamma+\gamma^2\right)}\left(16\,\pi^2\,\gamma+4\,\pi\,\gamma^2+\sqrt{\left(\left(-16\,\pi^2\,\gamma-4\,\pi\,\gamma^2\right)^2-4\,\left(4\,\pi\,\gamma+\gamma^2\right)\,\left(16\,\pi^4\,\text{Sin}[\beta]^4+16\,\pi^3\,\gamma\,\text{Sin}[\beta]^4+4\,\pi^2\,\gamma^2\,\text{Sin}[\beta]^4\right)\right)}\right)\right\}\right\}$$

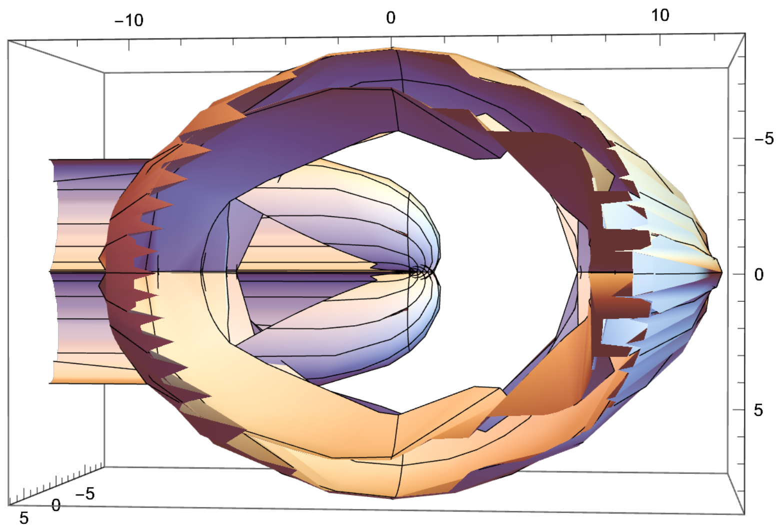
$$\text{SphericalPlot3D}\Big[\Big\{\frac{1}{2\,(4\,\pi\,\gamma+\gamma^2)}\Big(16\,\pi^2\,\gamma+4\,\pi\,\gamma^2+\sqrt{\Big((-16\,\pi^2\,\gamma-4\,\pi\,\gamma^2)^2-4\,(4\,\pi\,\gamma+\gamma^2)\,(16\,\pi^4\,\text{Sin}[\beta]^4+16\,\pi^3\,\gamma\,\text{Sin}[\beta]^4+4\,\pi^2\,\gamma^2\,\text{Sin}[\beta]^4)\Big)}\Big),$$
$$\frac{1}{2\,(4\,\pi\,\gamma+\gamma^2)}\Big(16\,\pi^2\,\gamma+4\,\pi\,\gamma^2+\sqrt{\Big((-16\,\pi^2\,\gamma-4\,\pi\,\gamma^2)^2-4\,(4\,\pi\,\gamma+\gamma^2)\,(16\,\pi^4\,\text{Sin}[\beta]^4+16\,\pi^3\,\gamma\,\text{Sin}[\beta]^4+4\,\pi^2\,\gamma^2\,\text{Sin}[\beta]^4)\Big)}\Big)\Big\},\{\beta,-\pi/2,\pi/2\},\{\gamma,-4\,\pi,4\,\pi\}\Big]$$



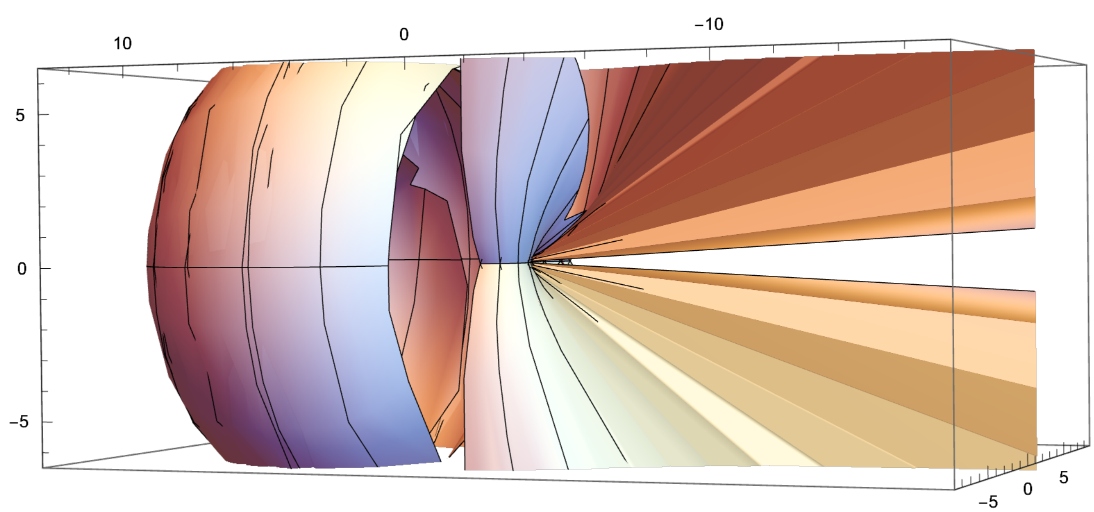
```
SphericalPlot3D[{1/(2 (4 π γ + γ^2)) (16 π^2 γ + 4 π γ^2 + √((-16 π^2 γ - 4 π γ^2)^2 -
      4 (4 π γ + γ^2) (16 π^4 Sin[β]^4 + 16 π^3 γ Sin[β]^4 + 4 π^2 γ^2 Sin[β]^4))),
   1/(2 (4 π γ + γ^2)) (16 π^2 γ + 4 π γ^2 + √((-16 π^2 γ - 4 π γ^2)^2 - 4 (4 π γ + γ^2) (16 π^4 Sin[β]^4 +
          16 π^3 γ Sin[β]^4 + 4 π^2 γ^2 Sin[β]^4)))}, {γ, -4 π, 4 π}, {β, -π / 2, π / 2}]
```

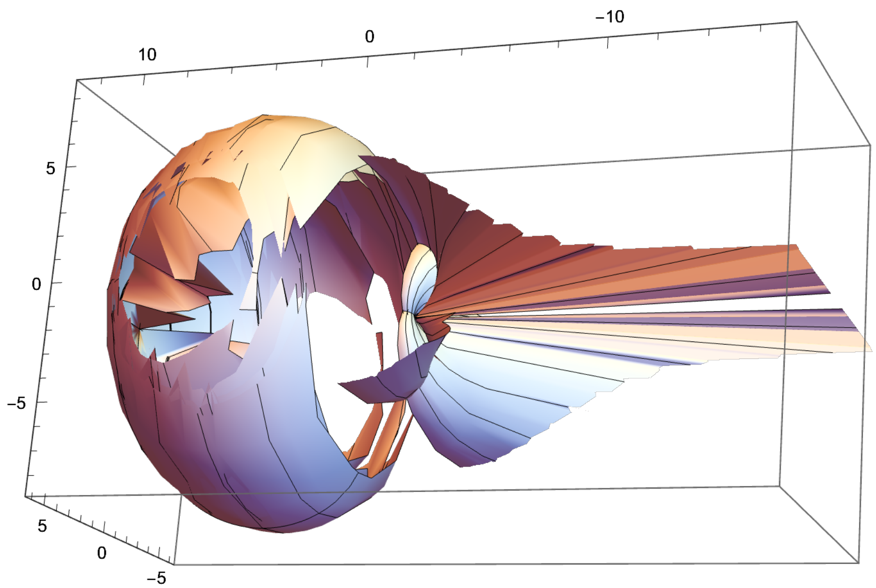


```
SphericalPlot3D[1/(2 (4 π γ + γ^2)) (16 π^2 γ + 4 π γ^2 +
    √((-16 π^2 γ - 4 π γ^2)^2 - 4 (4 π γ + γ^2) (16 π^4 Sin[β]^4 + 16 π^3 γ Sin[β]^4 + 4 π^2 γ^2 Sin[β]^4))),
  {γ, -4 π, 4 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[1/(2 (4 π γ + γ^2)) (16 π^2 γ + 4 π γ^2 +
    √((-16 π^2 γ - 4 π γ^2)^2 - 4 (4 π γ + γ^2) (16 π^4 Sin[β]^4 + 16 π^3 γ Sin[β]^4 + 4 π^2 γ^2 Sin[β]^4))),
  {β, -π / 2, π / 2}, {γ, -4 π, 4 π}]
```





$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}\theta}} == e^{\sqrt{-\frac{\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\ \text{Sin}[\beta]}\theta}},\ \theta\right]$$

$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{2\pi\gamma}{2\pi+\gamma}\right\},\ \left\{\theta \to \frac{2\left(4\pi^2+\pi\gamma\right)}{2\pi+\gamma}\right\}\right\}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\theta}} == e^{\sqrt{-\frac{\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\ \text{Sin}[\beta]}\theta}},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{1}{2\gamma(4\pi+\gamma)}\left(-\pi(-16\pi-4\gamma)\gamma\,\text{Csc}[\beta]^2 - \sqrt{4\pi^2\gamma(4\pi+\gamma)\left(-16\pi^2-16\pi\gamma-4\gamma^2\right)+\pi^2(-16\pi-4\gamma)^2\gamma^2\,\text{Csc}[\beta]^4}\right)\text{Sin}[\beta]^2\right\},\right.$$
$$\left.\left\{\theta \to \frac{1}{2\gamma(4\pi+\gamma)}\left(-\pi(-16\pi-4\gamma)\gamma\,\text{Csc}[\beta]^2 + \sqrt{4\pi^2\gamma(4\pi+\gamma)\left(-16\pi^2-16\pi\gamma-4\gamma^2\right)+\pi^2(-16\pi-4\gamma)^2\gamma^2\,\text{Csc}[\beta]^4}\right)\text{Sin}[\beta]^2\right\}\right\}$$

BETA

$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\theta}} == e^{\sqrt{-\frac{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\ \text{Sin}[\beta]}{\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}\theta}},\ \beta\right]$$

$$\{\{\beta \to 0\}\}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}}\,\theta} == e^{\sqrt{-\frac{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\pi+\gamma}}}\,\theta},\ \beta\right]$$

$$\left\{\left\{\beta\to-\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\Theta}\,\sqrt{-4\pi+\Theta}}\right]\right\},\right.$$
$$\left.\left\{\beta\to\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\Theta}\,\sqrt{-4\pi+\Theta}}\right]\right\}\right\}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}}\,\theta} == e^{\sqrt{-\frac{\sqrt{\gamma}\,\sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\,\text{Sin}[\beta]}}\,\theta},\ \beta\right]$$

$$\{\}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\theta} == e^{\sqrt{-\frac{\sqrt{\gamma}\,\sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\,\text{Sin}[\beta]}}\,\theta},\ \beta\right]$$

$$\left\{\left\{\beta\to-\text{ArcCsc}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}\right]\right\},\right.$$
$$\left.\left\{\beta\to\text{ArcCsc}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}\right]\right\}\right\}$$

GAMMA

$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\theta} == e^{\sqrt{-\frac{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\pi+\gamma}}}\,\theta},\ \beta\right]$$

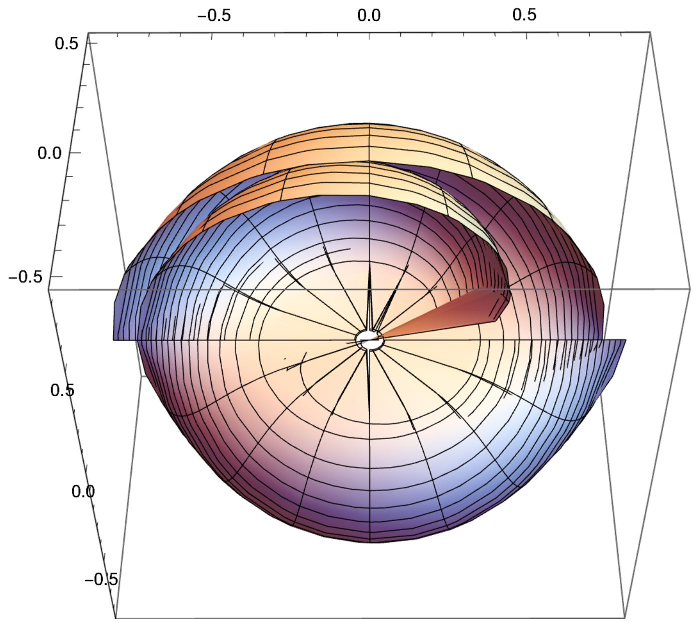
$$\{\{\beta\to0\}\}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}}\,\theta} == e^{\sqrt{-\frac{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\,\text{Sin}[\beta]}{\sqrt{\gamma}\,\sqrt{4\pi+\gamma}}}\,\theta},\ \beta\right]$$

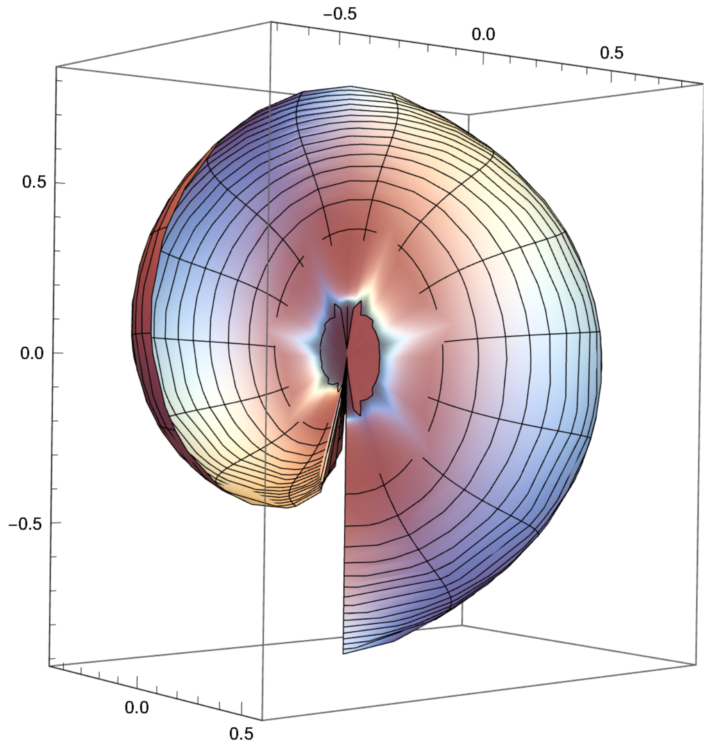
$$\left\{\left\{\beta\to-\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\Theta}\,\sqrt{-4\pi+\Theta}}\right]\right\},\right.$$
$$\left.\left\{\beta\to\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2}\,\pi\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\Theta)\,\Theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\Theta}\,\sqrt{-4\pi+\Theta}}\right]\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\left\{-\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2\,\pi}\,\left((2\,\pi+\gamma)^2\right)^{1/4}\,((4\,\pi-\theta)\,\theta)^{1/4}}{\gamma^{1/4}\,(4\,\pi+\gamma)^{1/4}\,\sqrt{\theta}\,\sqrt{-4\,\pi+\theta}}\right],\right.\right.$$

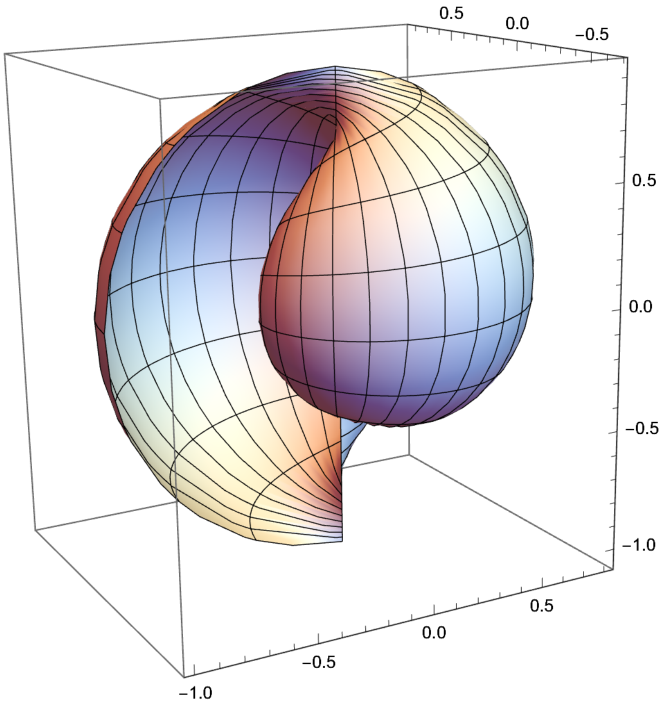
$$\left.\left.\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2\,\pi}\,\left((2\,\pi+\gamma)^2\right)^{1/4}\,((4\,\pi-\theta)\,\theta)^{1/4}}{\gamma^{1/4}\,(4\,\pi+\gamma)^{1/4}\,\sqrt{\theta}\,\sqrt{-4\,\pi+\theta}}\right]\right\},\,\{\gamma,\,-2\,\pi,\,2\,\pi\},\,\{\theta,\,-\pi/2,\,\pi/2\}\right]$$



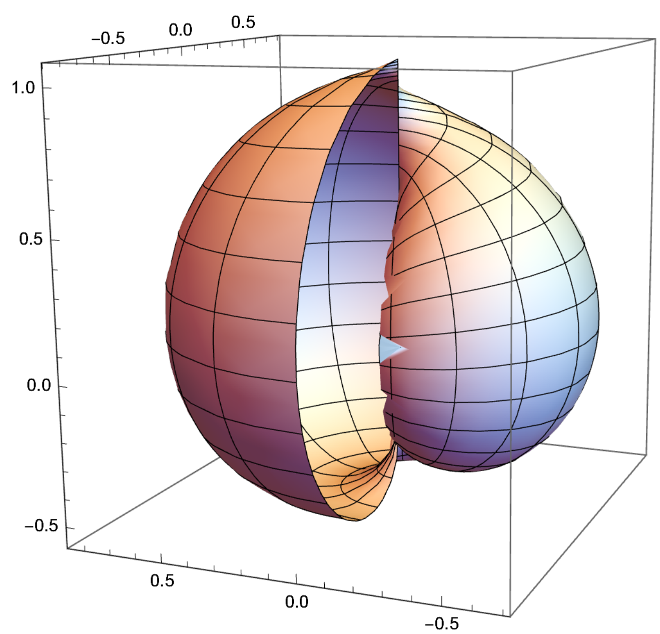
$$\text{SphericalPlot3D}\left[\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2\pi}\left((2\pi+\gamma)^2\right)^{1/4}((4\pi-\theta)\,\theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\sqrt{\theta}\,\sqrt{-4\pi+\theta}}\right],\right.$$
$$\left.\{\theta, -2\pi, 2\pi\}, \{\gamma, -\pi/2, \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2\pi}\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\theta)\,\theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\theta}\,\sqrt{-4\pi+\theta}}\right],\{\gamma,-2\pi,2\pi\},\{\theta,-\pi,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\mathbb{i}\,\text{ArcCsch}\left[\frac{\sqrt{2\pi}\,\left((2\pi+\gamma)^2\right)^{1/4}\,((4\pi-\theta)\,\theta)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,\sqrt{\theta}\,\sqrt{-4\pi+\theta}}\right],\{\theta,-\pi,\pi\},\{\gamma,-2\pi,2\pi\}\right]$$



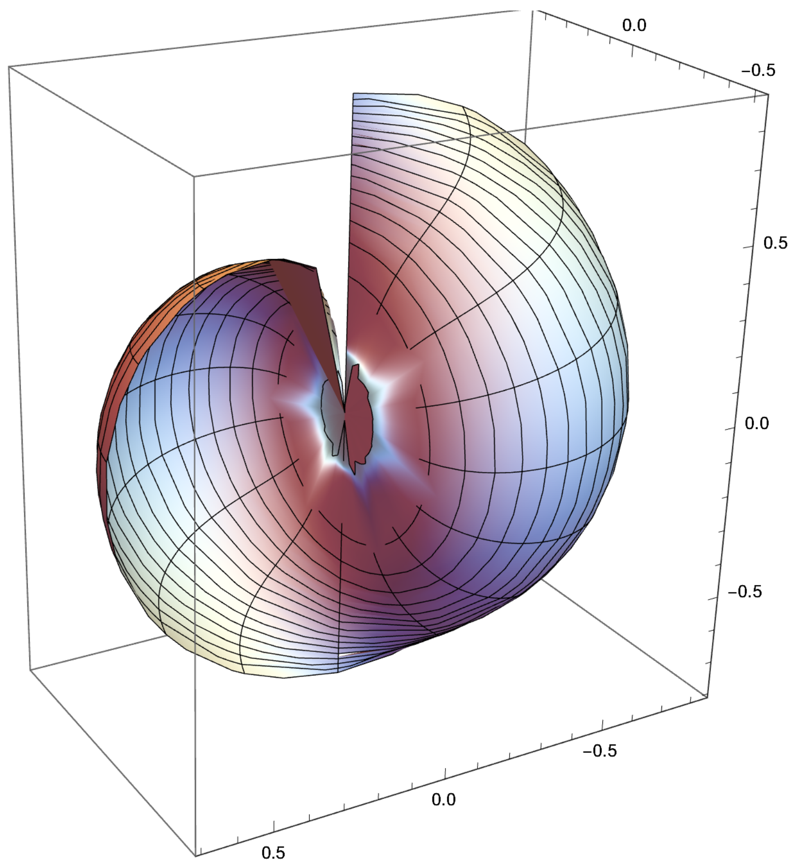
$$\text{Solve}\left[e^{\sqrt{-\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}\theta}} == e^{\sqrt{-\frac{\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\ \text{Sin}[\beta]}\theta}},\ \beta\right]$$

{}

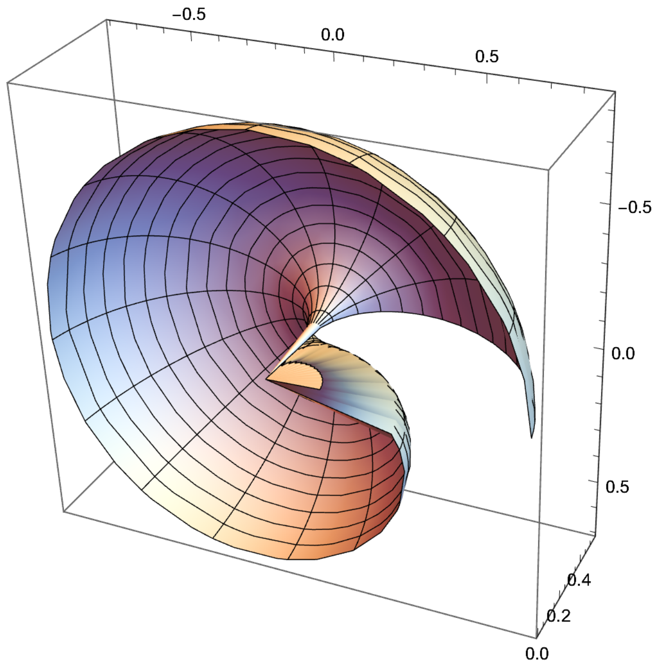
$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\theta}} == e^{\sqrt{-\frac{\sqrt{\gamma}\ \sqrt{4\pi+\gamma}}{\sqrt{4\pi^2+4\pi\gamma+\gamma^2}\ \text{Sin}[\beta]}\theta}},\ \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcCsc}\left[\frac{\sqrt{2\pi}\ \left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\ (4\pi+\gamma)^{1/4}\ ((4\pi-\theta)\ \theta)^{1/4}}\right]\right\},\right.$$
$$\left.\left\{\beta \to \text{ArcCsc}\left[\frac{\sqrt{2\pi}\ \left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\ (4\pi+\gamma)^{1/4}\ ((4\pi-\theta)\ \theta)^{1/4}}\right]\right\}\right\}$$

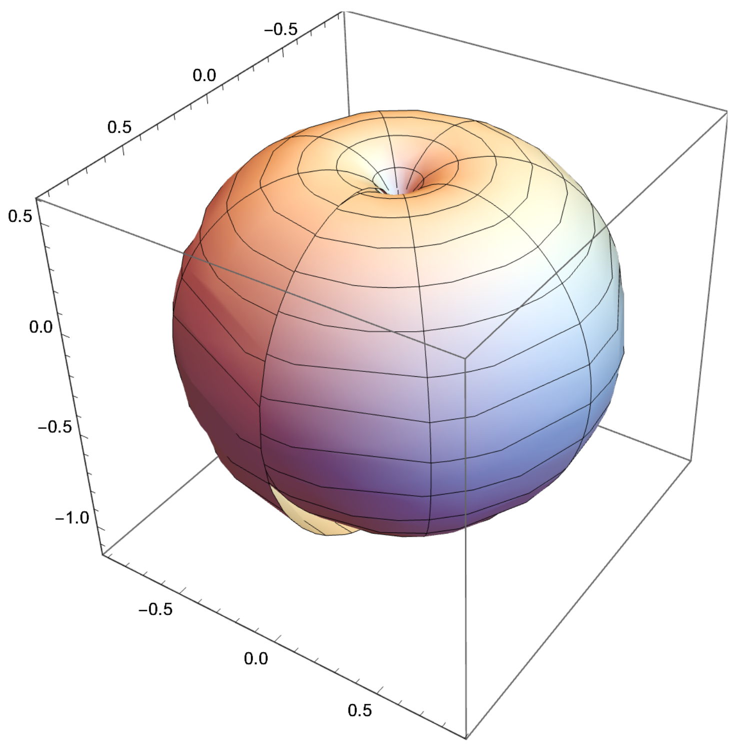
$$\text{SphericalPlot3D}\left[\text{ArcCsc}\left[\frac{\sqrt{2\pi}\ \left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\ (4\pi+\gamma)^{1/4}\ ((4\pi-\theta)\ \theta)^{1/4}}\right],\ \{\gamma, -2\pi, 2\pi\},\ \{\theta, -\pi/2, \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\text{ArcCsc}\left[\frac{\sqrt{2\pi}\,\left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,((4\pi-\theta)\,\theta)^{1/4}}\right],\,\{\theta,-\pi/2,\pi/2\},\,\{\gamma,-2\pi,2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\text{ArcCsc}\left[\frac{\sqrt{2\pi}\,\left((2\pi+\gamma)^2\right)^{1/4}}{\gamma^{1/4}\,(4\pi+\gamma)^{1/4}\,((4\pi-\theta)\,\theta)^{1/4}}\right],\,\{\theta,-\pi,\pi\},\,\{\gamma,-4\pi,4\pi\}\right]$$



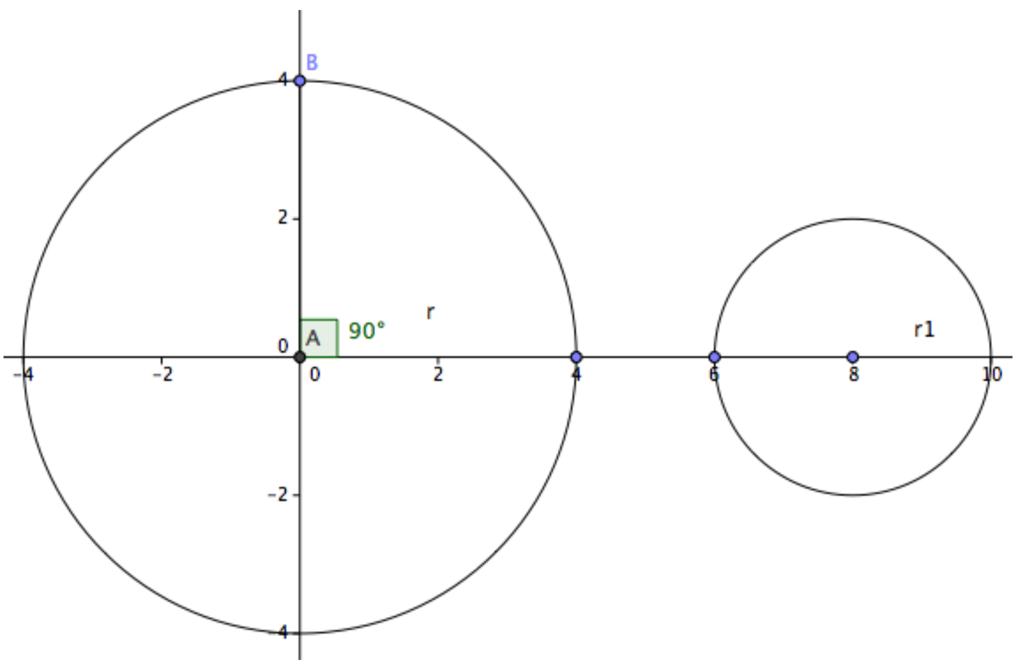
The Geometric Pattern of Perception Theorems

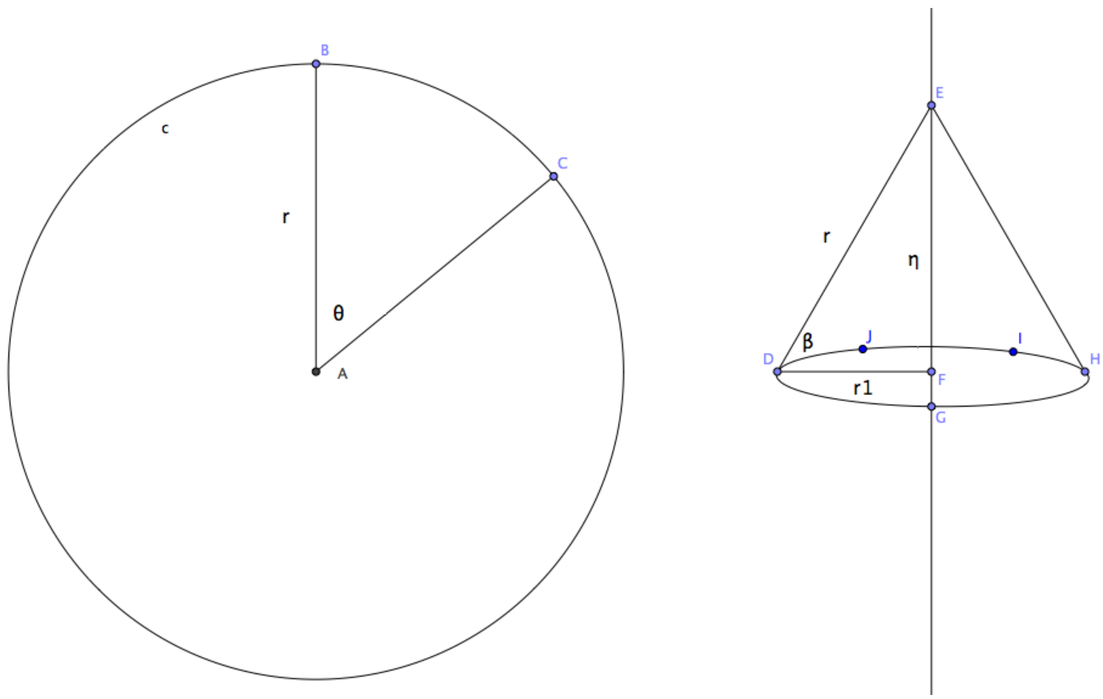
Visualization, Surfaces, and Geometry

Produced by Parker Emmerson for - The Citizen - Your Transcendental News Now!

I. Math for Transforming a Circle into a Cone (The First Three Theorems)

by Parker Emmerson





When a sector of a circle is removed, we may "fold up" the resulting shape into a cone. The parameters are related by the following theorem :

Theorem 1 *When a sector of angle θ is removed from a circle of radius r and the resulting shape is folded into a cone, then the base of the cone has radius r_1 given by $r_1 = r - \frac{(r\theta)}{2\pi}$; and height η, given by $\eta = \sqrt{r^2 - r_1^2}$* = r Sin[$\beta$]

Proof. The circumference of the initial circle is 2π r and the wedge removed has an arc length r θ. Therefore, the remaining circumference is of length r $(2\pi - \theta)$, and after the fold, this is the circumference of the base of the cone.

Establishing the circumference of the base of the cone, from the equation, $\theta\, r = 2\pi\, r - 2\pi\, r_1$, we calculate that its radius r_1 is $\frac{2\pi r - r\theta}{2\pi}$, which simplifies to r - $\frac{r\theta}{2\pi}$. Thus, we have proved the first part of the theorem.

To find the height of the cone, η, we apply the Pythagorean theorem to a right triangle formed between the apex of the cone, the center of the base, and a point on the circumference of the base. This gives $\eta = \sqrt{r^2 - r_1^2}$ = r Sin[β], where β is the angle formed by the slant of the cone and the base of the cone. The initial radius is always equal to the slant of the cone, and the height of the cone is always orthogonal to the center of the base of the cone.

Lemma 1 The height of the cone can be caluclated in terms of r and θ.

Proof.

$\theta\, r = 2\pi\, r - 2\pi\, r_1$

$\eta = \sqrt{r^2 - r_1^2}$

$\theta\, r = 2\pi\, r - 2\pi \sqrt{(r\hat{}2 - \eta\hat{}2)}$

Solving this equation we find that,

$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}\right\}$$

Lemma 2 The angle θ can be calculated in terms of r and η.

Proof

$$\text{Solve}\left[\eta == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,\pi\,\left(r^2 - \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}, \left\{\theta \to \frac{2\,\pi\,\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}\right\}$$

Lemma 3 The initial radius is a function of θ and η.

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \eta, r\right]$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}, \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\}$$

Lemma 4 *The height of the cone can be calculated in terms of only r and θ*, thus β is a function of θ alone.

Proof. Since we have shown that θ r = 2 π r - 2 π r_1 and $r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial radius of the circle, into the expression for θ r in terms of the change in circumference of the initial circle to the circle that is the base of the cone into which the circle was transformed.

θ r = 2 π r - 2 π $\sqrt{(r\,^\wedge 2 - \eta\,^\wedge 2)}$, thus, $\eta = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$ = (r Sin[β]). From $\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}$ = r, we note that: r = $\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$. So we solve the equation,

$$\text{Solve}\left[r == \frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \beta\right]$$

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right\}\right\}$$

Lemma 5 *The height of the cone can be calculated in terms of only r and θ*, thus θ is a function of β alone.

Proof. Since we have shown that θ r = 2 π r - 2 π r_1 and $r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial radius of the circle, into the expression for θ r in terms of the change in circumference of the initial circle to the circle that is the base of the cone into which the circle was transformed.

θ r = 2 π r - 2 π $\sqrt{(r\,^\wedge 2 - \eta\,^\wedge 2)}$, thus, $\eta = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$ = (r Sin[β]). From $\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}$ = r, we note that: r = $\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$. So we solve the equation,

$$\text{Solve}\left[r == \frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, \theta\right]$$

$$\left\{\left\{\theta \to 2\,\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

Lemma 6 The initial radius can be calculated purely in terms of the angle θ.

Proof. From Lemma 1, the height of the cone has been solved in terms of the transformation. That expression for the height divided by the initial radius is set equal to the sine of β. Solving that equation yields an expression for β that includes r. This expression for β is then set equal to the expression found from Lemma 5.

$$\text{Sin}[\beta] = \frac{\eta}{r} = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{r\,2\,\pi} = \frac{4\,\pi\,r^2\,\theta - r^2\,\theta^2}{4\,\pi^2\,r} = \frac{r\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}$$

$$\beta \to \text{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right] = \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]$$

$$\text{Solve}\left[\text{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right] == \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ r\right]$$

$$\left\{\left\{r \to \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right\}\right\}$$

Commentary of Lemma 6. Matt Ollis pointed out to me that my final lemma to this section cannot be proved through Euclidean geometry, reasoning that because a circle of any radius and any angle taken out of it can be made, this statement cannot be proven. I initially proposed that the initial radius is not dependent on theta, so how can it be shown that it is? In any sufficiently logical system (as pointed out by Kurt Gödel in his famous, first incompleteness theorem), there is always a statement that is true, but cannot be proven. This resolves the paradox of why this algebraic-geometric phenomenon takes place - Euclidean geometry and algebra are sufficiently logical systems, and I assert that Lemma 6 is true, but not provable by Euclidean geometry (the system to which this mathematics belongs).

A note about time passing like a clock.

The elapse of one unit of time, t, can be expressed by a constant function of the angle θ. The simplest expression is t (seconds) = $\frac{\theta}{2\pi}$; $\theta = k\,t$, where k is 2π, because one unit of time is equal to one revolution of θ through a circle. But what is so strange, is that at 2π, there is no angle, because the cone has totally collapsed into a distance orthogonal to the center of the base of the initial circle. But it's actually alright to measure time like this, because the intial radius can rotate 2π degrees and act as a signifier of a total revolution at the position of $\theta = 2\pi$.

Proof. θ r = 2 π r - 2 π (r - r t) yields $t = \frac{\theta}{2\pi}$.

Theorem 2 When we designate that a single unit of time passes per revolution of the angle through the total number of radians in a circle, instantaneous velocity through the distance of the height of the cone can be found by taking the first derivative of the expression for that distance, which is in terms of r and θ, with respect to t = $\frac{\theta}{2\pi}$. There is also a velocity through the height of the cone, which is equal to wavelength times frequency = $\lambda\, f = \frac{\eta}{\left(\frac{\theta}{(2\pi)}\right)}$ considered the average velocity through the height of the cone. Under the condition that one unit of time passes with one revolution of the circle, these two velocities are equal to each other at the position where a 30-60-90 triangle is formed between the apex, center of the base of the cone, and point on the circumference of the circle of the base of the cone.

Proof.

To prove this, we can substitute r Sin[β] for the height of the cone in the expression of velocity = ((2 π η)/θ) and find a real and two complex solutions for theta in terms of β , thus from Lemma 4, we can solve for β exactly.

$$\text{Instantaneous Velocity} = \frac{d\eta}{dt} = \frac{d\eta}{d\,\frac{\theta}{(2\,\pi)}} =$$

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ t\right] = D\left[k\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \theta\right] = D\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \theta\right] = \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$\text{Average Velocity} = (\eta\,/\,(\theta\,/\,2\,\pi))$$

$$\text{Instantaneous Velocity} = \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} = \text{Average Velocity} = \frac{2\,\pi\,\eta}{\theta}$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} == \frac{2\,\pi\,\eta}{\theta},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\pi}{3} + \frac{-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2}{6\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} - \frac{2\pi\left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},\right.$$

$$\left\{\theta \to \frac{4\pi}{3} - \frac{\left(1 + i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 - i\sqrt{3}\right)\pi\left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},$$

$$\left.\left\{\theta \to \frac{4\pi}{3} - \frac{\left(1 - i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 + i\sqrt{3}\right)\pi\left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{k\left(4\pi r^2 - 2 r^2 \theta\right)}{4\pi\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == \frac{k\, r\, \text{Sin}[\beta]}{\theta}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\pi}{3} - \frac{-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2}{6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\},\right.$$

$$\left\{\theta \to \frac{4\pi}{3} + \frac{\left(1 + i\sqrt{3}\right)\left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right)}{12\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}} - \frac{1}{3}\left(1 - i\sqrt{3}\right)\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\},$$

$$\left.\left\{\theta \to \frac{4\pi}{3} + \frac{\left(1 - i\sqrt{3}\right)\left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right)}{12\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}} - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\}\right\}$$

The real solution for θ, solved from equating the instantaneous velocity to the average velocity, can be equated with the real solution for the expression for θ from Lemma 4 to yield an exact solution for β that tells us that when these solutions for theta are equal, a 30-60-90 triangle is formed between the azimuth of the cone, the point on the base of the cone and the center of the base of the cone.

$$\text{Solve}\left[\frac{4\pi}{3} - \frac{-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2}{6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3} == 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -\frac{\pi}{3}\right\}, \left\{\beta \to \frac{\pi}{3}\right\}\right\}$$

We know that the height of the cone is perpendicular to the center of the base of the cone, so this proves a 30-60-90 triangle, because the sum of the angles of the triangle must be 180 degrees or π radians.

Lemma 7 We can show that $\beta = \frac{\pi}{3}$, thus we can show that there are two solutions to θ at which this occurs.

Proof.

$$\text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right] = \beta$$

$\texttt{Solve}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right] == \frac{\pi}{3}, \theta\right]$

$\{\{\theta \to \pi\}, \{\theta \to 3\pi\}\}$

Lemma 8 We can show can show that the position at which instantaneous rate of change of the height of the cone with respect to theta equals average rate of change of the height of the cone, 'per theta measure,' at

$$\left\{\left\{\beta \to -\texttt{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}, \left\{\beta \to \texttt{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}\right\}.$$

Proof.

$$\texttt{Solve}\left[\theta == \frac{4\pi}{3} - \frac{-4\pi^2+12\pi^2\,\texttt{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}} + \frac{2}{3}\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}, \beta\right]$$

$$\left\{\left\{\beta \to -\texttt{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}, \left\{\beta \to \texttt{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right\}\right\}$$

Theorem 3 The "innate velocity," v, within the Lorentz transformation can be solved for in terms of the system of the circle transforming into a cone. If r is multiplied by the Lorenz transformation, then it measures the distance in the prime system, denoted by r '. If t ' equals $\frac{\left(\frac{\theta}{(2\pi)}\right)}{\sqrt{1-\left(\frac{v^2}{c^2}\right)}}$, then the quantity r $\theta = \theta$ ' r '. We are only dealing with algebraic forms and the solutions necessitated by them. Logical, algebraic, reasoning will be given why, when using the exact speed of light, 2.99792458 (10^8) meters per second, the units of the speed of light can be ignored for the purposes of calculation and computation. This theorem states that, although, normal algebra would require the speed of light as a quantity to cancel out, valid expressions for the solutions for the intrinsic velocity, v, can be found in terms of η, r, and θ, or θ and β, depending on the expression used for the height of the cone.

Proof.

$c = 2.99792458\,(10^8)$ meters per second

$$r' = r\sqrt{1-\frac{v^2}{c^2}}$$

$$t' = \frac{\left(\frac{\theta}{(2\pi)}\right)}{\sqrt{1-\left(\frac{v^2}{c^2}\right)}}$$

$t' = \frac{\theta'}{2\pi}$

$2\pi t' = \theta'$

$$\theta' = \frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}$$

Therefore,

$$r'*\theta' = \left(\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}\right)\left(r\sqrt{1-\frac{v^2}{c^2}}\right)$$

$$\left(\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}\right)\left(r\sqrt{1-\frac{v^2}{c^2}}\right) = r\,\theta$$

$$r'*\theta' = r\,\theta = 2\,\pi\,r - 2\,\pi\,r_1 = 2\,\pi\,r - 2\,\pi\,\sqrt{r\,\hat{}\,2-\eta\,\hat{}\,2}$$

$$\text{Solve}\left[r\,\theta == 2\,\pi\,r - 2\,\pi\,\sqrt{r\,\hat{}\,2-\eta\,\hat{}\,2},\ \eta\right]$$

$$\left\{\left\{\eta\to-\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right\},\ \left\{\eta\to\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

$$\textbf{Solve}\left[r'\,\theta' == 2\,\pi\,r - 2\,\pi\,\sqrt{r\,\hat{}\,2-\eta\,\hat{}\,2},\ \eta\right]$$

$$\left\{\left\{\eta\to-\frac{\sqrt{r'}\ \sqrt{\theta'}\ \sqrt{4\,\pi\,r-r'\,\theta'}}{2\,\pi}\right\},\ \left\{\eta\to\frac{\sqrt{r'}\ \sqrt{\theta'}\ \sqrt{4\,\pi\,r-r'\,\theta'}}{2\,\pi}\right\}\right\}$$

The argument follows modus ponens, saying that, through commutation, $r'\,\theta' = \theta\,r$, therefore $\eta = \frac{\sqrt{r'}\ \sqrt{\theta'}\ \sqrt{4\,\pi\,r-r'\,\theta'}}{2\,\pi} = \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$

$$\eta = \frac{\sqrt{r'}\ \sqrt{\theta'}\ \sqrt{4\,\pi\,r-r'\,\theta'}}{2\,\pi} = \frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\sqrt{1-\frac{v^2}{c^2}}\ \frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}}{2\,\pi} = \frac{\sqrt{r\,\theta}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}$$

where c is its numeric value of the speed of light, its units being shown to cancel out.

$$\frac{\sqrt{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}}{\sqrt{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c)^2}}{1-\frac{v^2}{(c)^2}}}$$

$$\textbf{Solve}\left[\sqrt{\frac{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c)^2}}{1-\frac{v^2}{(c)^2}}},\ \text{meters}\right]$$

$$\{\{\}\}$$

$$\textbf{Solve}\left[\sqrt{\frac{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}{1-\frac{v^2}{(c\ (\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c)^2}}{1-\frac{v^2}{(c)^2}}},\ \text{second}\right]$$

$$\{\{\}\}$$

$$\text{Solve}\left[\sqrt{\frac{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c)^2}}{1-\frac{v^2}{(c)^2}}},\ v\right]$$

{{}}

$$\text{Solve}\left[\sqrt{\frac{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}} == \sqrt{\frac{1-\frac{v^2}{(c)^2}}{1-\frac{v^2}{(c)^2}}},\ c\right]$$

$\text{Solve}\left[\text{True},\ 2.99792\times 10^{8}\right]$

$$\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} =$$

$$\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c)^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} \tag{1}$$

Logically, the units of the speed of light will cancel out, therefore, their relationship will be set equal to one and taken out of the equation for the purposes of computational calculation.

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} == \eta,\ \text{meters}\right]$$

{}

Meters cancel out.

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} == \eta,\ \text{second}\right]$$

{}

Seconds cancel out.

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\,(\text{meters}/\text{second}))^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} == \eta,\ c\right]$$

{}

The numeric c cancels out.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\},\ \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}\right\}\right\}$$

Radius yields the result from Lemma 3.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ v\right]$$

{}

Velocity cancels out.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{(c)^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ v\right]$$

{}

Velocity cancels out. Everything *cancels out*. Only when using the exact speed of light in scientific notation can solutions to the innate velocity be found.

We set the speed of light equal to its numeric value for the purpose of making computations, dropping the units, because in the expression for the height of the cone, they would cancel out anyway. It should be noted that this is necessary for computing the function of the velocity and that the exact speed of light is to be used as well as that the numeric value of the speed of light has to be in the form of scientific notation in order to find results to this equation.

Theorem 3 Continued From the expression of the height of the cone of Lemma 1, with the Lorentz transformations implicitly expressed, we can solve for the velocity within the Lorenz coefficient in terms of the height of the cone, the initial radius, and the angle, θ when using the exact speed of light in scientific notation and only when it is its exact (or extremely closely approximated) value expressed in scientific notation.

Proof.

```
c := 2.99792458 * (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{3.54814\times10^{18}\,\eta^2 - 1.12941\times10^{18}\,r^2\,\theta + 8.98755\times10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,\eta^2 - 12.5664\,r^2\,\theta + r^2\,\theta^2}}\right\},\right.$$
$$\left.\left\{v \to \frac{\sqrt{3.54814\times10^{18}\,\eta^2 - 1.12941\times10^{18}\,r^2\,\theta + 8.98755\times10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,\eta^2 - 12.5664\,r^2\,\theta + r^2\,\theta^2}}\right\}\right\}$$

Theorem 3 Continued From the expression of the height of the cone, from Lemma 1 with the Lorentz transformations implicitly expressed, we can solve for the velocity within the Lorenz coefficient in terms of θ and β.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{v \to \frac{\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\}\right\}$$

BREAKING RESULTS.... !

{Phenomenal Velocity = Instantaneous Velocity of the Height of the Cone} at the following solutions.

The "phenomenal velocity," described in Theorem 3, equals the instantaneous velocity of the height of the cone at the following positions.

So, we have

$$\frac{\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}} == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} \tag{76}$$

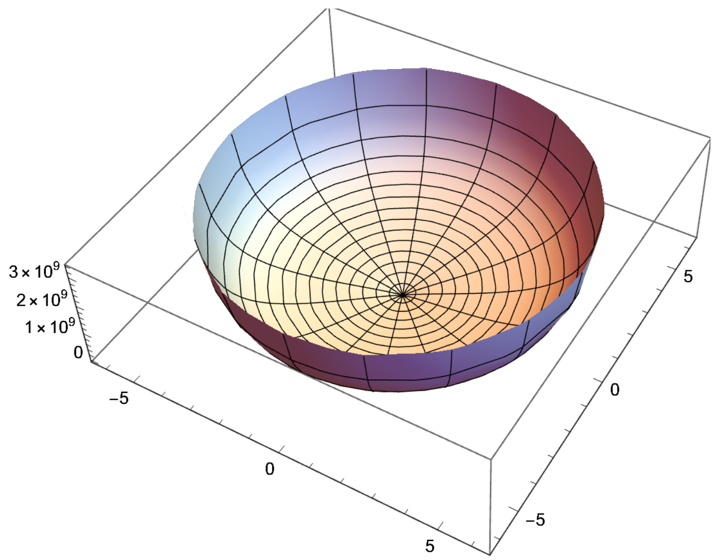
```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (4 π r^2 - 2 r^2 θ) / (2 √(4 π r^2 θ - r^2 θ^2)), r]
```

$$\left\{\left\{r \to -\frac{1.\ \sqrt{6.91664\times10^{33} - 5.50409\times10^{32}\,\theta}\ \sqrt{\theta}}{\sqrt{2.41771\times10^{17} - 7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2}}\right\},\right.$$
$$\left.\left\{r \to \frac{\sqrt{6.91664\times10^{33} - 5.50409\times10^{32}\,\theta}\ \sqrt{\theta}}{\sqrt{2.41771\times10^{17} - 7.6958\times10^{16}\,\theta + 6.12412\times10^{15}\,\theta^2}}\right\}\right\}$$

```
RevolutionPlot3D[
```

$$\frac{\sqrt{6.916640561054567`*^{\wedge}33 - 5.504087674408674`*^{\wedge}32\,\theta}\ \sqrt{\theta}}{\sqrt{2.4177070339300032`*^{\wedge}17 - 7.695800507960096`*^{\wedge}16\,\theta + 6.124123459454841`*^{\wedge}15\,\theta^2}},$$

$\{\theta, -2\pi, 2\pi\}]$

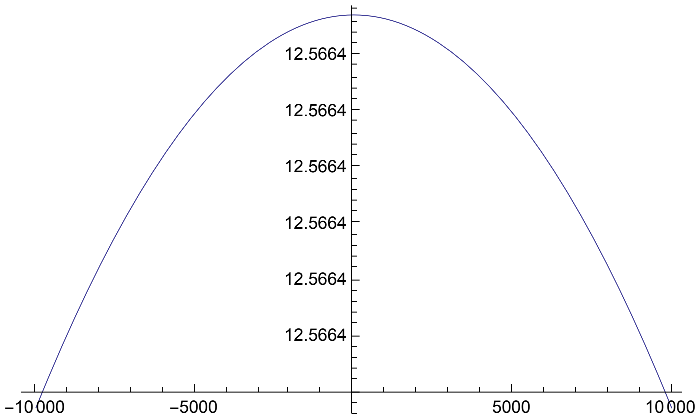


$$\text{Solve}\Big[\big(\sqrt{}\,(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2)\big)\Big/ \left(\sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2}\right) == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}, \theta\Big]$$

$$\left\{\left\{\theta \to \frac{0.5\left(6.91664\times10^{33} + 7.6958\times10^{16}\,r^2 - 2.30714\times10^{25}\sqrt{8.98755\times10^{16} + 1.\,r^2}\right)}{5.50409\times10^{32} + 6.12412\times10^{15}\,r^2}\right\},\right.$$

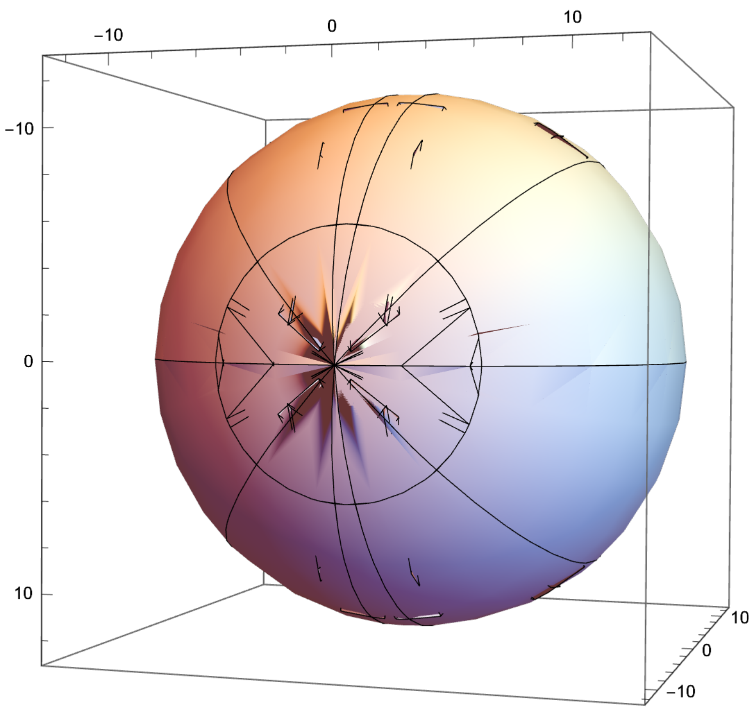
$$\left.\left\{\theta \to \frac{0.5\left(6.91664\times10^{33} + 7.6958\times10^{16}\,r^2 + 2.30714\times10^{25}\sqrt{8.98755\times10^{16} + 1.\,r^2}\right)}{5.50409\times10^{32} + 6.12412\times10^{15}\,r^2}\right\}\right\}$$

```
Plot[(0.5` (6.916640561054567`*^33 + 7.695800507960096`*^16 r^2 +
      2.3071429505590057`*^25 Sqrt[8.987551787368176`*^16 + 1.` r^2])) /
  (5.504087674408674`*^32 + 6.124123459454841`*^15 r^2), {r, -10000, 10000}]
```



Many more possible substitutions for this solution, but here is an example so we can go 3 D.

```
SphericalPlot3D[
 (0.5` (6.916640561054567`*^33 + 7.695800507960096`*^16 ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 +
      2.3071429505590057`*^25 Sqrt[8.987551787368176`*^16 + 1.` ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2]))/
  (5.504087674408674`*^32 + 6.124123459454841`*^15
     ((2 π Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])])/
      ((4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])))^2),
 {θ, -2 π, 2 π}, {β, -2 π, 2 π}]
```

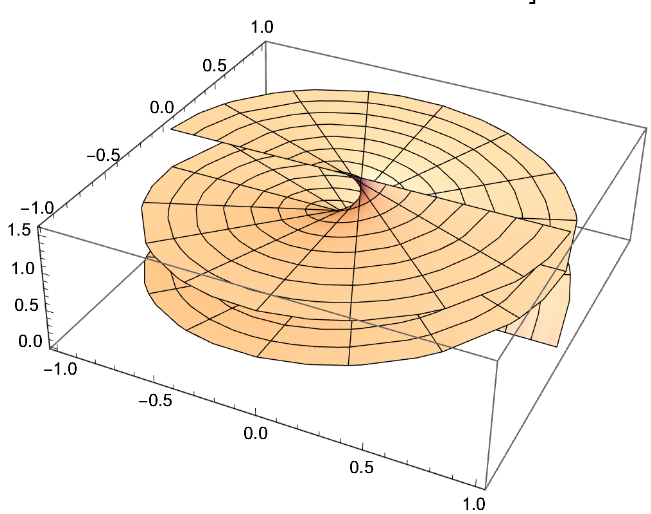


This one flickers a lot - even in revolution plot.

```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (4 π r^2 - 2 r^2 θ)/(2 √(4 π r^2 θ - r^2 θ^2)), β]
```

$$\left\{\left\{\beta \to -1.\ \mathrm{ArcSin}\left[\left(\sqrt{\theta}\ \sqrt{\left(1.08487\times10^{33}\ r^2 - 3.10363\times10^{49}\ \theta - 4.31657\times10^{32}\ r^2\ \theta + 4.93958\times10^{48}\ \theta^2 + 5.49602\times10^{31}\ r^2\ \theta^2 - 1.9654\times10^{47}\ \theta^3 - 2.1868\times10^{30}\ r^2\ \theta^3\right)}\right) \middle/ \left(\sqrt{\left(3.40822\times10^{33}\ r^2 - 9.75034\times10^{49}\ \theta - 1.08487\times10^{33}\ r^2\ \theta + 7.75907\times10^{48}\ \theta^2 + 8.63313\times10^{31}\ r^2\ \theta^2\right)}\right)\right]\right\},\right.$$
$$\left.\left\{\beta \to \mathrm{ArcSin}\left[\left(\sqrt{\theta}\ \sqrt{\left(1.08487\times10^{33}\ r^2 - 3.10363\times10^{49}\ \theta - 4.31657\times10^{32}\ r^2\ \theta + 4.93958\times10^{48}\ \theta^2 + 5.49602\times10^{31}\ r^2\ \theta^2 - 1.9654\times10^{47}\ \theta^3 - 2.1868\times10^{30}\ r^2\ \theta^3\right)}\right) \middle/ \left(\sqrt{\left(3.40822\times10^{33}\ r^2 - 9.75034\times10^{49}\ \theta - 1.08487\times10^{33}\ r^2\ \theta + 7.75907\times10^{48}\ \theta^2 + 8.63313\times10^{31}\ r^2\ \theta^2\right)}\right)\right]\right\}\right\}$$

```
RevolutionPlot3D[ArcSin[(√θ √(1.0848712769677502`*^33 r^2 -
      3.10362859208832`*^49 θ - 4.3165656586958524`*^32 r^2 θ +
      4.9395783195219584`*^48 θ^2 + 5.496022094097345`*^31 r^2 θ^2 -
      1.965395765853693`*^47 θ^3 - 2.186797709044656`*^30 r^2 θ^3)) /
   (√(3.4082236338124617`*^33 r^2 - 9.7503367843759`*^49 θ -
      1.0848712769677502`*^33 r^2 θ + 7.7590714802208`*^48 θ^2 +
      8.633131317391704`*^31 r^2 θ^2))], {r, -1, 1}, {θ, -2 π, 2 π}]
```



And we also have,

$$\frac{\sqrt{3.54814\times10^{18}\,\eta^2-1.12941\times10^{18}\,r^2\,\theta+8.98755\times10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,\eta^2-12.5664\,r^2\,\theta+r^2\,\theta^2}}==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}} \tag{77}$$

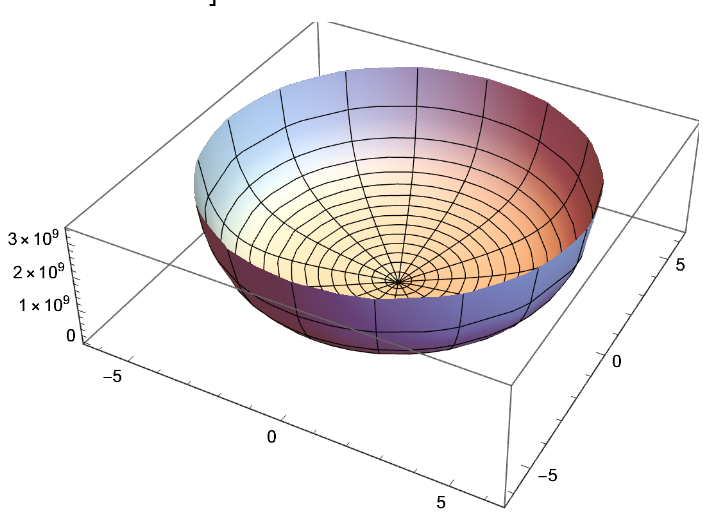
Solve$\left[\left(\sqrt{}\left(3.5481432270250993\text{`}*\text{^}18\,\eta^2-1.1294090667581471\text{`}*\text{^}18\,r^2\,\theta+8.987551787368176\text{`}*\text{^}16\,r^2\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\text{`}\,\eta^2-12.566370614359172\text{`}\,r^2\,\theta+r^2\,\theta^2}\right)==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\eta\right]$

{}

Solve$\left[\left(\sqrt{}\left(3.5481432270250993\text{`}*\text{^}18\,\eta^2-1.1294090667581471\text{`}*\text{^}18\,r^2\,\theta+8.987551787368176\text{`}*\text{^}16\,r^2\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\text{`}\,\eta^2-12.566370614359172\text{`}\,r^2\,\theta+r^2\,\theta^2}\right)==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},r\right]$

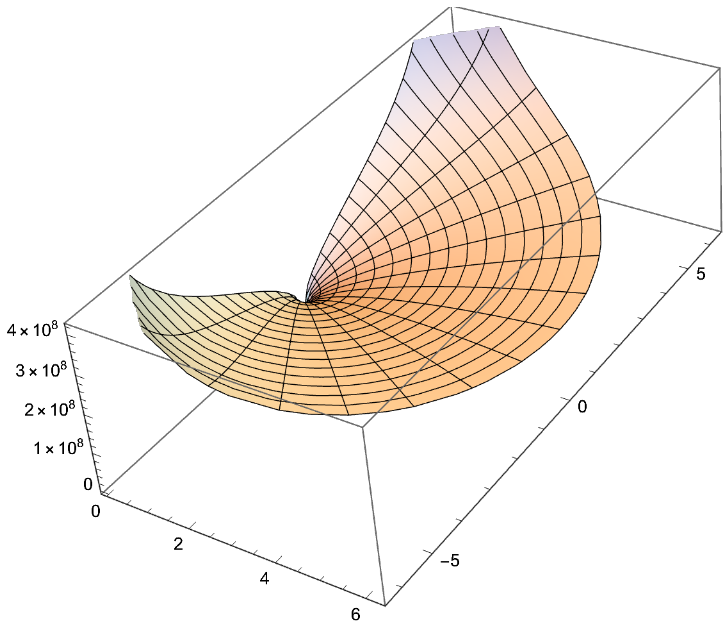
$$\left\{\left\{r\to-\frac{1.\,\sqrt{3.20712\times10^{55}-2.55214\times10^{54}\,\theta}\,\sqrt{\theta}}{\sqrt{1.12105\times10^{39}-3.5684\times10^{38}\,\theta+2.83964\times10^{37}\,\theta^2}}\right\},\left\{r\to\frac{\sqrt{3.20712\times10^{55}-2.55214\times10^{54}\,\theta}\,\sqrt{\theta}}{\sqrt{1.12105\times10^{39}-3.5684\times10^{38}\,\theta+2.83964\times10^{37}\,\theta^2}}\right\}\right\}$$

RevolutionPlot3D$\left[\frac{\sqrt{3.207116365345587\text{`}*\text{^}55-2.552142113078316\text{`}*\text{^}54\,\theta}\,\sqrt{\theta}}{\sqrt{1.1210453581739739\text{`}*\text{^}39-3.568398203672245\text{`}*\text{^}38\,\theta+2.8396410651733885\text{`}*\text{^}37\,\theta^2}},\{\theta,-2\,\pi,2\,\pi\}\right]$

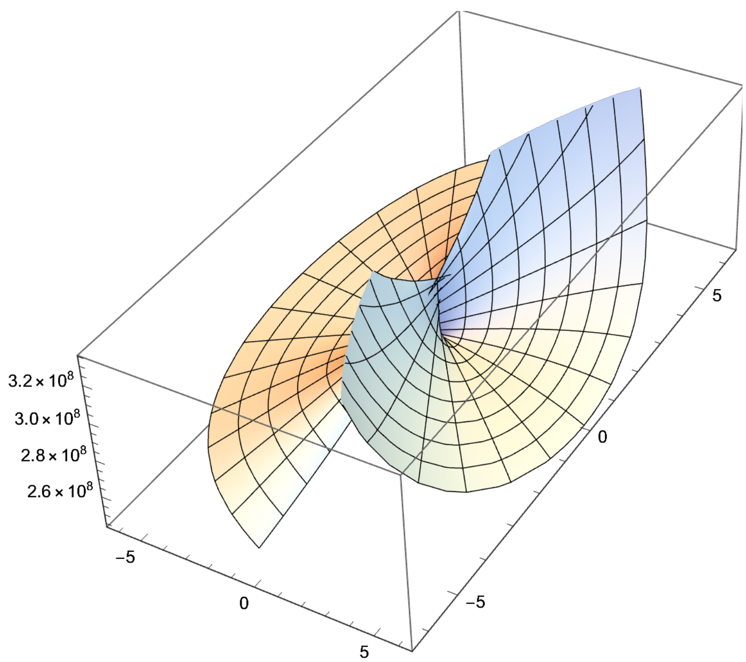


Substitution : $\theta=2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$

```
RevolutionPlot3D[(√(3.207116365345587`*^55 - 2.552142113078316`*^54 θ) √θ) /
  (√ (1.1210453581739739`*^39 - 3.568398203672245`*^38 θ + 2.8396410651733885`*^37
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
RevolutionPlot3D[
 (Sqrt[3.207116365345587`*^55 - 2.552142113078316`*^54 θ] Sqrt[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])])/
  (Sqrt[(1.1210453581739739`*^39 - 3.568398203672245`*^38 θ + 2.8396410651733885`*^37
      (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2)]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

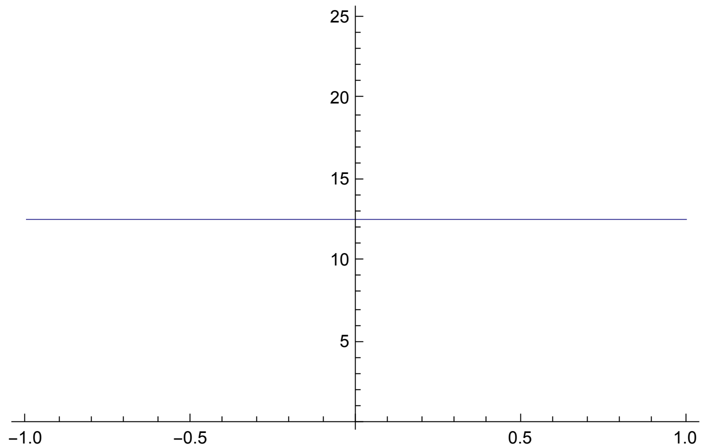



```
Solve[(Sqrt[(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)])/
  (Sqrt[39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2]) == (4 π r^2 - 2 r^2 θ)/(2 Sqrt[4 π r^2 θ - r^2 θ^2]), θ]
```

$$\left\{\left\{\theta \to \frac{0.5\left(3.20712\times 10^{55} + 3.5684\times 10^{38}\, r^2 - 1.06978\times 10^{47}\sqrt{8.98755\times 10^{16} + 1.\, r^2}\right)}{2.55214\times 10^{54} + 2.83964\times 10^{37}\, r^2}\right\},\right.$$

$$\left.\left\{\theta \to \frac{0.5\left(3.20712\times 10^{55} + 3.5684\times 10^{38}\, r^2 + 1.06978\times 10^{47}\sqrt{8.98755\times 10^{16} + 1.\, r^2}\right)}{2.55214\times 10^{54} + 2.83964\times 10^{37}\, r^2}\right\}\right\}$$

```
Plot[(0.5` (3.207116365345587`*^55 + 3.568398203672245`*^38 r^2 +
      1.069778868601687`*^47 √(8.987551787368176`*^16 + 1.` r^2)))/
  (2.552142113078316`*^54 + 2.8396410651733885`*^37 r^2), {r, -1, 1}]
```



{Phenomenal Velocity = Average Velocity of the Height of the Cone} at the following solutions.

$$\frac{\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2}}==\frac{2\,\pi\,\eta}{\theta} \tag{78}$$

```
Solve[2 π η/θ == (√(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2))/
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)), η]
```

$\{\{\eta\to 4.77135\times10^{7}\,\theta\}\}$

```
Solve[2 π η/θ == (√(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2))/
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)), r]
```

{}

```
Solve[2 π η/θ == (√(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)), θ]
```

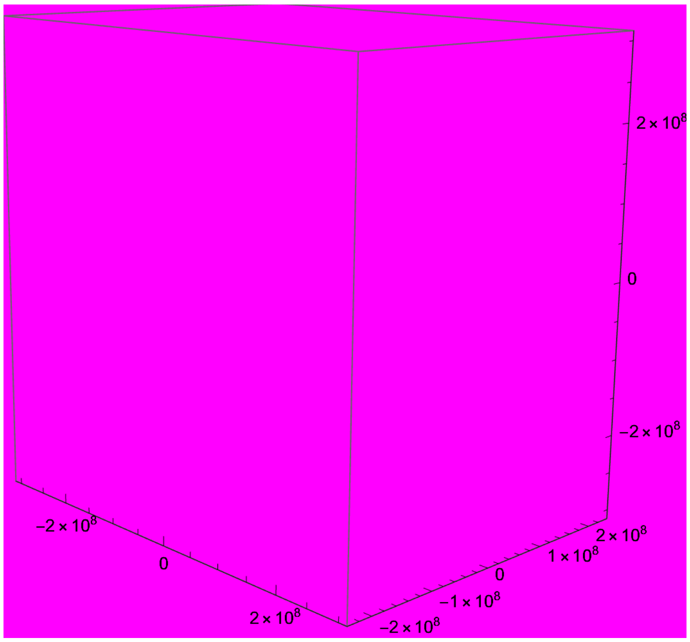
$$\{\{\theta \to 2.09585 \times 10^{-8}\, \eta\}\}$$

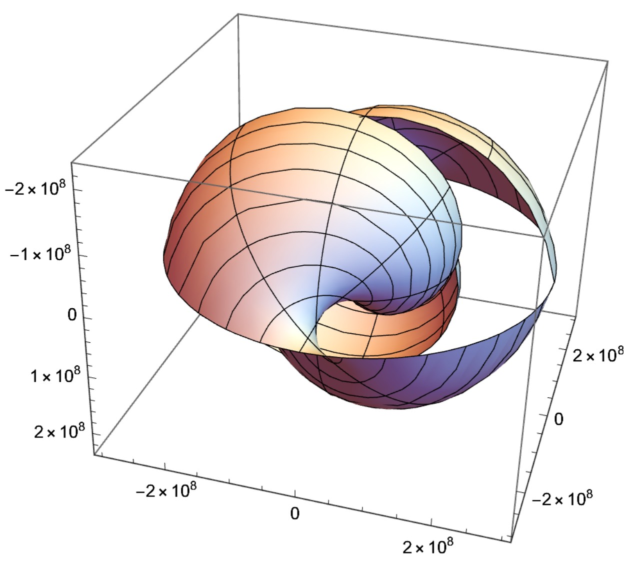
$$\frac{\sqrt{-1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2 + 3.54814 \times 10^{18}\, \mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\, \theta + \theta^2 + 39.4784\, \mathrm{Sin}[\beta]^2}} == \frac{2\,\pi\,\eta}{\theta} \tag{79}$$

```
Solve[2 π η/θ == (√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), η]
```

$$\left\{\left\{\eta \to \frac{0.159155\, \theta\, \sqrt{-1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2 + 3.54814 \times 10^{18}\, \mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\, \theta + \theta^2 + 39.4784\, \mathrm{Sin}[\beta]^2}}\right\}\right\}$$

```
SphericalPlot3D[
 (0.15915494309189535` θ √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
       3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle → Opacity[.5]]
```





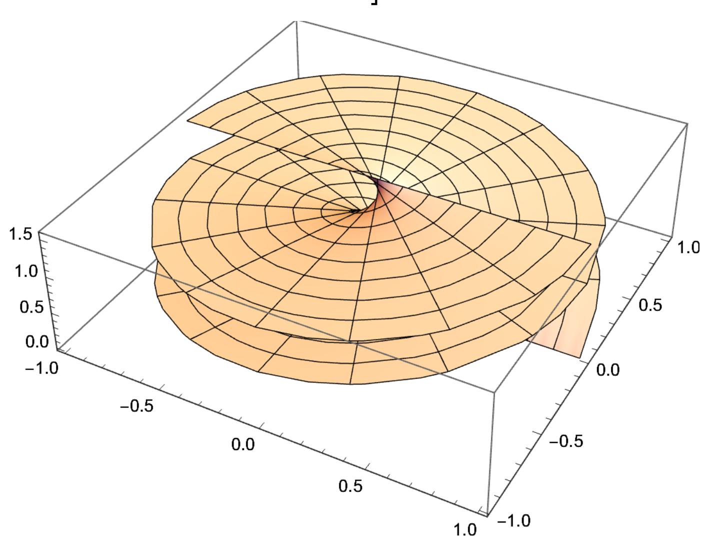
```
Solve[2 π η/θ == (√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2))/
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ]
```

$\{\{\theta \to 2.09585 \times 10^{-8}\,\eta\}\}$

```
Solve[2 π η/θ == (√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2))/
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), β]
```

$$\left\{\left\{\beta \to -1.\,\mathrm{ArcSin}\left[\frac{\sqrt{\theta}\ \sqrt{-1.10318\times10^{24}\,\eta + 5.26365\times10^{31}\,\theta + 8.77883\times10^{22}\,\eta\,\theta - 4.18868\times10^{30}\,\theta^2}}{\sqrt{-3.46574\times10^{24}\,\eta + 1.65363\times10^{32}\,\theta}}\right]\right\}, \left\{\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{\theta}\ \sqrt{-1.10318\times10^{24}\,\eta + 5.26365\times10^{31}\,\theta + 8.77883\times10^{22}\,\eta\,\theta - 4.18868\times10^{30}\,\theta^2}}{\sqrt{-3.46574\times10^{24}\,\eta + 1.65363\times10^{32}\,\theta}}\right]\right\}\right\}$$

```
RevolutionPlot3D[
 ArcSin[(√θ √(-1.1031799963798287`*^24 η + 5.263652535493924`*^31 θ +
         8.778827477197447`*^22 η θ - 4.18868159871023`*^30 θ^2))/
   (√(-3.465742172214084`*^24 η + 1.6536252136556997`*^32 θ))],
 {η, -1, 1}, {θ, -2 π, 2 π}]
```



A Notational Language for Describing the Geometry of Space-Time

by Parker Emmerson

© October 14, 2009

I. Postulates, Structure

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle,
the base of the cone, of radius r_1

$r\verb|^|2 = r_1\verb|^|2 + \eta\verb|^|2$

This is the initial radius squared expressed as the slant of
the cone in terms of the height of the cone, η, and the radius
of the base of the cone, r_1

$r = \sqrt{}(r_1\verb|^|2 + \eta\verb|^|2)$ (80)

$s = \theta r$

$s / \theta = r$

The arc length taken out of a circle at a given time is =

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r$ → Equation 7

$r_1\verb|^|2 == r\verb|^|2 - \eta\verb|^|2$

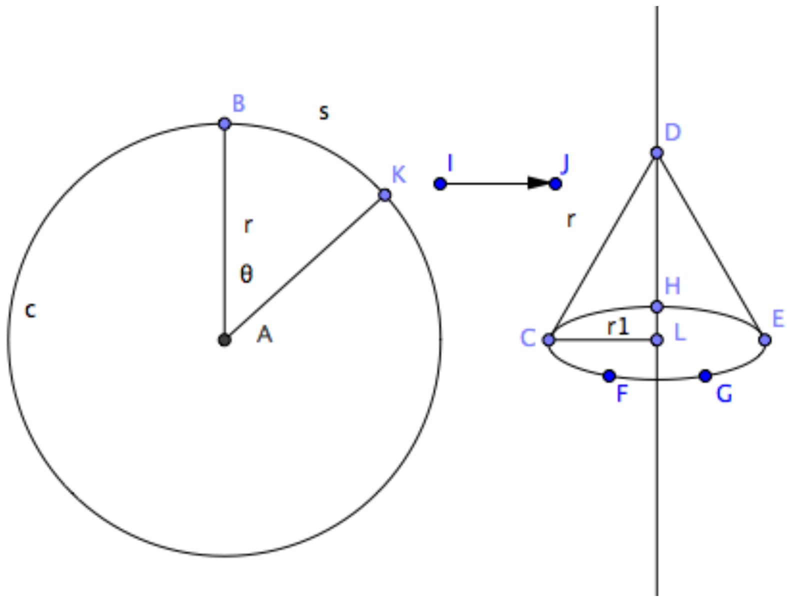
$r_1 = \sqrt{}(r\verb|^|2 - \eta\verb|^|2)$

$\eta \leq r$

$\tau = \text{time}$

1 second = 6 degrees

$\tau = 6\,\theta$



I will now do some algebra to conclude what the height of the cone is in terms of the initial parameters. It can eventually be reduced to a single variable.

Solve[r_1^2 + η^2 == r^2, η]

$$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\} \quad (81)$$

We say that the amount of θr = s, taken out of the circle is the change in the circle's circumference that is the base of the cone. The change is equal to s = 2πr-2πr $_1$.

Notice that θ =
((2 π r) / r) - ((2 π r $_1$) / r), because we divide by r on both sides.

We will focus on the positive solutions for the height of the cone.

Solve[η == $\sqrt{r^2 - r_1^2}$, r_1]

$$\left\{\left\{r_1 \to -\sqrt{r^2 - \eta^2}\right\}, \left\{r_1 \to \sqrt{r^2 - \eta^2}\right\}\right\} \quad (82)$$

This is the change in circumference with
the substituted expression for r_1 in terms of h and r.

$$r\,\theta == s == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)\,\hat{}\,2 - \eta\,\hat{}\,2)} = 2\,\pi\,(r) - 2\,\pi\,r_1 \quad (83)$$

θ == (2 π r) / r - (2 π r $_1$) / r) = ((2 π r) / r) - $\left(\left(2\,\pi\,\sqrt{-\eta^2 + r^2}\right) \Big/ r\right)$

Solve[θ * r == 2 π (r) - 2 π $\sqrt{((r)\,\hat{}\,2 - \eta\,\hat{}\,2)}$, η]

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\} \quad (84)$$

$$\text{Solve}\left[\eta == \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}\right\} \quad (85)$$

II. Motion through the Space - Time

If there is something traveling over the distance, η , then its velocity is said to be the first derivative with respect to time. What if r is constant, which it is when it' s the hypoteneuse of the triangle made by the cone.

ν = frequency = 1 / τ = (1 / (1080 / π) θ) ,
because each second is in terms of degrees of a clock, and in terms of theta,
which is in radians, we must make the following conversion : (86)

$$\text{Time} = 6\,(\theta_{\text{degrees}}) = 6\,(180/\pi)\,\theta = (1080/\pi)\,\theta$$

$$\eta \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}$$

$$v = \lambda\,\nu = r\,(1/(1080/\pi)\,\theta) = ((1/(1080/\pi))\,D[\eta, \theta]) = 1/(1080/\pi))\ D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right] \quad (87)$$

The velocity of η is equal to the first derivative of η with respect to time. The constant (1/(1080/π)) is taken out of the equation in order to perform the derivative.

$$(1/(1080/\pi))\ D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}}$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} =$$
velocity through the height of the cone when r is constant
(stays always the initial radius of the circle equal to the hypoteneuse
of the triangle formed by the height meeting the base of the cone) . (88)

$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\,(1/(1080/\pi)\,\theta), \theta\right]$$

$$\Bigg\{\Bigg\{\theta \to \pi - \frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} + \frac{1}{6 \times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)} -$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2} + 8\,\pi^2 - \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} - \frac{1}{6 \times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}} - \right.}$$

$$\left.\left(\frac{4}{\pi} + 64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,\pi^2}\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3} + 1\Big/\left(6 \times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}\right)\right)}\right)\right)\Bigg\},$$

$$\Bigg\{\theta \to \pi - \frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} + \frac{1}{6 \times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)} +$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2} + 8\,\pi^2 - \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} - \frac{1}{6 \times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}} - \right.}$$

$$\left(\frac{4}{\pi} + 64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,\pi^2}\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3} + 1\Big/\right.}\right.$$

$$\left.\left.\left.\left.\left(6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\right)\right)\right)\right)\Big\},$$

$$\Big\{\Theta\to\pi+\frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+\right.}$$

$$\left.\frac{1}{6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2}+8\,\pi^2-\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}-\right.}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}+$$

$$\left(\frac{4}{\pi}+64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{1}{12\,\pi^2}\right.}\right.$$

$$\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}+1\Big/$$

$$\left.\left.\left.\left.\left(6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\right)\right)\right)\right)\Big\},$$

$$\Big\{\Theta\to\pi+\frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+\right.}$$

$$\left.\frac{1}{6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2}+8\,\pi^2-\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}-\right.}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}+$$

$$\left(\frac{4}{\pi}+64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{1}{12\,\pi^2}\right.}\right.$$

$$\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}+1\Big/$$

$$\left(6\times 2^{2/3}\,\pi^2\,\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\right)\Big)\Big)\Big)\Big\}\Big\}$$

What is theta for a certain number of frequencies?

$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==r\;n\;(1\,/\,(1080\,/\,\pi)\;\theta),\;\theta\right]$$

$$\Big\{\Big\{\theta\to\pi-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}-\right.}$$

$$\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\right.}\right.$$

$$1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+$$

$$\left.\left.\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\right)\right)\Big\},\;\Big\{\theta\to\pi-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}-$$

$$\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Big/\left(4\,\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\right.}\right.$$

$$1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+$$

$$\left.\left.\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\right)\right)\Big\},\ \Big\{\theta\to\pi+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}+$$

$$\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Big/\left(4\,\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\right.}\right.$$

$$1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+$$

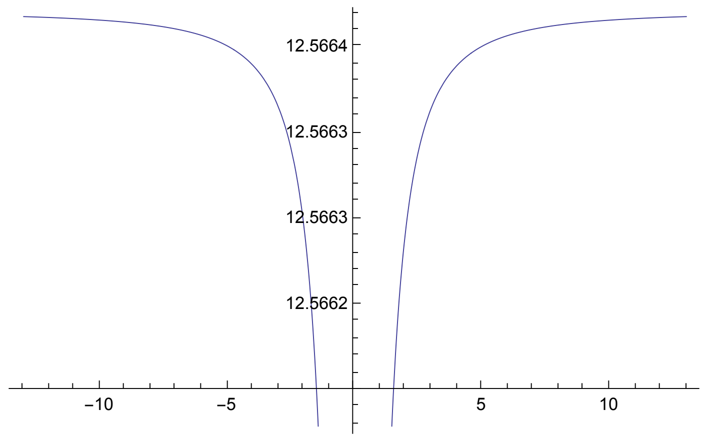
$$\left.\left.\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\right)\right)\Big\},\ \Big\{\theta\to\pi+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\right.}$$

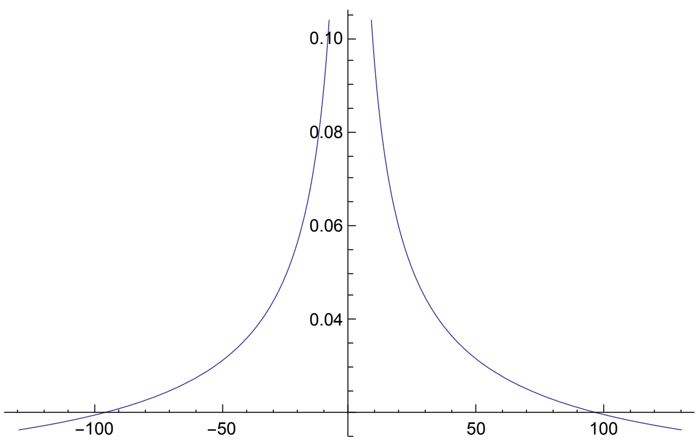
$$\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\,+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}+\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}\right)\right)}\}\}$$

$$\mathbf{Plot}\Big[\pi+\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}+\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}+\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}\right)\right)},\ \{n,\,-13,\,13\}\Big]$$


12.5664
12.5663
12.5663
12.5662
−10
−5
5
10

$$\text{Plot}\Big[\pi + \frac{1}{2}\sqrt{\left(-\frac{1}{6 n^2 \pi^2} + 4\pi^2 + \frac{1}{12 n^2 \pi^2 \left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}} + \frac{\left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}}{12 n^2 \pi^2}\right)} - \frac{1}{2}\sqrt{\left(-\frac{1}{3 n^2 \pi^2} + 8\pi^2 - \frac{1}{12 n^2 \pi^2 \left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}} - \frac{\left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}}{12 n^2 \pi^2} + \left(\frac{4}{n^2 \pi} + 64\pi^3\right) \Big/ \left(4\sqrt{\left(-\frac{1}{6 n^2 \pi^2} + 4\pi^2 + \frac{1}{12 n^2 \pi^2 \left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}} + \frac{\left(1 + 13824 n^4 \pi^8 + 96\sqrt{3}\,\pi^4\sqrt{n^4 + 6912 n^8 \pi^8}\right)^{1/3}}{12 n^2 \pi^2}\right)}\right)\right)},\ \{n, -13, 13\}\Big]$$



These are mathematical expressions of the reality of the four noble truths. Leaves falling from trees.

What would acceleration through the height of the cone be when r is constant?

$$v = \lambda\, \nu = r\ (1\,/\,(1080\,/\,\pi)\ \theta) = (1\,/\,(1080\,/\,\pi))\ D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi},\ \theta\right]$$

$$(1/(1080/\pi))\, D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}} = \text{velocity when r is constant.}$$

$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\,(1/(1080/\pi)\,\theta), r\right]$$

{}

$$(1/(1080/\pi))\, D\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}, \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)^2}{8640 (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} - \frac{r^2}{2160 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080}$$

$$\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)^2}{8640 (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} - \frac{r^2}{2160 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} = \tag{91}$$

acceleration through the height of the cone when r is constant.

What happens if r is changing?

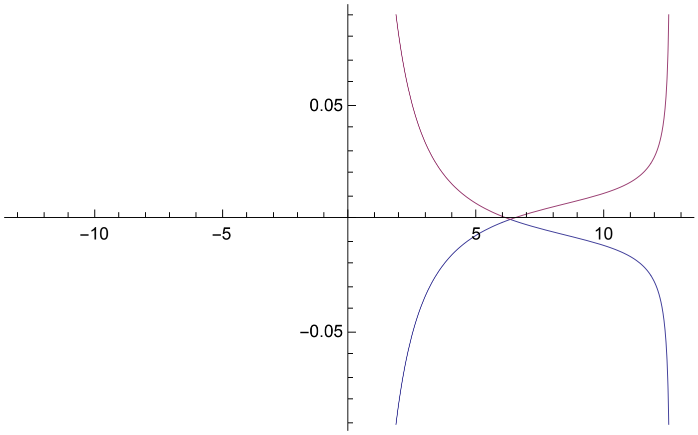
$$(1/(1080/\pi))\, D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, r, \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} = \text{velocity when r is changing} \tag{91}$$

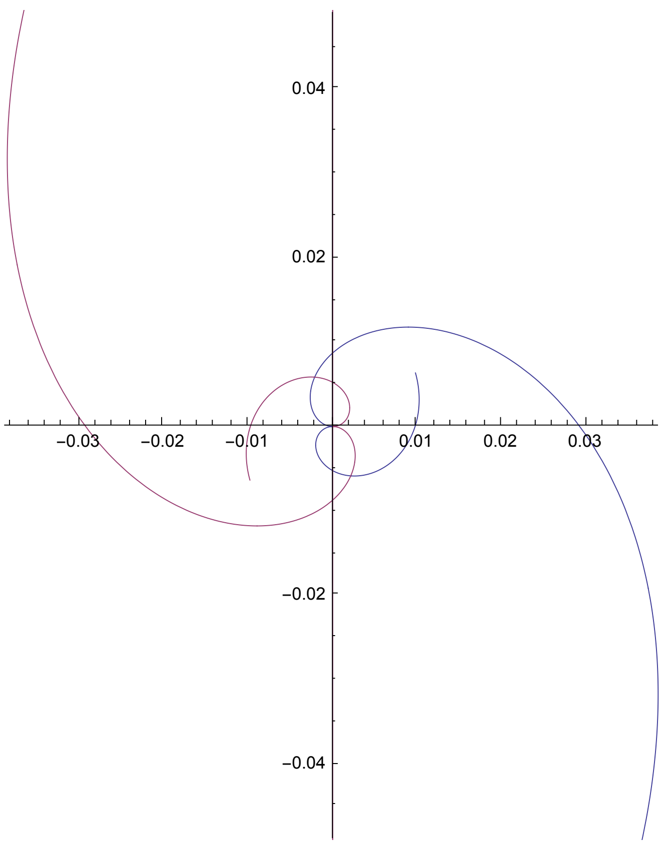
$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} == r\,(1/(1080/\pi)\,\theta), r\right]$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$\text{Plot}\left[\left\{-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\left\{-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-10,10\}\right]$$

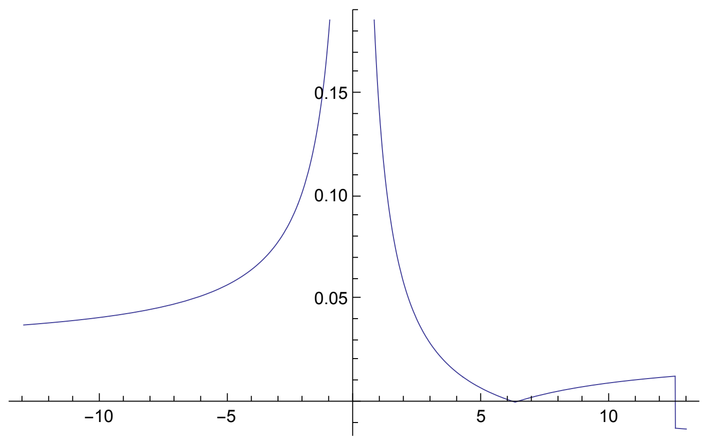


$$\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}} = r = \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}$$

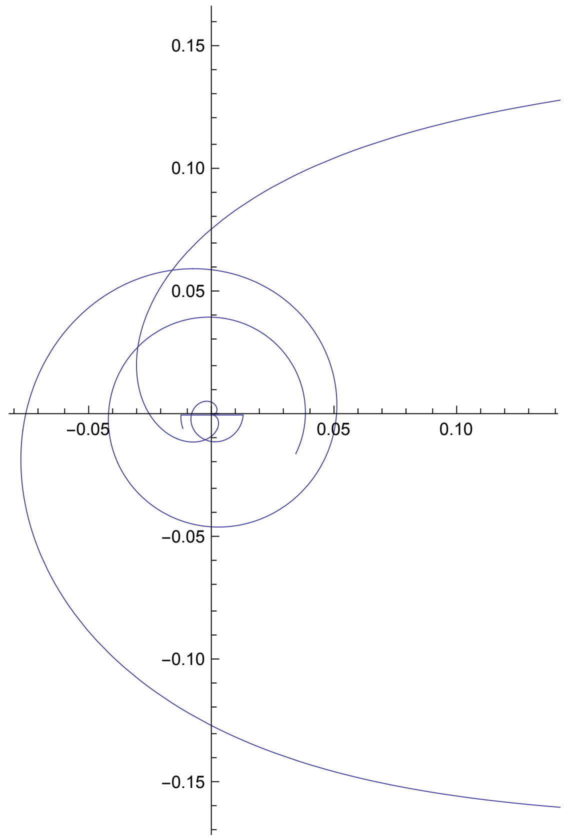
$$\text{Solve}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}==\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}},\eta\right]$$

$$\left\{\left\{\eta\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}},\{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}, \{\theta, -13, 13\}\right]$$



$$(1/(1080/\pi))\ \text{D}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}, r, \theta\right]$$

$$\frac{1}{1\,166\,400}\pi^2\left(-\frac{15\left(4\pi r^2-2r^2\theta\right)^2\left(8\pi r\theta-2r\theta^2\right)^2}{32\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{7/2}}+\right.$$
$$\frac{3\left(4\pi r^2-2r^2\theta\right)^2\left(8\pi\theta-2\theta^2\right)}{16\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}+\frac{3\left(8\pi r-4r\theta\right)\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}-$$
$$\frac{3r^2\left(8\pi r\theta-2r\theta^2\right)^2}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}-\frac{\left(8\pi r-4r\theta\right)^2}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{\left(8\pi-4\theta\right)\left(4\pi r^2-2r^2\theta\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+$$
$$\left.\frac{r^2\left(8\pi\theta-2\theta^2\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{r\left(8\pi r\theta-2r\theta^2\right)}{\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{1}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

Acceleration when r is changing =

$$\frac{1}{1166400}\pi^2\left(-\frac{15\left(4\pi r^2-2r^2\theta\right)^2\left(8\pi r\theta-2r\theta^2\right)^2}{32\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{7/2}}+\frac{3\left(4\pi r^2-2r^2\theta\right)^2\left(8\pi\theta-2\theta^2\right)}{16\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}+\frac{3\,(8\pi r-4r\theta)\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}-\frac{3r^2\left(8\pi r\theta-2r\theta^2\right)^2}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{5/2}}-\frac{(8\pi r-4r\theta)^2}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{(8\pi-4\theta)\left(4\pi r^2-2r^2\theta\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{r^2\left(8\pi\theta-2\theta^2\right)}{4\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{r\left(8\pi r\theta-2r\theta^2\right)}{\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{1}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$r:=\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}$$

$$\text{Solve}\left[r==\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\theta\right]$$

$$\left\{\left\{\theta\to\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2r^2}+\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}+\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}\right)}-\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2r^2}-\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}-\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2r^2}+\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}+\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}\right)}\right)\right)}\right\},$$

$$\left\{\theta \to \pi - \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} + \frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} - \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\right\},$$

$$\left\{\theta \to \pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} - \frac{1}{2}\sqrt{\left(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} + \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right)\Big/\left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\right\},$$

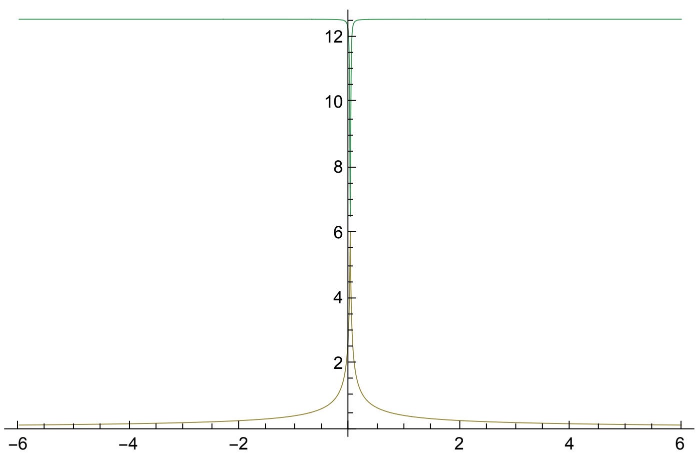
$$\left\{\theta \to \pi + \frac{1}{2} \sqrt{\left(4 \pi^2 - \frac{1}{6 \pi^2 r^2} + \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2}\right)} + \frac{1}{2} \sqrt{\left(8 \pi^2 - \frac{1}{3 \pi^2 r^2} - \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2} + \left(64 \pi^3 + \frac{4}{\pi r^2}\right) \Big/ \left(4 \sqrt{\left(4 \pi^2 - \frac{1}{6 \pi^2 r^2} + \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2}\right)}\right)\right)}\right\}\right\}$$

$$\mathbf{Plot}\left[\left\{\left\{\left\{\pi - \frac{1}{2} \sqrt{\left(4 \pi^2 - \frac{1}{6 \pi^2 r^2} + \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2}\right)} - \frac{1}{2} \sqrt{\left(8 \pi^2 - \frac{1}{3 \pi^2 r^2} - \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2} - \left(64 \pi^3 + \frac{4}{\pi r^2}\right) \Big/ \left(4 \sqrt{\left(4 \pi^2 - \frac{1}{6 \pi^2 r^2} + \frac{1}{12 \pi^2 r^2 \left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824 \pi^8 r^4 + 96 \sqrt{3} \pi^4 \sqrt{r^4 + 6912 \pi^8 r^8}\right)^{1/3}}{12 \pi^2 r^2}\right)}\right)\right)}\right\},\right.\right.\right.$$

$$\left\{\pi - \frac{1}{2}\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)} + \frac{1}{2}\sqrt{\left(8\pi^2 - \frac{1}{3\pi^2 r^2} - \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2} - \left(64\pi^3 + \frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\right\},$$

$$\left\{\pi + \frac{1}{2}\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)} - \frac{1}{2}\sqrt{\left(8\pi^2 - \frac{1}{3\pi^2 r^2} - \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2} + \left(64\pi^3 + \frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\right\},$$

$$\Big\{\pi + \frac{1}{2}\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)} + \frac{1}{2}\sqrt{\left(8\pi^2 - \frac{1}{3\pi^2 r^2} - \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2} + \left(64\pi^3 + \frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4 + 6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\Big\}\Big\},\ \{r, -6, 6\}\Big]$$



III. What would the solutions be through acceleration?

When r is constant

$$v = \lambda\nu = r\,(1/(1080/\pi)\,\theta) = (1/(1080/\pi))\,D\!\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$(1/(1080/\pi))\,D[r\,(1/(1080/\pi)\,\theta), \theta]$ = acceleration of a wavelength, r, and frequency, $(1/(1080/\pi)\,\theta)$. (92)

```
(1 / (1080 / π)) D[r (1 / (1080 / π) θ), θ]
```

$$\frac{\pi^2 r}{1166400}$$

$$(1 / (1080 / \pi))\, D\left[(1 / (1080 / \pi))\, D\left[\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, \theta\right], \theta\right]$$

$$(1 / (1080 / \pi))\, D\left[(1 / (1080 / \pi))\, D\left[\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, \theta\right], \theta\right] = \tag{93}$$

acceleration through the height of the cone

$$\text{Solve}\left[\frac{\pi^2 r}{1166400} == (1 / (1080 / \pi))\, D\left[(1 / (1080 / \pi))\, D\left[\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, \theta\right], \theta\right], \theta\right]$$

$$\left\{\left\{\theta \to 2\pi - \sqrt{-(-2\pi)^{2/3} + 4\pi^2}\right\}, \left\{\theta \to 2\pi + \sqrt{-(-2\pi)^{2/3} + 4\pi^2}\right\},\right.$$
$$\left\{\theta \to 2\pi - \sqrt{4\pi^2 - (2\pi)^{2/3}}\right\}, \left\{\theta \to 2\pi + \sqrt{4\pi^2 - (2\pi)^{2/3}}\right\},$$
$$\left.\left\{\theta \to 2\pi - \sqrt{4\pi^2 + (-1)^{1/3}(2\pi)^{2/3}}\right\}, \left\{\theta \to 2\pi + \sqrt{4\pi^2 + (-1)^{1/3}(2\pi)^{2/3}}\right\}\right\}$$

IV. Defining the Initial Distance through its Geometric Correlates

When r is constant

$$r = \frac{2 * \text{velocity} * 6\, ((180 / \pi)\, \theta) * \pi}{\sqrt{4 \pi \theta - (\theta)^2}} = \frac{2 * \left(\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right) * 6\, ((180 / \pi)\, \theta) * \pi}{\sqrt{4 \pi \theta - (\theta)^2}}$$

$$\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} = \tag{94}$$

velocity through the height of the cone when r is constant
(stays always the initial radius of the circle equal to the hypoteneuse
of the triangle formed by the height meeting the base of the cone).

$$\text{Solve}\left[\frac{2 * \left(\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right) * 6\, ((180 / \pi)\, \theta) * \pi}{\sqrt{4 \pi \theta - (\theta)^2}} == r, \theta\right]$$

$$\{\{\theta \to 3\pi\}\}$$

When r is changing

$$r = \frac{2 * \text{velocity} * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}} = \frac{\pi\left(-\frac{(4\pi r^2 - 2r^2\theta)(8\pi r\theta - 2r\theta^2)}{8\pi(4\pi r^2\theta - r^2\theta^2)^{3/2}} + \frac{8\pi r - 4r\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)}{1080} \tag{94}$$

$$\text{velocity} = \lambda\nu = r\ (1/(1080/\pi)\ \theta)$$

$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2 - 2r^2\theta)(8\pi r\theta - 2r\theta^2)}{8\pi(4\pi r^2\theta - r^2\theta^2)^{3/2}} + \frac{8\pi r - 4r\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)}{1080} == r\ (1/(1080/\pi)\ \theta),\ r\right]$$

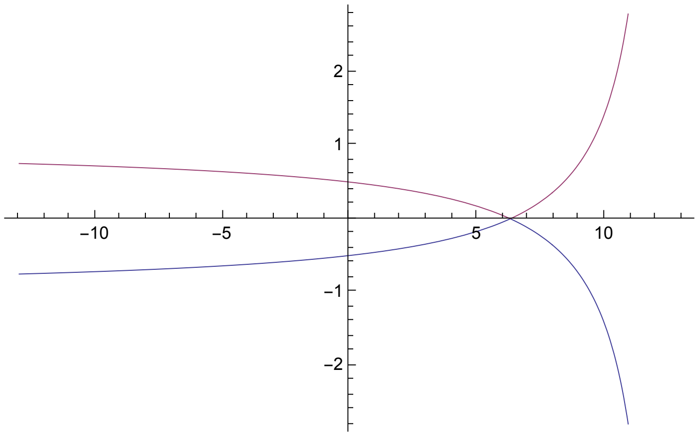
$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\} \tag{95}$$

$$r = \frac{2 * \text{velocity} * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}} = \frac{2 * \left(\frac{\pi\left(-\frac{(4\pi r^2 - 2r^2\theta)(8\pi r\theta - 2r\theta^2)}{8\pi(4\pi r^2\theta - r^2\theta^2)^{3/2}} + \frac{8\pi r - 4r\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)}{1080}\right) * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}$$

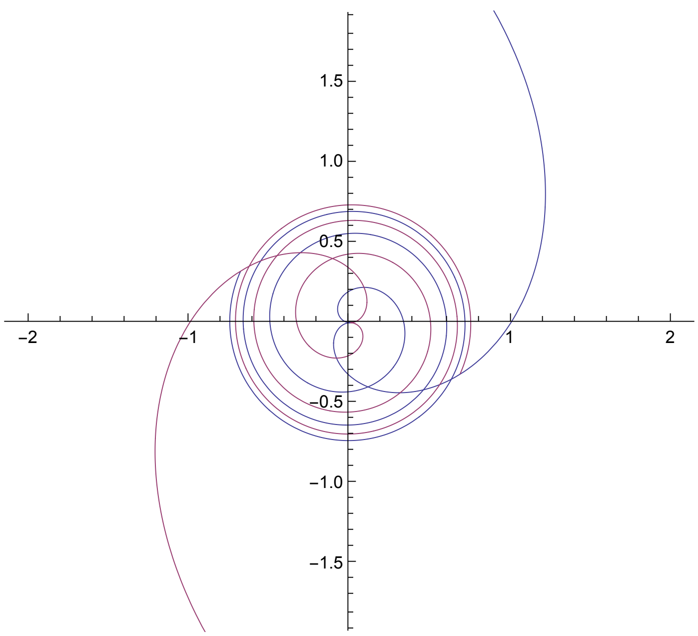
$$\text{Solve}\left[r == \frac{2 * \left(\frac{\pi\left(-\frac{(4\pi r^2 - 2r^2\theta)(8\pi r\theta - 2r\theta^2)}{8\pi(4\pi r^2\theta - r^2\theta^2)^{3/2}} + \frac{8\pi r - 4r\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)}{1080}\right) * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}},\ r\right]$$

$$\left\{\left\{r \to -\sqrt{1 + \frac{4\pi^2}{(4\pi-\theta)^2} - \frac{4\pi}{4\pi-\theta}}\right\}, \left\{r \to \sqrt{1 + \frac{4\pi^2}{(4\pi-\theta)^2} - \frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

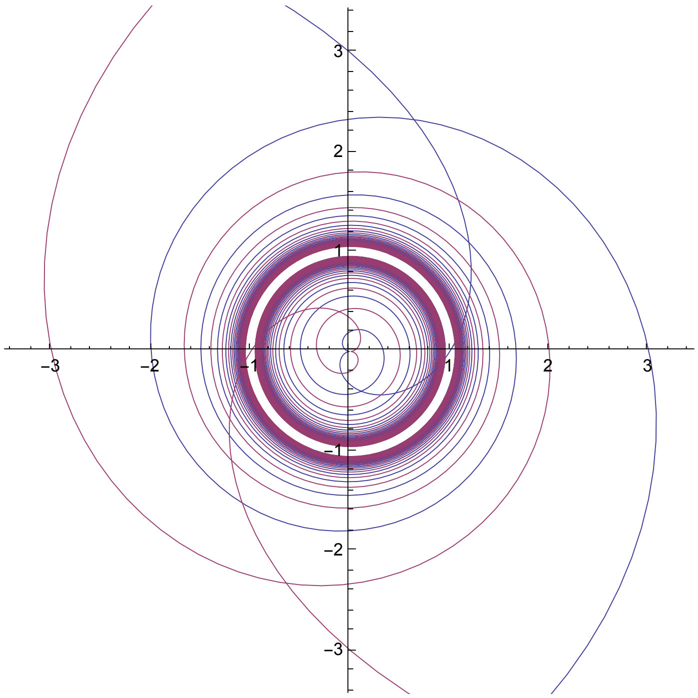
$$\texttt{Plot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



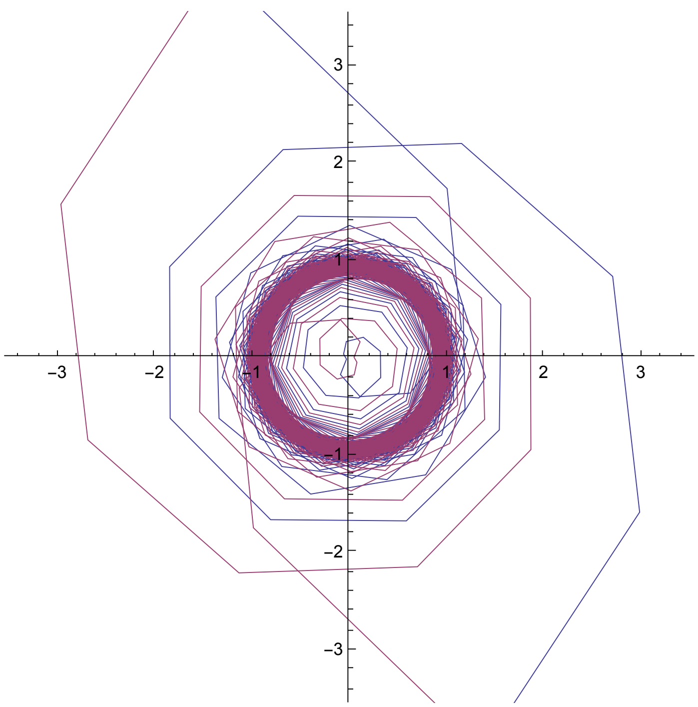
$$\texttt{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



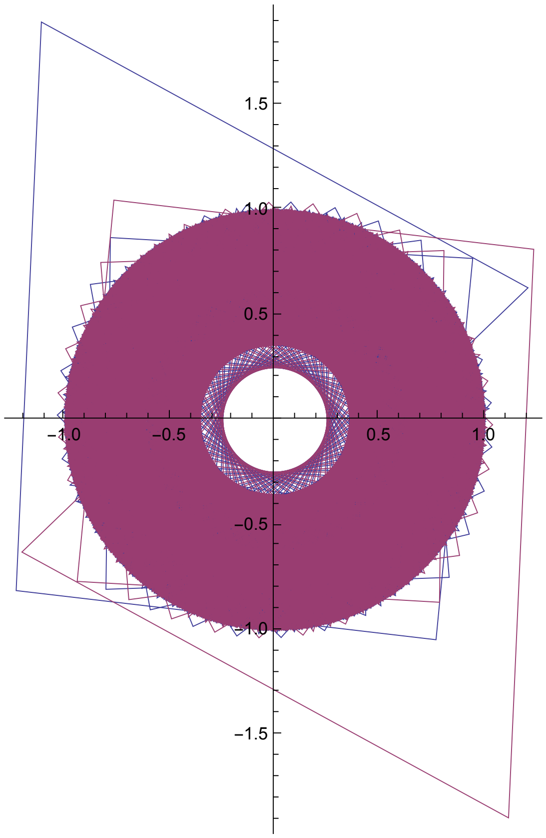
$$\texttt{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -130,\ 130\}\right]$$



$$\texttt{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -1300,\ 1300\}\right]$$



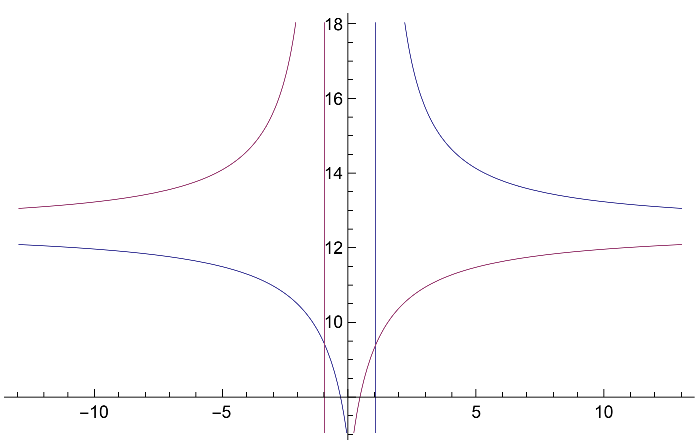
$$\text{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13\,000,\ 13\,000\}\right]$$



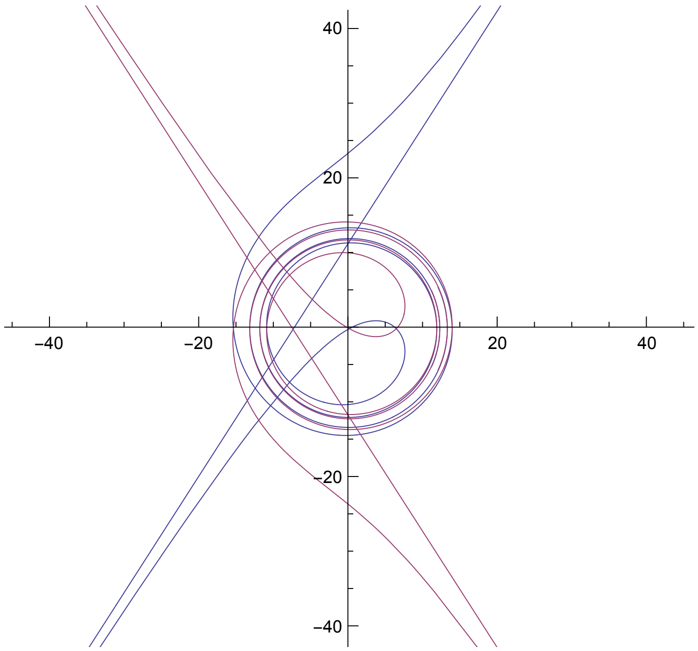
$$\text{Solve}\left[r == \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,(-\pi+2\,\pi\,r)}{-1+r}\right\},\ \left\{\theta\to\frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\}\right\}$$

$$\text{Plot}\left[\left\{\frac{2\,(-\pi+2\,\pi\,r)}{-1+r},\ \frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\},\ \{r,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\left\{\frac{2\,(-\pi+2\,\pi\,r)}{-1+r},\ \frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\},\ \{r,\,-13,\,13\}\right]$$



V. Dealing with n

$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==r\,n\,(1/(1080/\pi)\,\theta),\ n\right]$$

$$\left\{\left\{n\to\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right\}\right\}$$

Options for assigning functions that are expressions of r.

From the velocity when r is changing :

$$\left\{\left\{r\to-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \left\{r\to\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\theta,\,-13,\,13\}\right]$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\},\ \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\}$$

$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta - \theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right\}\right\}$$

$$n = \frac{r\ (2\,\pi - \theta)}{2\,\pi\,\theta\ \sqrt{r^2\ (4\,\pi - \theta)\ \theta}} =$$

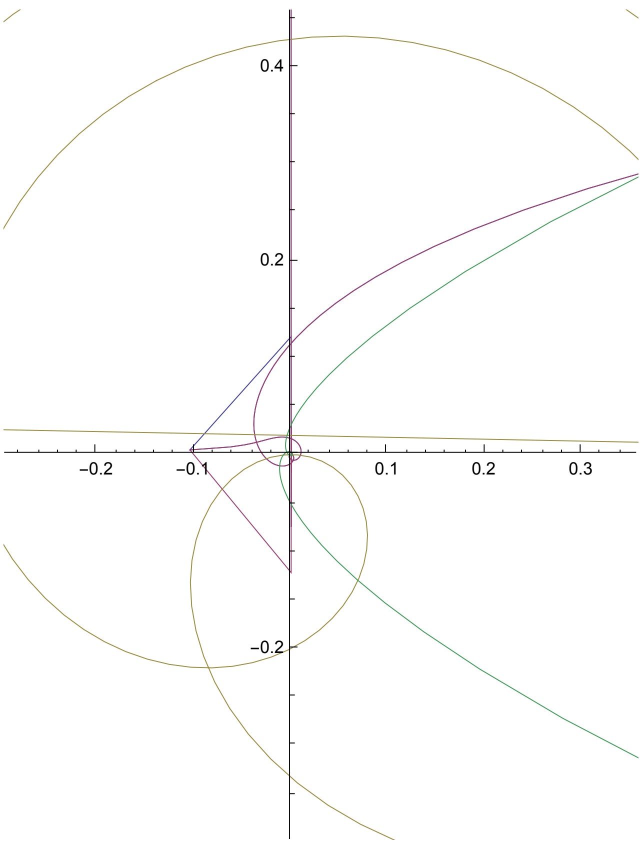
$$\frac{\sqrt{1 + \frac{4\,\pi^2}{(4\,\pi-\theta)^2} - \frac{4\,\pi}{4\,\pi-\theta}}\ (2\,\pi - \theta)}{2\,\pi\,\theta\ \sqrt{\left(\sqrt{1 + \frac{4\,\pi^2}{(4\,\pi-\theta)^2} - \frac{4\,\pi}{4\,\pi-\theta}}\right)^2\ (4\,\pi - \theta)\ \theta}} = \frac{\frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\ (2\,\pi - \theta)}{2\,\pi\,\theta\ \sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)^2\ (4\,\pi - \theta)\ \theta}} =$$

$$\frac{\sqrt{1 + \frac{4\,\pi^2}{(4\,\pi-\theta)^2} - \frac{4\,\pi}{4\,\pi-\theta}}\ (2\,\pi - \theta)}{2\,\pi\,\theta\ \sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)^2\ (4\,\pi - \theta)\ \theta}} = \frac{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)\ (2\,\pi - \theta)}{2\,\pi\,\theta\ \sqrt{\left(\sqrt{1 + \frac{4\,\pi^2}{(4\,\pi-\theta)^2} - \frac{4\,\pi}{4\,\pi-\theta}}\right)^2\ (4\,\pi - \theta)\ \theta}}$$

$$\text{PolarPlot}\Big[\Big\{\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\ (2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}},$$

$$\frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\ (2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}},\ \frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\ (2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}},$$

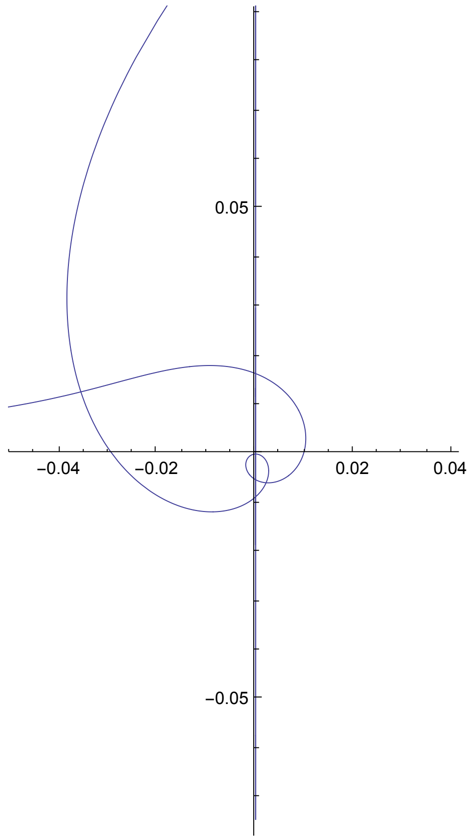
$$\frac{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}}\Big\},\ \{\theta,-130,130\}\Big]$$



$$\text{Solve}\Big[\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}} == r\,n\,(1/(1080/\pi)\,\theta),\ n\Big]$$

$$\Big\{\Big\{n\to\frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}}\Big\}\Big\}$$

$$\text{PolarPlot}\left[\frac{(1)\ (2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{(1)^2\ (4\,\pi-\theta)\ \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



VI. Solving for r_1

$$r_1 \to \sqrt{r^2-\eta^2}$$

$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right\}\right\}$$

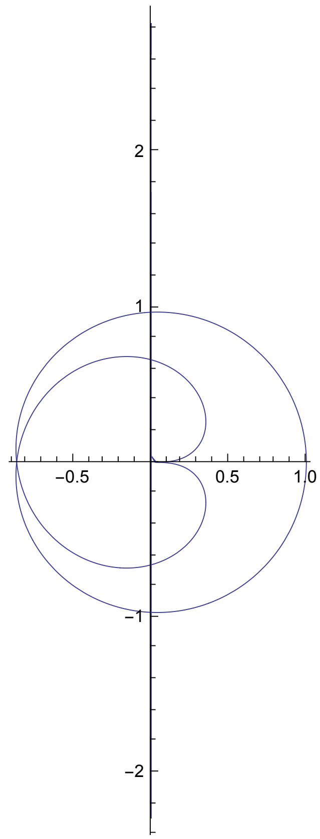
The Constant r

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\},\ \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\}\right\}$$

$$\text{Solve}\left[1 == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \eta\right]$$

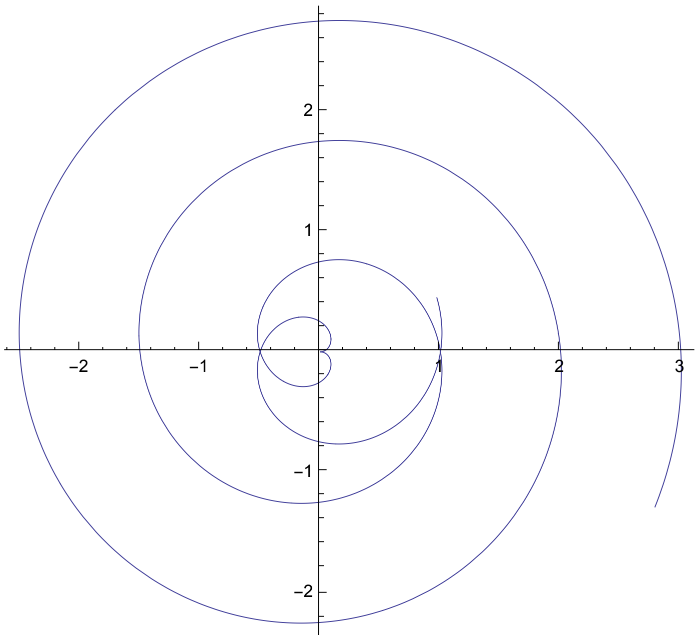
$$\left\{\left\{\eta \to \frac{\sqrt{(4\,\pi-\theta)\ \theta}}{2\,\pi}\right\}\right\}$$

$$\text{PolarPlot}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



$$\sqrt{r^2-\eta^2}\ =\ \sqrt{(1)^2-\left(\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right)^2}$$

$$\text{PolarPlot}\left[\sqrt{(1)^2-\left(\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right)^2},\ \{\theta,-13,13\}\right]$$



The changing r

$$r_1=\sqrt{r^2-\eta^2}$$

$$\left\{\left\{\eta\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right\}\right\}$$

$$r_1=\sqrt{r^2-\eta^2}=\sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}=$$

$$\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}=$$

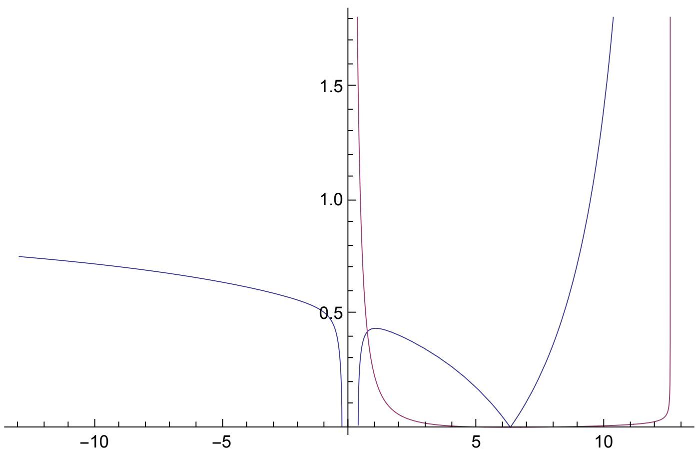
$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}$$

$$\left\{\left\{r\to-\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\},\left\{r\to\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

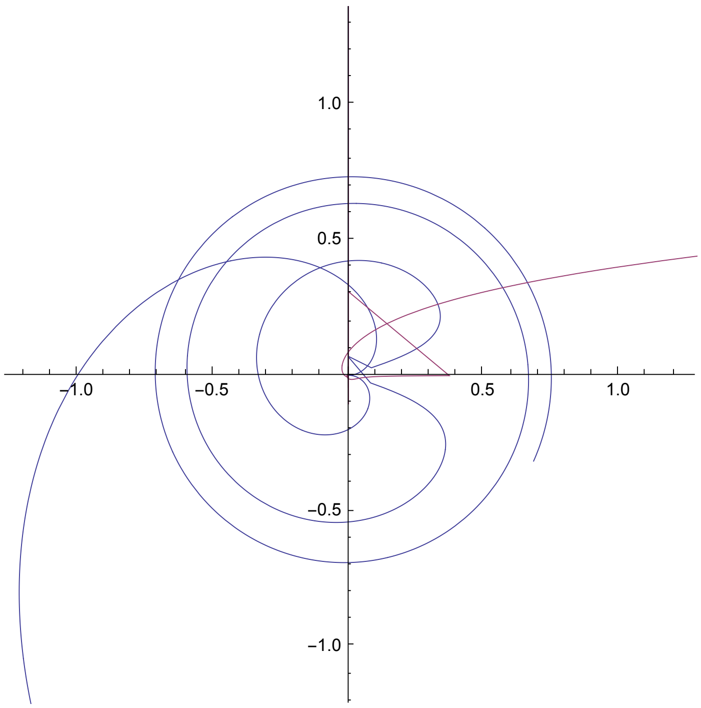
$$\text{Plot}\Bigg[\Bigg\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\Bigg\}, \{\theta, -13, 13\}\Bigg]$$



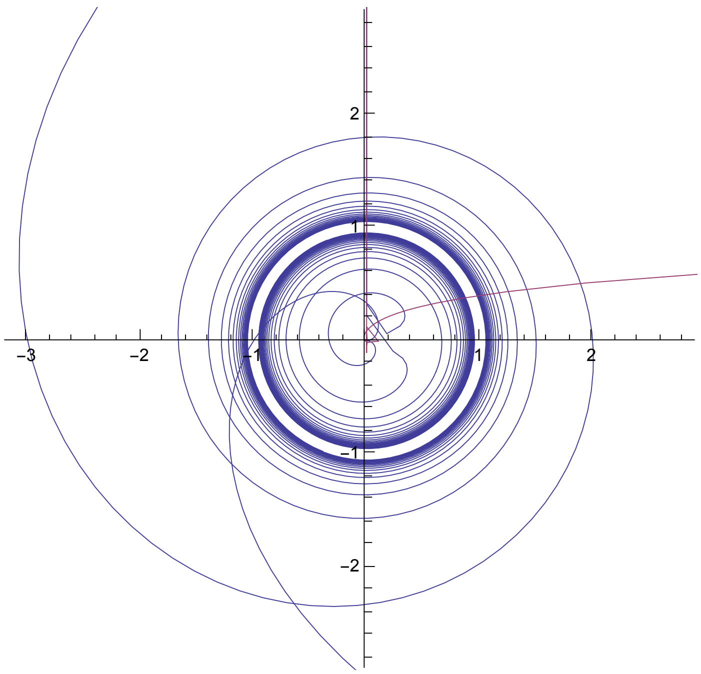
$$\texttt{PolarPlot}\Big[\Big\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},$$

$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\Big\},\ \{\theta,\ -13,\ 13\}\Big]$$



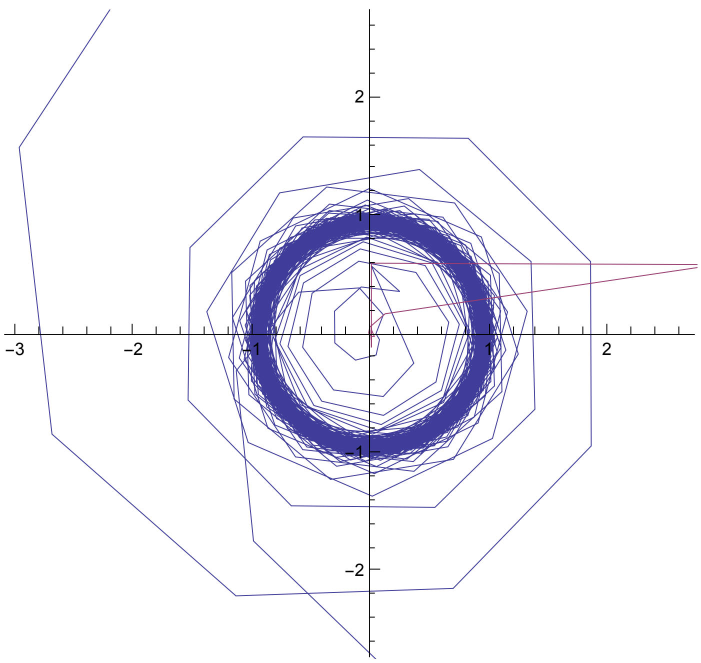
$$\text{PolarPlot}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2}\right\},\ \{\theta,\ -130,\ 130\}\right]$$



$$\text{PolarPlot}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\,-1300,\,1300\}\right]$$



$$\text{Solve}\left[\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2}==\right.$$

$$\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\ \sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}}\right)^2},\ \theta\right]$$

$$\Big\{\{\theta\to 2\,\pi\},$$

$$\left\{\theta\to -\left(\frac{2}{1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}}\right)^{1/3}+\frac{\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{12\,\pi^2}\right\},$$

$$\left\{\theta\to -\frac{\left(1+\mathbb{i}\ \sqrt{3}\right)\ \left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\right.$$
$$\left.\frac{1-\mathbb{i}\ \sqrt{3}}{2^{2/3}\ \left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right\},$$

$$\left\{\theta\to -\frac{\left(1-\mathbb{i}\ \sqrt{3}\right)\ \left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\right.$$
$$\left.\frac{1+\mathbb{i}\ \sqrt{3}}{2^{2/3}\ \left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right\}\Big\}$$

If these are theta solutions, what is $r*\theta$, the change in circumference?

$$\text{Plot}\Big[\Big\{\{r\,2\,\pi\},$$

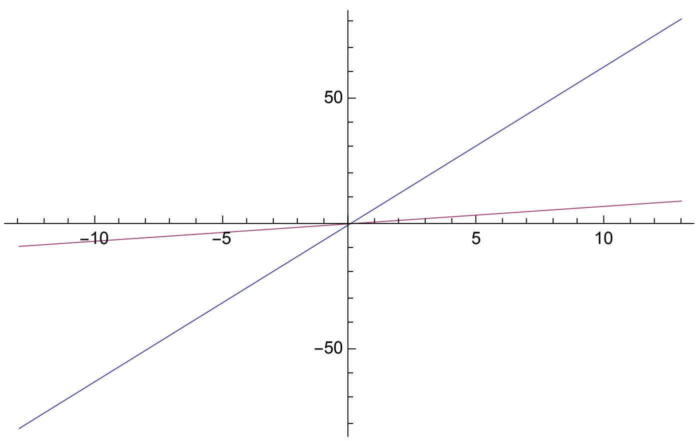
$$\left\{r\left(\left(\frac{2}{1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}}\right)^{1/3}+\frac{\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{12\,\pi^2}\right)\right\},$$

$$\left\{r\left(-\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\right.\right.$$

$$\left.\left.\frac{1-i\sqrt{3}}{2^{2/3}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right)\right\},$$

$$\left\{r\left(-\frac{\left(1-i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\right.\right.$$

$$\left.\left.\frac{1+i\sqrt{3}}{2^{2/3}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right)\right\}\Big\},\ \{r,-13,13\}\Big]$$



$$\text{Solve}\left[r_1==\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,\pi\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}-\frac{1}{2}\right.\right.$$

$$\sqrt{\left(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\ \sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)-\frac{1}{2}$$

$$\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-\right.}$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\right.$$

$$\left.\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Bigg/\left(4\,\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}\right.$$

$$\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\Bigg\},$$

$$\left\{\theta\to\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}-\frac{1}{2}\,\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)+\frac{1}{2}$$

$$\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-\right.}$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-$$

$$\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Bigg/$$

$$\left(4\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\Bigg\},$$

$$\Bigg\{\theta\to\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)-\frac{1}{2}$$

$$\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-\right.}$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}+$$

$$\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\Bigg\},$$

$$\left\{\theta\to\frac{2\pi\left(1+8\pi^4 r_1^2\right)}{1+16\pi^4 r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\pi^2\left(1+8\pi^4 r_1^2\right)^2}{\left(1+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2}{1+16\pi^4 r_1^2}-\frac{32\pi^4 r_1^2\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\pi^4 r_1^2\right)^2\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}+\frac{32\pi^4\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}\right)}+\frac{1}{2}\sqrt{\left(\frac{32\pi^2\left(1+8\pi^4 r_1^2\right)^2}{\left(1+16\pi^4 r_1^2\right)^2}-\frac{32\pi^2}{1+16\pi^4 r_1^2}+\frac{32\pi^4 r_1^2\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\pi^4 r_1^2\right)^2\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}-\frac{32\pi^4\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}+\left(\frac{512\pi^3\left(1+8\pi^4 r_1^2\right)^3}{\left(1+16\pi^4 r_1^2\right)^3}-\frac{768\pi^3\left(1+8\pi^4 r_1^2\right)}{\left(1+16\pi^4 r_1^2\right)^2}+\frac{256\pi^3}{1+16\pi^4 r_1^2}\right)\Big/\left(4\sqrt{\left(\frac{16\pi^2\left(1+8\pi^4 r_1^2\right)^2}{\left(1+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2}{1+16\pi^4 r_1^2}-\frac{32\pi^4 r_1^2\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\pi^4 r_1^2\right)^2\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}+\frac{32\pi^4\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}\right)}\right)\right)}\right\}\right\}$$

Plot$$\left[\left\{\left\{\frac{2\pi\left(1+8\pi^4 r_1^2\right)}{1+16\pi^4 r_1^2}-\frac{1}{2}\sqrt{\left(\frac{16\pi^2\left(1+8\pi^4 r_1^2\right)^2}{\left(1+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2}{1+16\pi^4 r_1^2}-\frac{32\pi^4 r_1^2\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\pi^4 r_1^2\right)^2\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}+\frac{32\pi^4\left(9\pi^2 r_1^4+\sqrt{3}\sqrt{r_1^6+27\pi^4 r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\pi^4 r_1^2+768\pi^8 r_1^4+4096\pi^{12} r_1^6\right)^{1/3}}\right)}-\frac{1}{2}\sqrt{\left(\frac{32\pi^2\left(1+8\pi^4 r_1^2\right)^2}{\left(1+16\pi^4 r_1^2\right)^2}-\right.}\right.\right.\right.$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-\Bigg(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-$$

$$\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\Bigg)\Bigg/\Bigg(4\sqrt{\Bigg(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-}$$

$$\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}-\frac{1}{2}\sqrt{\Bigg(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\Bigg)+\frac{1}{2}\sqrt{\Bigg(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-$$

$$\Bigg(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\Bigg)\Bigg/$$

$$\Bigg(4\sqrt{\Bigg(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\Big\},$$

$$\Big\{\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)-\frac{1}{2}\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}+$$

$$\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\Big\},$$

$$\Big\{\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\Bigg)+\frac{1}{2}\sqrt{\Bigg(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

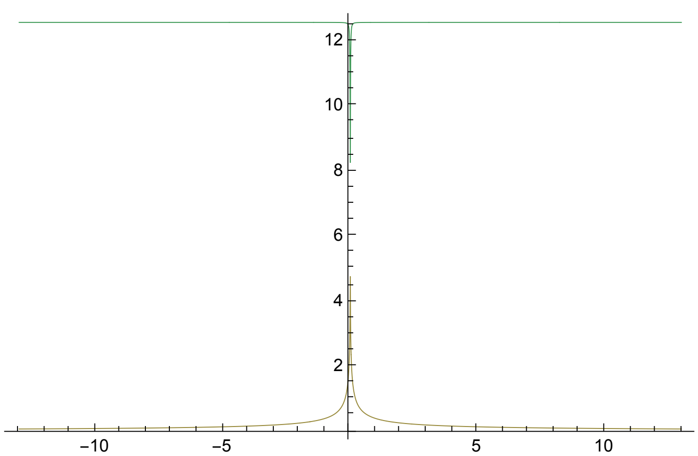
$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}+$$

$$\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Bigg/$$

$$\Bigg(4\sqrt{\Bigg(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-}$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\Bigg)\Bigg)\Bigg)\Bigg\}\Bigg\},\ \{r_1,\ -13,\ 13\}\Bigg]$$



$$\text{Solve}\left[\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}==r_1,\ \theta\right]$$

$$
\Big\{\Big\{\theta \to \frac{\pi\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)}{1-16\,\pi^4+16\,\pi^4\,r_1^2} -
$$

$$
\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2} - \frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)} + (2^{1/3}\,(16\,\pi^4-512\,\pi^8+}
$$

$$
\begin{aligned}
&4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4))\Big/\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\\
&(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\\
&r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\\
&r_1^6+\sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-}\\
&7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big)+\\
&(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+\\
&6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\\
&\sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-}\\
&7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\\
&\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big/\big(3\times 2^{1/3}\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\big)\Bigg) -
\end{aligned}
$$

$$
\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)} -}
$$

$$
\begin{aligned}
&(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4))\Big/\\
&\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\,(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\\
&r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\\
&r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+}\\
&1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+\\
&38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\\
&\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big)-\\
&(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+\\
&6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\\
&\sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-}\\
&7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+\\
&89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-\\
&356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3}\Big/
\end{aligned}
$$

$$\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)-\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-\right.$$

$$\left.\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.}\right.$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\left(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+\right.\right.$$

$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$

$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-\right.}$$

$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$\left.\left.\left.356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3}\right)+$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+\right.$$

$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+\right.}$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$

$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$

$$\left.\left.\left.\left.474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\right)\right)\right)\Big\},$$

$$\Big\{\theta\to\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-\frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\right.}$$

$$\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\left(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right.$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\right.$$

$$\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-\right.}$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\ \Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Bigg)+$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{16\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}-$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)-$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/$$

$$\Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)-\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^3}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^3}-$$

$$\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}\Bigg)\Bigg/$$

$$\Bigg(4\sqrt{}\Bigg(\frac{4\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{8\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}+$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$

$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big/\left(3\times2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-}$$

$$\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big/\left(3\times2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)-$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}-}$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-}$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)-$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-}$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)+\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-$$

$$\frac{64\,\pi^3\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\Bigg)\Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+}$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\,\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$

$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$

$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-}$$

$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$

$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$

$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$

$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+}$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8))^{1/3} \Big/ (3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2))))\Big\},$$

$$\Big\{\theta \to \frac{\pi\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\sqrt{\Big(\frac{4\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \right.}$$

$$\frac{8\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} +$$

$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$

$$\Big(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)$$

$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)})^{1/3}\Big) +$$

$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)})^{1/3} \Big/ (3 \times 2^{1/3}\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2))\Big) +$$

$$\frac{1}{2}\sqrt{\Big(\frac{8\,\pi^2\,(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2)^2}{(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\,(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2)}{3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)} - \right.}$$

$$(2^{1/3}\,(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4)) \Big/$$

$$\Big(3\,(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2)$$

$$(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -}}$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$

$$\sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -}$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/$$

$$\Big(3\times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big) + \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^3}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^3} -\right.$$

$$\left.\frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} +\right.}\right.$$

$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$

$$\Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\,\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$

$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$

$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 -}$$

$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$

$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456$$

$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$

$$33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +}$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$

$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$

$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$

$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\ \Big(3\times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big)\Big)\Big)\Big)\Big)\}\}$$

$$\mathbf{Plot}\Big[\Big\{\Big\{\frac{\pi\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} -$$

$$\frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} + \Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 +\right.}$$

$$4096\,\pi^{12} + 2048\,\pi^{8}\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\big) \Big/ \Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)}\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)}\Big)^{1/3} \Big/ \Big(3\times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big)\Bigg) -$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{16\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} -}$$

$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\big)\Big) \Big/$$

$$\Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\,\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)}\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)}\Big)^{1/3} \Big/$$

$$\Big(3\times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)\Big) - \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^3}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^3} -\right.$$

$$\left.\frac{64\,\pi^3\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2}\right) \Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\big)} +}$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$
$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$
$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$
$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$
$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$
$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$
$$33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$
$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/\Big(3\times2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\frac{\pi\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}-\frac{1}{2}\surd\Bigg(\frac{4\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{8\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}+$$
$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$
$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$
$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$
$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$
$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/\Big(3\times2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Bigg)+$$

$$\frac{1}{2}\surd\Bigg(\frac{8\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{16\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}-$$
$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$
$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$

$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/$$

$$\left(3\times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) - \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} - \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +}$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg)}\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{\pi\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +}$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{}\,\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\,\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\ \left(3\times 2^{1/3}\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)-$$

$$\frac{1}{2}\sqrt{}\left(\frac{8\,\pi^2\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2\ \left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}-\right.$$

$$\left(2^{1/3}\ \left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Big(3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{}\,\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)-$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\,\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)+\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-\right.$$

$$\left.\frac{64\,\pi^3\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\ \left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right)\Big/$$

$$\left(4\sqrt{}\left(\frac{4\,\pi^2\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\ \left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/ \left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\right)+$$

$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}+\frac{1}{2}\sqrt{\Bigg(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/ \left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\right)+$$

$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)}\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)+$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)$$

$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)-$$

$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/$$

$$\Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)+\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^3}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^3}-\right.$$

$$\left.\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}\right)\Big/$$

$$\Bigg(4\,\surd\Bigg(\frac{4\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{8\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}+$$

$$\big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\big)\Big/$$

$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$

$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$

$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-$$

$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$

$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$

$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

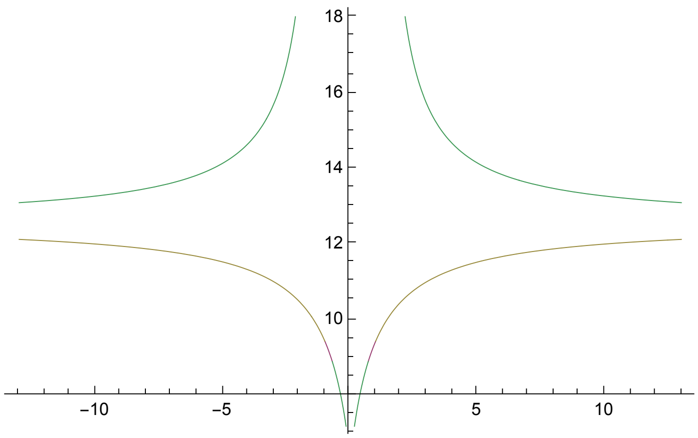
$$\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312$$

$$\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/$$

$$\Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Bigg)\Bigg)\Bigg)\}\},\ \{r_1,\,-13,\,13\}]$$



A Notational Language for Describing the Geometry of Space-Time

by Parker Emmerson

© October 14, 2009

I. Postulates, Structure

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle,

the base of the cone, of radius r_1

$r^2 = r_1^2 + \eta^2$

This is the initial radius squared expressed as the slant of the cone in terms of the height of the cone, η, and the radius of the base of the cone, r_1

$r = \sqrt{(r_1^2 + \eta^2)}$ (96)

$s = \theta r$

$s / \theta = r$

The arc length taken out of a circle at a given time is =

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r$ → Equation 7

$r_1^2 == r^2 - \eta^2$

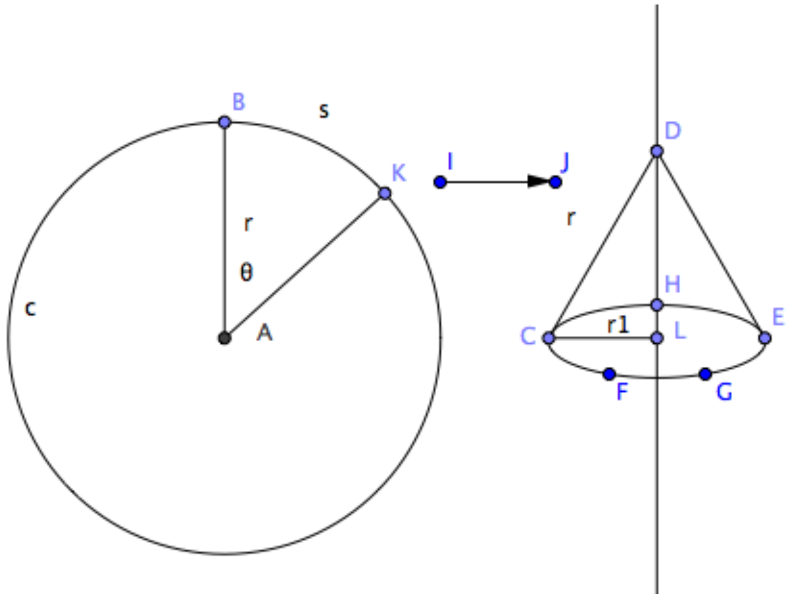
$r_1 = \sqrt{(r^2 - \eta^2)}$

$\eta \leq r$

τ = time

1 second = 6 degrees

$\tau = 6\,\theta$



I will now do some algebra to conclude what the height of the cone is in terms of the initial parameters. It can eventually be reduced to a single variable.

```
Solve[r1^2 + η^2 == r^2, η]
```

$$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\} \quad (97)$$

We say that the amount of $\theta r =$ s, taken out of the circle is the change in the circle's circumference that is the base of the cone. The change is equal to $s = 2\pi r - 2\pi r_1$.

Notice that θ = ((2 π r) / r) – ((2 π r 1) / r), because we divide by r on both sides.

We will focus on the positive solutions for the height of the cone.

```
Solve[η == Sqrt[r^2 - r1^2], r1]
```

$$\left\{\left\{r_1 \to -\sqrt{r^2 - \eta^2}\right\}, \left\{r_1 \to \sqrt{r^2 - \eta^2}\right\}\right\} \quad (98)$$

This is the change in circumference with the substituted expression for r_1 in terms of h and r.

$$r\,\theta == s == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)\,\verb|^|2 - \eta\,\verb|^|2)} = 2\,\pi\,(r) - 2\,\pi\,r_1 \quad (99)$$

$$\theta == (2\,\pi\,r)\,/\,r - (2\,\pi\,r\ _1)\,/\,r) = ((2\,\pi\,r)\,/\,r) - \left(\left(2\,\pi\,\sqrt{-\eta^2 + r^2}\right)\Big/\,r\right)\right)$$

```
Solve[θ * r == 2 π (r) - 2 π Sqrt[((r)^2 - η^2)], η]
```

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\} \qquad (100)$$

$$\text{Solve}\left[\eta == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, r\right]$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}, \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\} \qquad (101)$$

II. Motion through the Space - Time

If there is something traveling over the distance, η, then its velocity is said to be the first derivative with respect to time. What if r is constant, which it is when it' s the hypoteneuse of the triangle made by the cone.

ν = frequency = 1 / τ = (1 / (1080 / π) θ),
because each second is in terms of degrees of a clock, and in terms of theta,
which is in radians, we must make the following conversion : (102)

$$\text{Time} = 6\left(\theta_{\text{degrees}}\right) = 6\,(180/\pi)\,\theta = (1080/\pi)\,\theta$$

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$v = \lambda\,\nu = r\,(1/(1080/\pi)\,\theta) = ((1/(1080/\pi))\,D[\eta, \theta]) = 1/(1080/\pi))$$
$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right] \qquad (103)$$

The velocity of η is equal to the first derivative of η with respect to time. The constant (1/(1080/π)) is taken out of the equation in order to perform the derivative.

$$(1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

$$\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$(1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\sqrt{1 - ((v)\text{^}2/c\text{^}2)}\right), \theta\right]$$

$$\frac{\sqrt{1 - \frac{v^2}{c^2}}\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} = c$$

```
c := (2.99792458 * 10^8)
```

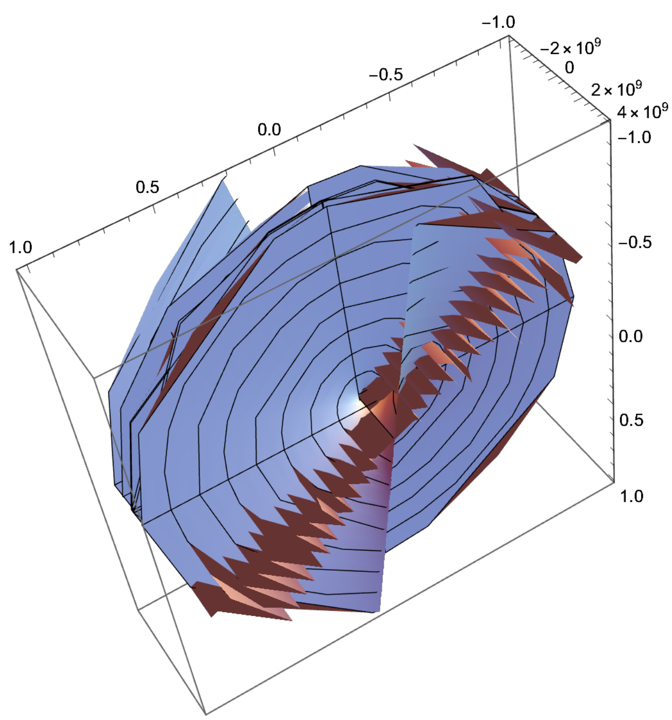
$$\text{Solve}\left[\frac{\sqrt{1-\frac{v^2}{c^2}}\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==c,\ v\right]$$

$$\left\{\left\{v\to-\frac{c\,\sqrt{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right\},\right.$$
$$\left.\left\{v\to\frac{c\,\sqrt{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right\}\right\}$$

(1 / (1080 / π))

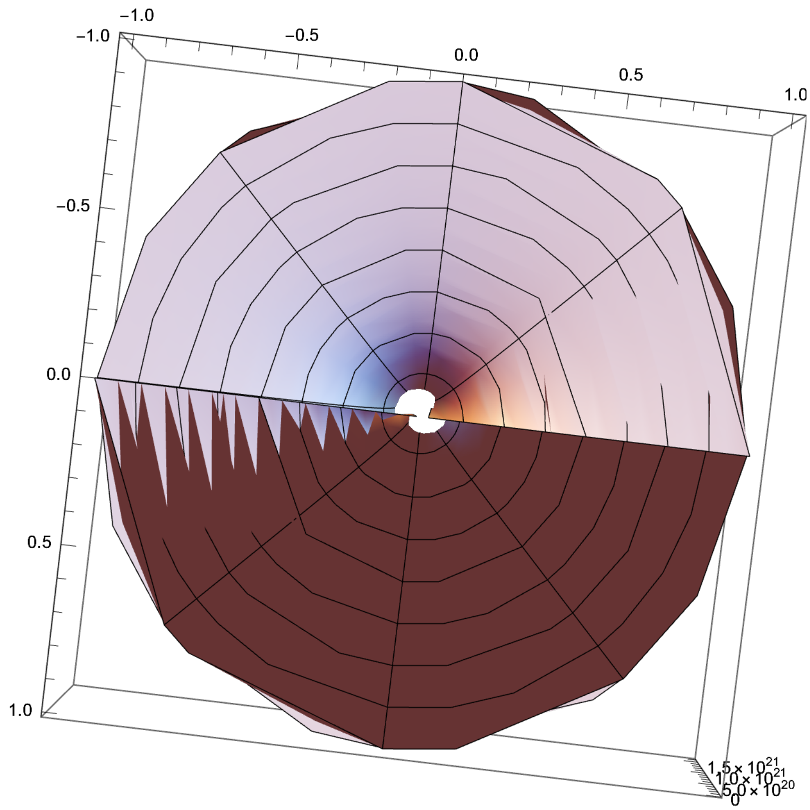
$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\left(\sqrt{1-\left(\left(\frac{c\,\sqrt{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right)\text{^}2\Big/\,c\text{^}2\right)}\right),\ \theta\right]$$

$$\text{RevolutionPlot3D}\left[\frac{1}{1080}\pi\left(\left(\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{-4\pi - \frac{18\,662\,400\,c^2\pi}{r^2} + 2\theta + \frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2} + \frac{(-4\pi + 2\theta)\left(4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2 - 4\pi\theta + \theta^2\right)^2}\right)\right)\Big/\left(4\pi\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}\right) + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)\right), \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



```
RevolutionPlot3D[
```

$$\mathrm{RevolutionPlot3D}\left[\frac{c\sqrt{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\{r,-1,1\},\{\theta,-4\pi,4\pi\}\right]$$



$$\mathrm{Solve}\left[m\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}}\left(\sqrt{1-\left(\left(\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)\hat{}\,2\Big/c\hat{}\,2\right)}\right)==m\,c,\right]$$

$$D\left[\frac{c\sqrt{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\theta\right]$$

$$\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}}=$$

velocity through the height of the cone when r is constant (104)
(stays always the initial radius of the circle equal to the hypoteneuse of the triangle formed by the height meeting the base of the cone).

```
(1 / (1080 / π)) (1 / (1080 / π)) D[(r / θ), θ]
```

$$\text{Solve}\left[-\frac{\pi^2\,r}{1\,166\,400\,\theta^2}==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\,\theta\right]$$

$$\{\{\theta\to\pi\,\text{Root}[-4+\#1+1\,166\,400\,\#1^3-1\,166\,400\,\#1^4+291\,600\,\#1^5\,\&,\,1]\},$$
$$\{\theta\to\pi\,\text{Root}[-4+\#1+1\,166\,400\,\#1^3-1\,166\,400\,\#1^4+291\,600\,\#1^5\,\&,\,2]\},$$
$$\{\theta\to\pi\,\text{Root}[-4+\#1+1\,166\,400\,\#1^3-1\,166\,400\,\#1^4+291\,600\,\#1^5\,\&,\,3]\},$$
$$\{\theta\to\pi\,\text{Root}[-4+\#1+1\,166\,400\,\#1^3-1\,166\,400\,\#1^4+291\,600\,\#1^5\,\&,\,4]\},$$
$$\{\theta\to\pi\,\text{Root}[-4+\#1+1\,166\,400\,\#1^3-1\,166\,400\,\#1^4+291\,600\,\#1^5\,\&,\,5]\}\}$$

$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==r\,(1/(1080/\pi)\,\theta),\,\theta\right]$$

$$\Bigg\{\Bigg\{\theta\to\pi-\frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+\right.}$$
$$\left.\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)-$$
$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2}+8\,\pi^2-\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}-\right.}$$
$$\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}-$$
$$\left(\frac{4}{\pi}+64\,\pi^3\right)\Bigg/\left(4\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\right.}\right.$$
$$\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+1\Big/\Big(6\times$$
$$\left.\left.\left.2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\Big)\right)\right)\right)\Bigg\},$$

$$\Bigg\{\theta\to\pi-\frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+\right.}$$
$$\left.\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}\right)+$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{1}{3\,\pi^2}+8\,\pi^2-\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}-}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}-$$

$$\left(\frac{4}{\pi}+64\,\pi^3\right)\Big/\Bigg(4\sqrt{\Bigg(-\frac{1}{6\,\pi^2}+4\,\pi^2+}$$

$$\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+1\Big/\Big(6\times$$

$$2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\Big)\Bigg)}\Bigg)\Bigg)}\Big\},$$

$$\Big\{\theta\to\pi+\frac{1}{2}\sqrt{\Bigg(-\frac{1}{6\,\pi^2}+4\,\pi^2+\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}\Bigg)}-$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{1}{3\,\pi^2}+8\,\pi^2-\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}-}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}}+$$

$$\left(\frac{4}{\pi}+64\,\pi^3\right)\Big/\Bigg(4\sqrt{\Bigg(-\frac{1}{6\,\pi^2}+4\,\pi^2+}$$

$$\frac{\left(\frac{1}{2}\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2}+1\Big/\Big(6\times$$

$$2^{2/3}\,\pi^2\left(2+27\,648\,\pi^8+\sqrt{110\,592\,\pi^8+764\,411\,904\,\pi^{16}}\right)^{1/3}\Big)\Bigg)}\Bigg)\Bigg)}\Big\},$$

$$\Big\{\theta \to \pi + \frac{1}{2}\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} + \right.}$$

$$\left.\frac{1}{6\times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}}\right) +$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,\pi^2} + 8\,\pi^2 - \frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} - \right.}$$

$$\frac{1}{6\times 2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}} +$$

$$\left(\frac{4}{\pi} + 64\,\pi^3\right) \Big/ \left(4\sqrt{\left(-\frac{1}{6\,\pi^2} + 4\,\pi^2 + \right.}\right.$$

$$\frac{\left(\frac{1}{2}\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)\right)^{1/3}}{12\,\pi^2} + 1 \Big/ \Big(6\times$$

$$\left.\left.\left.2^{2/3}\,\pi^2\left(2 + 27\,648\,\pi^8 + \sqrt{110\,592\,\pi^8 + 764\,411\,904\,\pi^{16}}\right)^{1/3}\Big)\right)\right)\right)\Big\}\Big\}$$

What is theta for a certain number of frequencies?

$$\text{Solve}\left[\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} == r\,n\,(1\,/\,(1080\,/\,\pi)\,\theta)\,,\,\theta\right]$$

$$\Big\{\Big\{\theta \to \pi -$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,n^2\,\pi^2\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} + \right.}$$

$$\left.\frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right) -$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2} + 8\,\pi^2 - \frac{1}{12\,n^2\,\pi^2\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} - \right.}$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}-$$

$$\left(\frac{4}{n^2 \pi}+64 \pi^3\right) \Big/ \Bigg(4 \sqrt{\Bigg(-\frac{1}{6\, n^2 \pi^2}+4 \pi^2+}$$

$$1 \Big/ \left(12\, n^2 \pi^2 \left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}\right)+$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}\Bigg)\Bigg)\Bigg)\Big\},\ \Big\{\theta \to \pi -$$

$$\frac{1}{2} \sqrt{\Bigg(-\frac{1}{6\, n^2 \pi^2}+4 \pi^2+\frac{1}{12\, n^2 \pi^2 \left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}\Bigg)+$$

$$\frac{1}{2} \sqrt{\Bigg(-\frac{1}{3\, n^2 \pi^2}+8 \pi^2-\frac{1}{12\, n^2 \pi^2 \left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}-}$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}-$$

$$\left(\frac{4}{n^2 \pi}+64 \pi^3\right) \Big/ \Bigg(4 \sqrt{\Bigg(-\frac{1}{6\, n^2 \pi^2}+4 \pi^2+}$$

$$1 \Big/ \left(12\, n^2 \pi^2 \left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}\right)+$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}\Bigg)\Bigg)\Bigg)\Big\},\ \Big\{\theta \to \pi +$$

$$\frac{1}{2} \sqrt{\Bigg(-\frac{1}{6\, n^2 \pi^2}+4 \pi^2+\frac{1}{12\, n^2 \pi^2 \left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}+}$$

$$\frac{\left(1+13\,824\, n^4 \pi^8+96 \sqrt{3}\, \pi^4 \sqrt{n^4+6912\, n^8 \pi^8}\right)^{1/3}}{12\, n^2 \pi^2}\Bigg)-$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}+$$

$$\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Bigg/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\right.}\right.$$

$$1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+$$

$$\left.\left.\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\right)\right)\Big\},\ \Big\{\theta\to\pi+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2}+8\,\pi^2-\frac{1}{12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}+$$

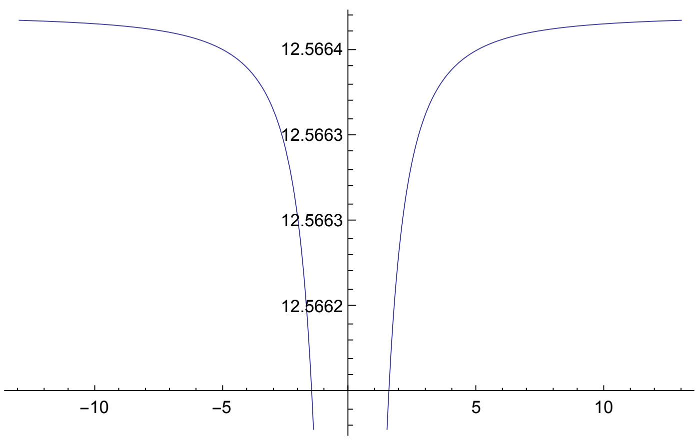
$$\left(\frac{4}{n^2\,\pi}+64\,\pi^3\right)\Bigg/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2}+4\,\pi^2+\right.}\right.$$

$$1\Big/\left(12\,n^2\,\pi^2\,\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}\right)+$$

$$\left.\left.\left.\frac{\left(1+13\,824\,n^4\,\pi^8+96\,\sqrt{3}\,\pi^4\,\sqrt{n^4+6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)\right)\right)\Big\}\Big\}$$

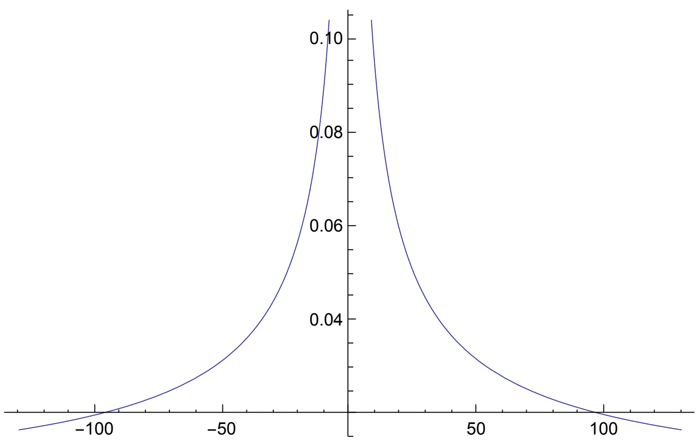
$$\text{Plot}\Big[\pi + \frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,n^2\,\pi^2\,\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)} +$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2} + 8\,\pi^2 - \frac{1}{12\,n^2\,\pi^2\,\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2} + \left(\frac{4}{n^2\,\pi} + 64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,n^2\,\pi^2\,\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}\right)\right)}, \{n, -13, 13\}\Big]$$



$$\text{Plot}\Bigg[\pi + \frac{1}{2}\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,n^2\,\pi^2\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)} -$$

$$\frac{1}{2}\sqrt{\left(-\frac{1}{3\,n^2\,\pi^2} + 8\,\pi^2 - \frac{1}{12\,n^2\,\pi^2\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2} + \left(\frac{4}{n^2\,\pi} + 64\,\pi^3\right)\Big/\left(4\sqrt{\left(-\frac{1}{6\,n^2\,\pi^2} + 4\,\pi^2 + \frac{1}{12\,n^2\,\pi^2\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,n^4\,\pi^8 + 96\,\sqrt{3}\,\pi^4\,\sqrt{n^4 + 6912\,n^8\,\pi^8}\right)^{1/3}}{12\,n^2\,\pi^2}\right)}\right)\right)}, \{n, -13, 13\}\Bigg]$$



These are mathematical expressions of the reality of the four noble truths. Leaves falling from trees.

What would acceleration through the height of the cone be when r is constant?

$$v = \lambda\,\nu = r\,(1 / (1080 / \pi)\,\theta) =$$

$$(1 / (1080 / \pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right] = (1 / (1080 / \pi))\,D[\eta, \theta] = \text{velocity}$$

$$(1 / (1080 / \pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} = \text{velocity}$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} = \text{velocity of } \eta \text{ when r is constant.}$$

$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\,(1/(1080/\pi)\,\theta),\ r\right]$$

{}

$$(1/(1080/\pi))\ D\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}},\ \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)^2}{8640\,(4\pi r^2\theta-r^2\theta^2)^{3/2}} - \frac{r^2}{2160\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}$$

$$\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)^2}{8640\,(4\pi r^2\theta-r^2\theta^2)^{3/2}} - \frac{r^2}{2160\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080} = \frac{\pi^3 r}{629\,856\,000\,\theta^3} = \tag{107}$$

acceleration through the height of the cone when r is constant.

$$(1/(1080/\pi))\ (1/(1080/\pi))\ (1/(1080/\pi))\ D[D[(r/\theta),\theta],\theta]$$

$$\frac{\pi^3 r}{629\,856\,000\,\theta^3}$$

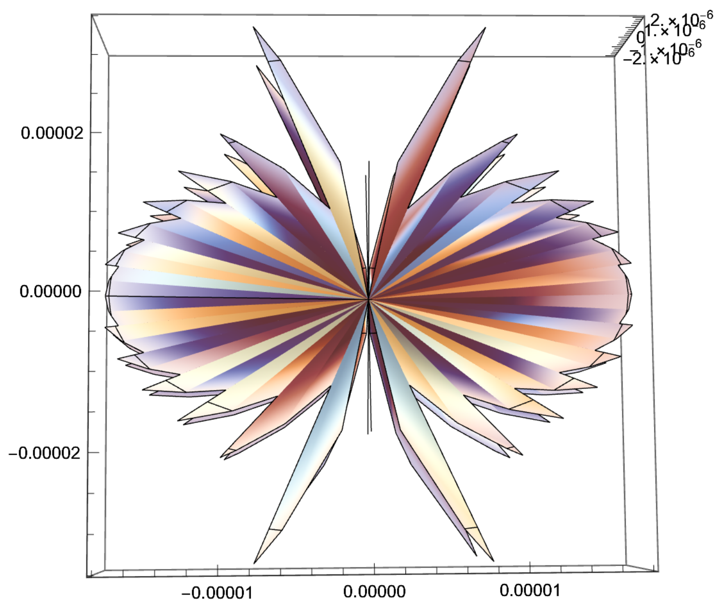
$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)^2}{8640\,(4\pi r^2\theta-r^2\theta^2)^{3/2}} - \frac{r^2}{2160\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080} == \frac{\pi^3 r}{629\,856\,000\,\theta^3},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\left(1 + 6480\times 5^{1/3} - 36\times 5^{2/3}\right)\pi}{1\,166\,401}\right\},\right.$$

$$\left\{\theta \to \frac{4\left(1 - 3240\times 5^{1/3} - 3240\,i\sqrt{3}\,5^{1/3} + 18\times 5^{2/3} - 18\,i\sqrt{3}\,5^{2/3}\right)\pi}{1\,166\,401}\right\},$$

$$\left.\left\{\theta \to \frac{4\left(1 - 3240\times 5^{1/3} + 3240\,i\sqrt{3}\,5^{1/3} + 18\times 5^{2/3} + 18\,i\sqrt{3}\,5^{2/3}\right)\pi}{1\,166\,401}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[r\,\frac{4\left(1-3240\times 5^{1/3}-3240\,i\,\sqrt{3}\,5^{1/3}+18\times 5^{2/3}-18\,i\,\sqrt{3}\,5^{2/3}\right)\pi}{1\,166\,401},\ \{r,-1,1\}\right]$$



What happens if r is changing?

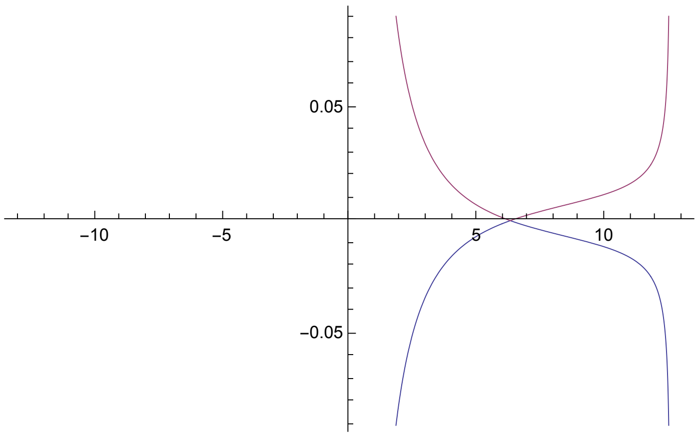
$$(1/(1080/\pi))\ \text{D}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\ r,\ \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080} = \text{velocity when r is changing} \tag{107}$$

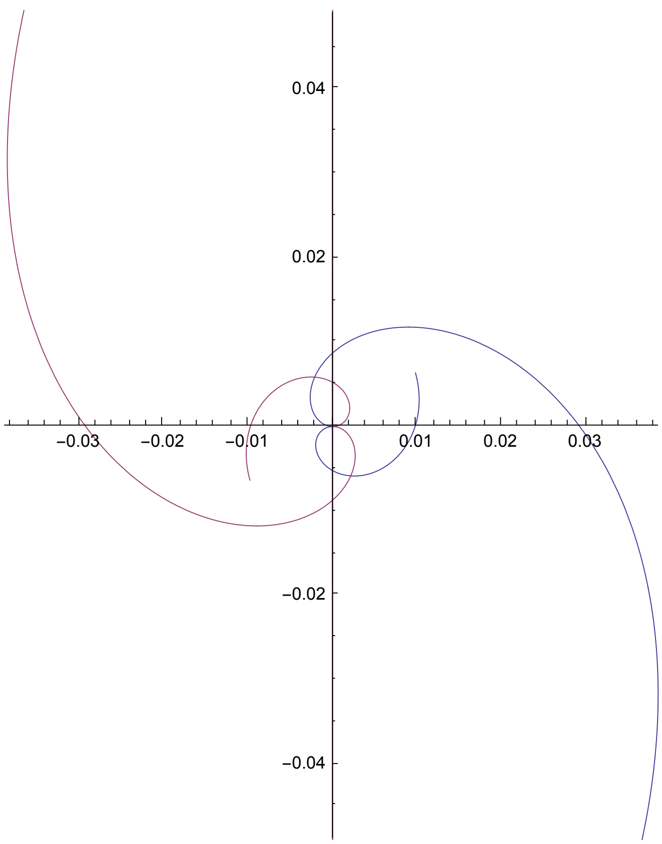
$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080} == r\,(1/(1080/\pi)\,\theta),\ r\right]$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

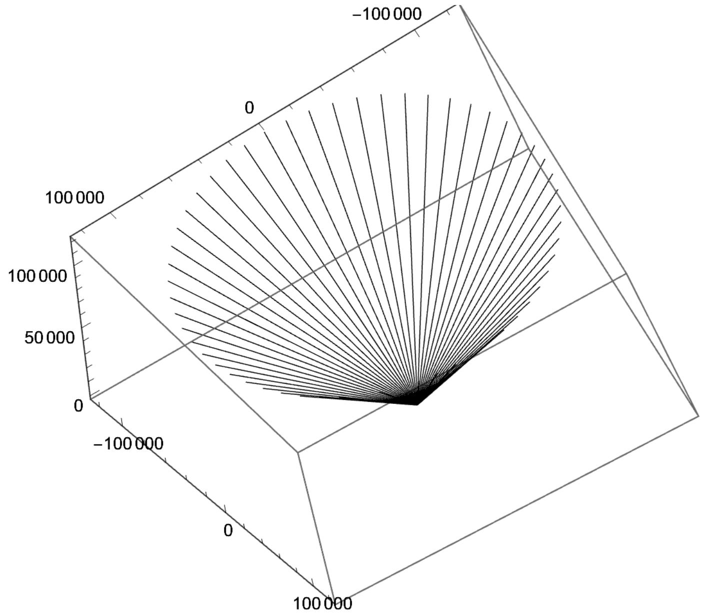
$$\text{Plot}\left[\left\{-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\left\{-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-10,10\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\left\{-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\ \{\theta,-10,10\}\right]$$



$$\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}=r=\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}$$

$$\texttt{Solve}\left[\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}==\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ \eta\right]$$

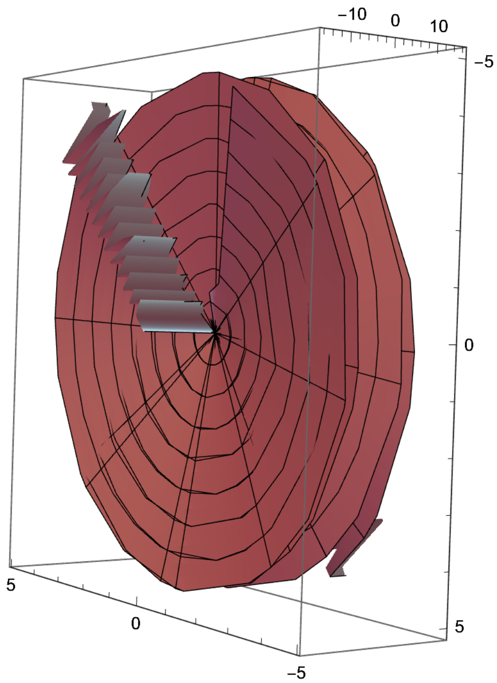
$$\left\{\left\{\eta\to\frac{\sqrt{\frac{1}{4\pi-\Theta}+\frac{4\pi}{\Theta^2}-\frac{3}{\Theta}}\ \sqrt{4\pi\Theta-\Theta^2}}{8\pi^2\sqrt{\Theta}}\right\}\right\}$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\Theta}+\frac{4\pi}{\Theta^2}-\frac{3}{\Theta}}}{4\pi\sqrt{\Theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\pi-\Theta}+\frac{4\pi}{\Theta^2}-\frac{3}{\Theta}}}{4\pi\sqrt{\Theta}}\right\}\right\}$$

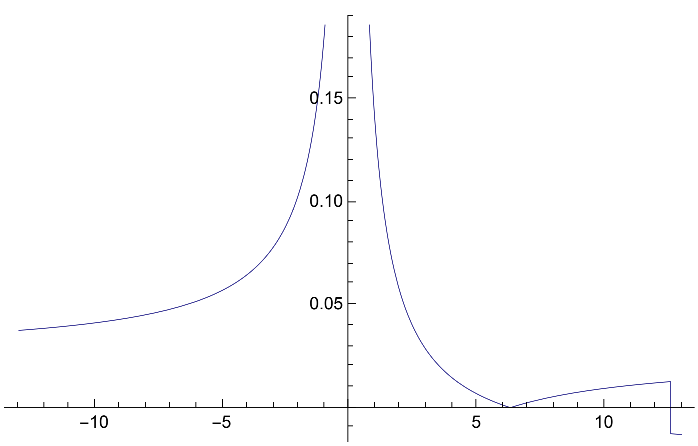
$$\texttt{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}==\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}},\ \theta\right]$$

$$\{\{\Theta\to 2\pi\}\}$$

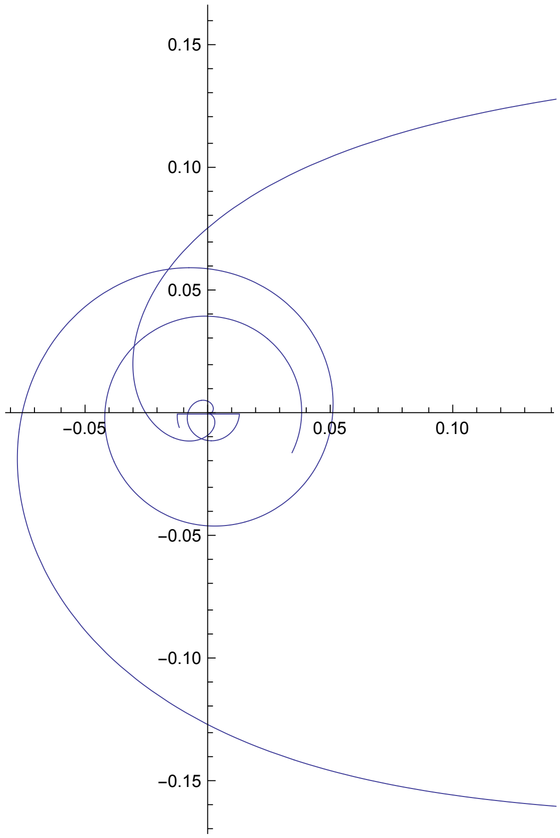
$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{\eta,\ -5,\ 5\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



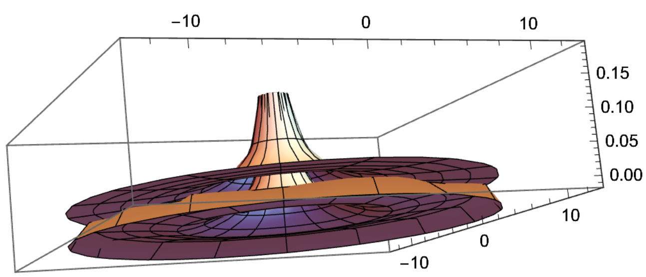
$$\text{Plot}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\ \sqrt{\theta}},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}, \{\theta, -13, 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\ \sqrt{\theta}}, \{\theta, -13, 13\}\right]$$



$$(1/(1080/\pi))\,D\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080},r,\theta\right]$$

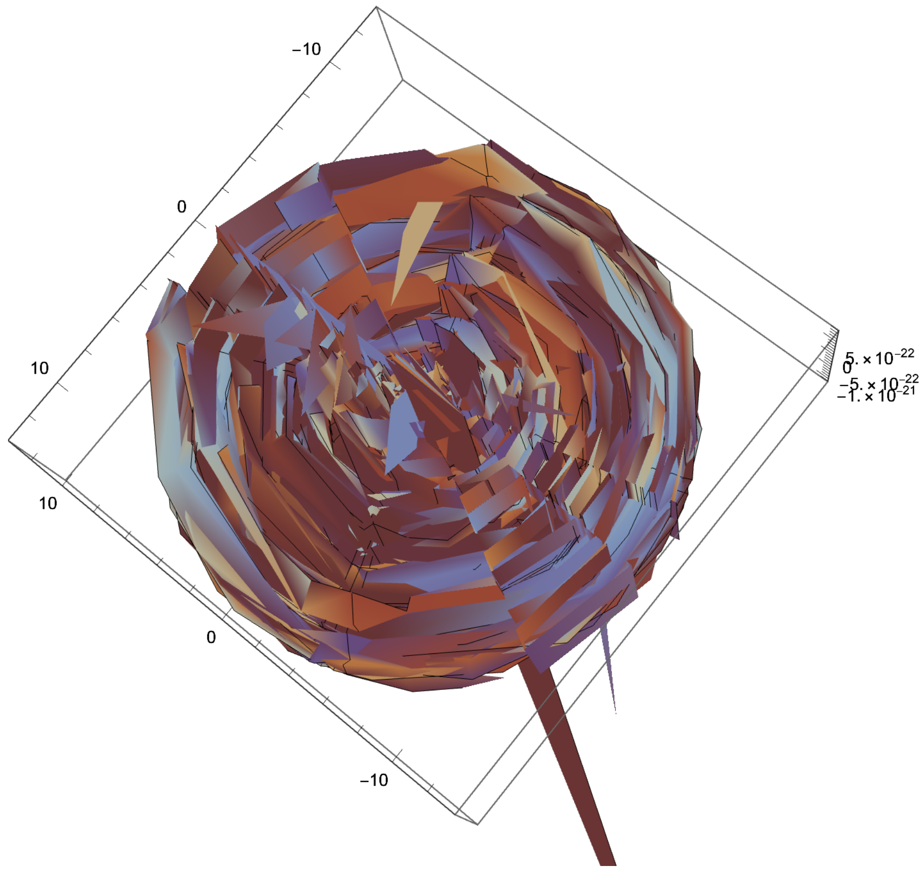
$$\frac{1}{1166400}\pi^2\left(-\frac{15(4\pi r^2-2r^2\theta)^2(8\pi r\theta-2r\theta^2)^2}{32\pi(4\pi r^2\theta-r^2\theta^2)^{7/2}}+\frac{3(4\pi r^2-2r^2\theta)^2(8\pi\theta-2\theta^2)}{16\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}+\frac{3(8\pi r-4r\theta)(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{3r^2(8\pi r\theta-2r\theta^2)^2}{8\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{(8\pi r-4r\theta)^2}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{(8\pi-4\theta)(4\pi r^2-2r^2\theta)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r^2(8\pi\theta-2\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r(8\pi r\theta-2r\theta^2)}{\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{1}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

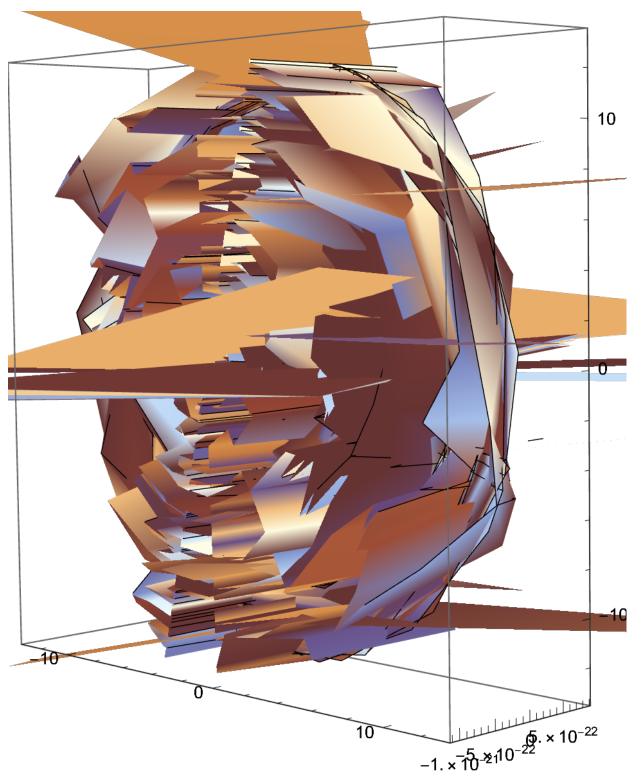
Acceleration when r is changing =

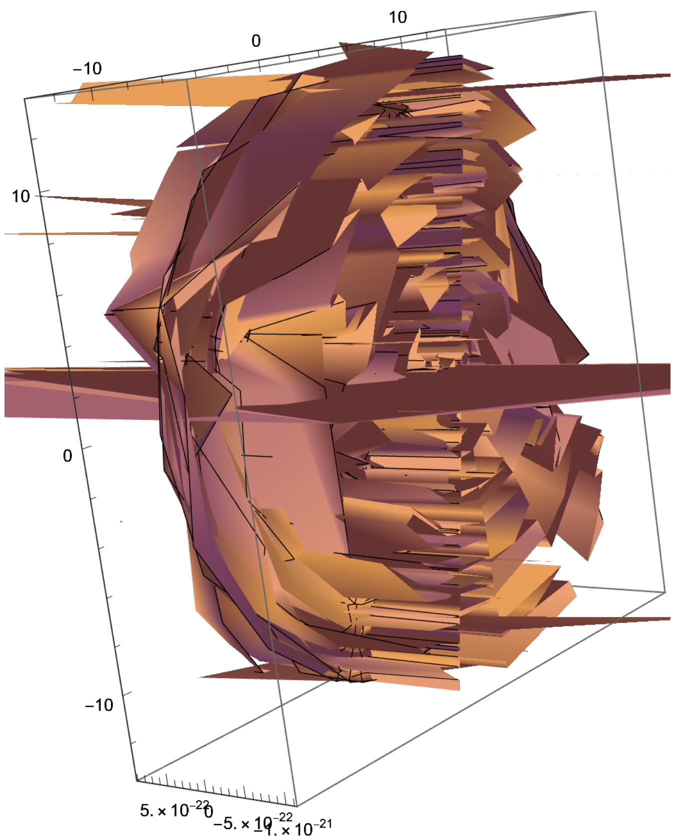
$$\frac{1}{1166400}\pi^2\left(-\frac{15(4\pi r^2-2r^2\theta)^2(8\pi r\theta-2r\theta^2)^2}{32\pi(4\pi r^2\theta-r^2\theta^2)^{7/2}}+\frac{3(4\pi r^2-2r^2\theta)^2(8\pi\theta-2\theta^2)}{16\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}+\frac{3(8\pi r-4r\theta)(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{3r^2(8\pi r\theta-2r\theta^2)^2}{8\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{(8\pi r-4r\theta)^2}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{(8\pi-4\theta)(4\pi r^2-2r^2\theta)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r^2(8\pi\theta-2\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r(8\pi r\theta-2r\theta^2)}{\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{1}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

RevolutionPlot3D

$$\text{RevolutionPlot3D}\left[\frac{1}{1166400}\pi^2\left(-\frac{15(4\pi r^2-2r^2\theta)^2(8\pi r\theta-2r\theta^2)^2}{32\pi(4\pi r^2\theta-r^2\theta^2)^{7/2}}+\frac{3(4\pi r^2-2r^2\theta)^2(8\pi\theta-2\theta^2)}{16\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}+\frac{3(8\pi r-4r\theta)(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{3r^2(8\pi r\theta-2r\theta^2)^2}{8\pi(4\pi r^2\theta-r^2\theta^2)^{5/2}}-\frac{(8\pi r-4r\theta)^2}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{(8\pi-4\theta)(4\pi r^2-2r^2\theta)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r^2(8\pi\theta-2\theta^2)}{4\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{r(8\pi r\theta-2r\theta^2)}{\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}-\frac{1}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right),\{r,-13,13\},\{\theta,-13,13\}\right]$$


−10
0
10
10
0
−10
5. × 10^−22
0
−5. × 10^−22
−1. × 10^−21


10
0
−10
−10
0
10
−1. × 10^−21
−5. × 10^−22
0
5. × 10^−22



$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$r := \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}$$

$$\eta == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}$$

$$\text{Solve}\left[r == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}, \theta\right]$$

$$\left\{\left\{\theta \to \pi - \frac{1}{2}\sqrt{\left(4\pi^2 - \frac{1}{6\pi^2 r^2} + \frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4 + 96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}} + \frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)} - \right.\right.$$

$$
\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\right.}
$$

$$
\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/
$$

$$
\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.
$$

$$
\left.\left.\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\Bigg\},
$$

$$
\left\{\theta\to\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.
$$

$$
\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)+
$$

$$
\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\right.}
$$

$$
\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/
$$

$$
\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.
$$

$$
\left.\left.\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\Bigg\},
$$

$$
\left\{\theta\to\pi+\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.
$$

$$
\left.\frac{\left(1+13\,824\,\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)-
$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/\left(4\,\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\theta\to\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/\left(4\,\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\right)}\Bigg\}\Bigg\}$$

$$\textbf{Plot}\Bigg[\Bigg\{\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Big\},$$

$$\Big\{\pi-\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Big\},$$

$$\Big\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Big\},$$

$$\Big\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}$$

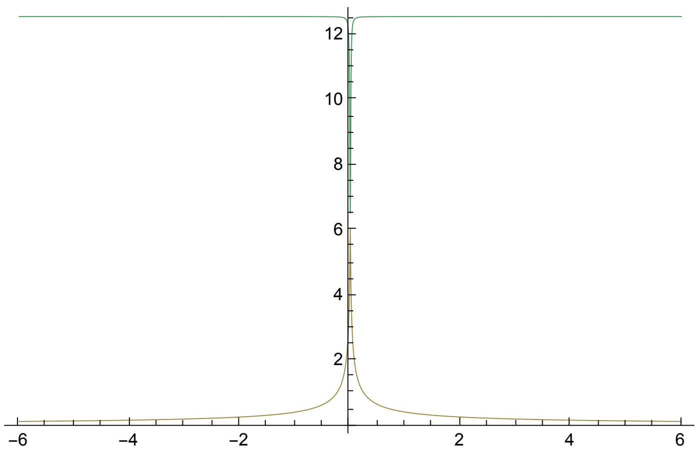
$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\Big\}\Big\},\ \{r,-6,6\}\Big]$$



III. What would the solutions be through acceleration?

When r is constant

$$v = \lambda\,\nu = r\,(1/(1080/\pi)\,\theta) = (1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

(1 / (1080 / π)) (1 / (1080 / π)) (1 / (1080 / π) D[D[(r / θ))), θ], θ] = acceleration of a wavelength, r, of frequency, (1 / (1080 / π) θ). (108)

(1 / (1080 / π)) D[r (1 / (1080 / π) θ), θ]

$$\frac{\pi^2\,r}{1\,166\,400} = \text{velocity}$$

(1 / (1080 / π)) (1 / (1080 / π)) (1 / (1080 / π)) D[D[(r / θ), θ], θ]

$$\frac{\pi^3\,r}{629\,856\,000\,\theta^3}$$

$$(1/(1080/\pi))\,D\left[(1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right], \theta\right]$$

$$\frac{\pi\left(-\frac{(4\,\pi\,r^2 - 2\,r^2\,\theta)^2}{8640\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{r^2}{2160\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)}{1080} = a$$

$$(1/(1080/\pi))\,D\left[(1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right], \theta\right] = \tag{109}$$

acceleration through the height of the cone

$$\text{Solve}\left[\frac{\pi^2 r}{1166400} == (1/(1080/\pi))\, D\left[(1/(1080/\pi))\, D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right], \theta\right], \theta\right]$$

$$\left\{\left\{\theta \to 2\pi - \sqrt{-(-2\pi)^{2/3} + 4\pi^2}\right\}, \left\{\theta \to 2\pi + \sqrt{-(-2\pi)^{2/3} + 4\pi^2}\right\},\right.$$
$$\left\{\theta \to 2\pi - \sqrt{4\pi^2 - (2\pi)^{2/3}}\right\}, \left\{\theta \to 2\pi + \sqrt{4\pi^2 - (2\pi)^{2/3}}\right\},$$
$$\left.\left\{\theta \to 2\pi - \sqrt{4\pi^2 + (-1)^{1/3}(2\pi)^{2/3}}\right\}, \left\{\theta \to 2\pi + \sqrt{4\pi^2 + (-1)^{1/3}(2\pi)^{2/3}}\right\}\right\}$$

$$\frac{\pi^3 r}{629856000\, \theta^3} = \text{acceleration}$$

IV. Defining the Initial Distance through its Geometric Correlates

When r is constant

$$r = \frac{2 * \text{velocity} * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}} = \frac{2 * \left(\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right) * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}} =$$

velocity through the height of the cone when r is constant (110)
(stays always the initial radius of the circle equal to the hypoteneuse of the triangle formed by the height meeting the base of the cone).

$$\text{Solve}\left[\frac{2 * \left(\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right) * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}} == r, \theta\right]$$

$$\{\{\theta \to 3\pi\}\}$$

When r is changing

$$r = \frac{2 * \text{velocity} * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}} =$$

$$\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi\sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} \tag{110}$$

$$\text{velocity} = \lambda \nu = r\,(1/(1080/\pi)\,\theta)$$

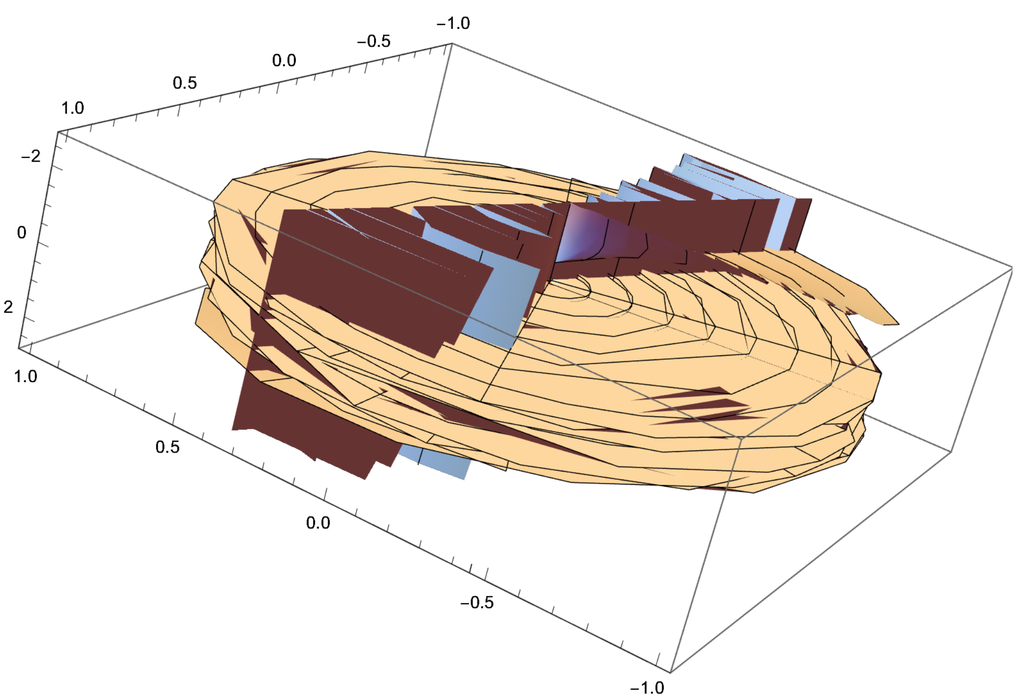
$$\text{Solve}\left[\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==r\,(1/(1080/\pi)\,\theta),\ r\right]$$

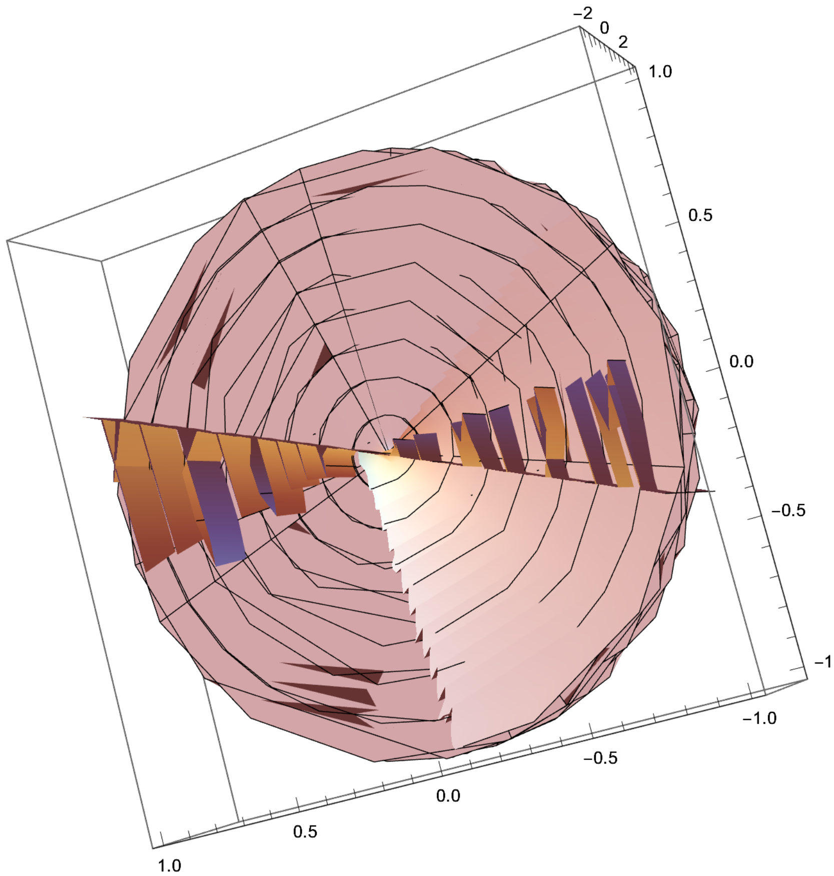
$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\} \tag{111}$$

$$r=\frac{2*\text{velocity}*6\,((180/\pi)\,\theta)*\pi}{\sqrt{4\pi\theta-(\theta)^2}}=$$

$$\frac{2*\left(\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}\right)*6\,((180/\pi)\,\theta)*\pi}{\sqrt{4\pi\theta-(\theta)^2}}$$

$$\text{RevolutionPlot3D}\left[\frac{2*\left(\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}\right)*6\,((180/\pi)\,\theta)*\pi}{\sqrt{4\pi\theta-(\theta)^2}},\ \{r,-1,1\},\ \{\theta,-13,13\}\right]$$

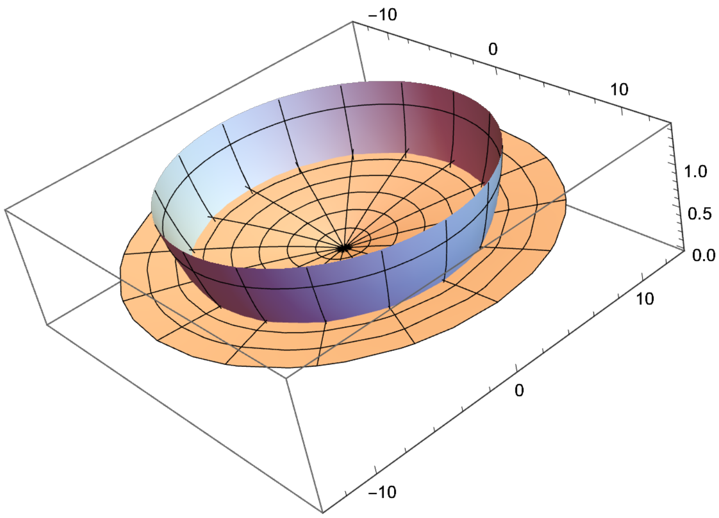


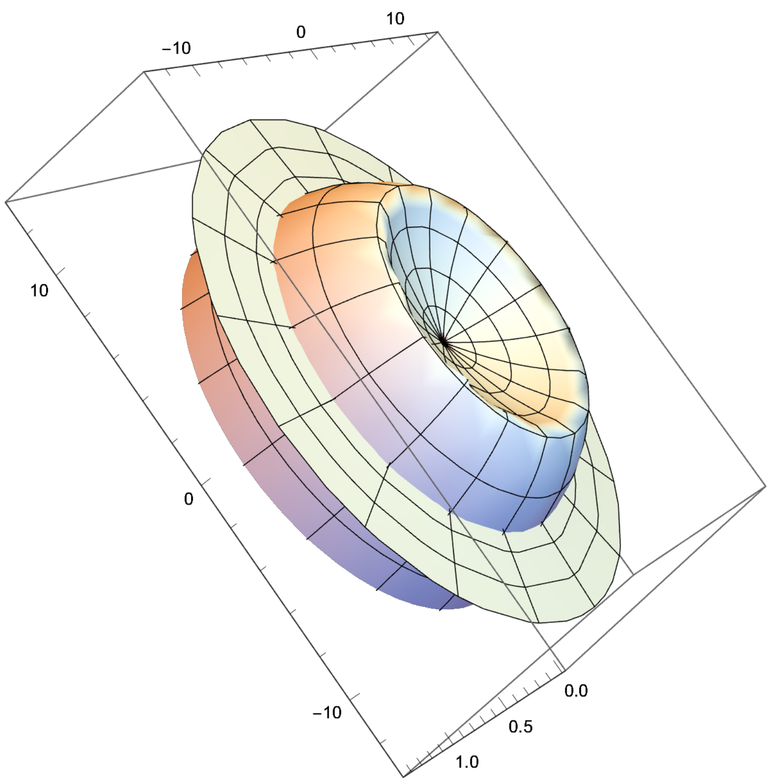


$$\text{Solve}\left[r == \frac{2 * \left(\frac{\pi \left(-\frac{(4 \pi r^2 - 2 r^2 \theta)(8 \pi r \theta - 2 r \theta^2)}{8 \pi (4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8 \pi r - 4 r \theta}{4 \pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right)}{1080}\right) * 6 \left(\left(180 / \pi\right) \theta\right) * \pi}{\sqrt{4 \pi \theta - (\theta)^2}}, r\right]$$

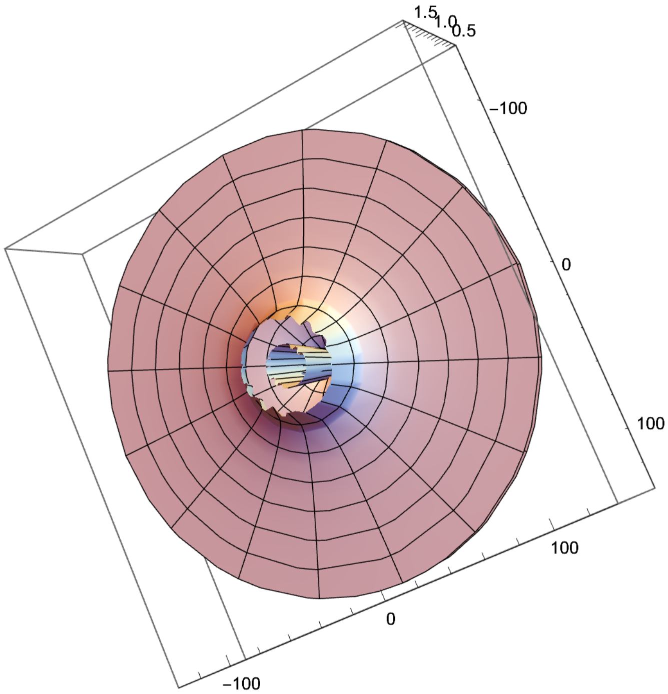
$$\left\{\left\{r \to -\sqrt{1 + \frac{4 \pi^2}{(4 \pi - \theta)^2} - \frac{4 \pi}{4 \pi - \theta}}\right\}, \left\{r \to \sqrt{1 + \frac{4 \pi^2}{(4 \pi - \theta)^2} - \frac{4 \pi}{4 \pi - \theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -13,\ 13\}\right]$$

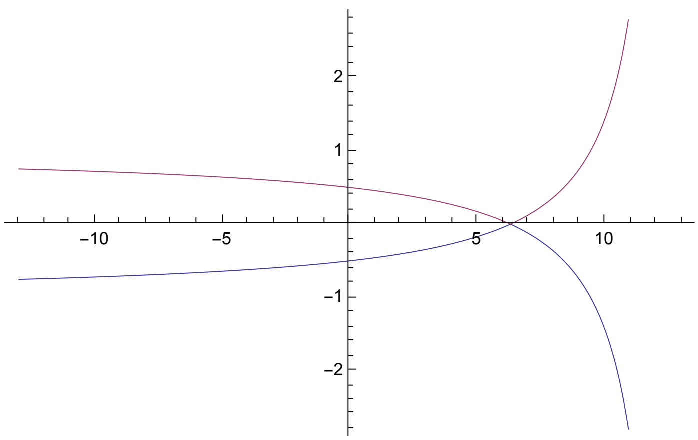




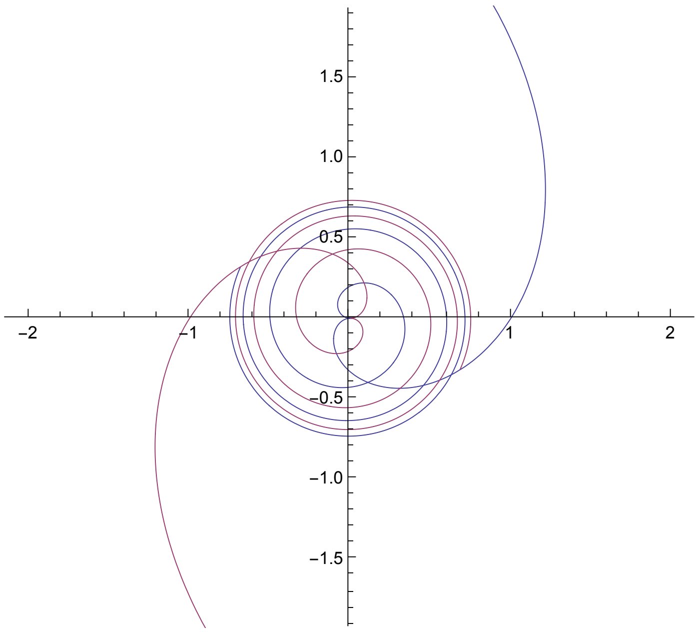
$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -130,\ 130\}\right]$$



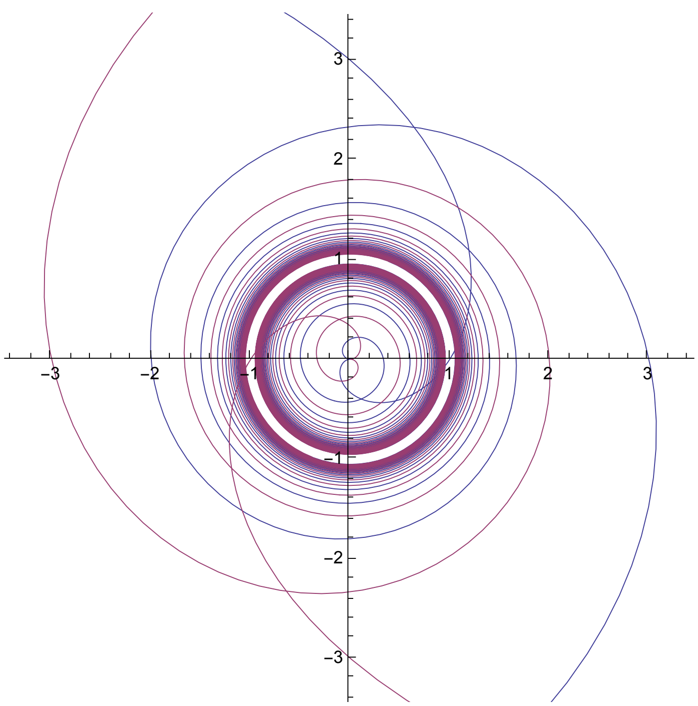
$$\text{Plot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



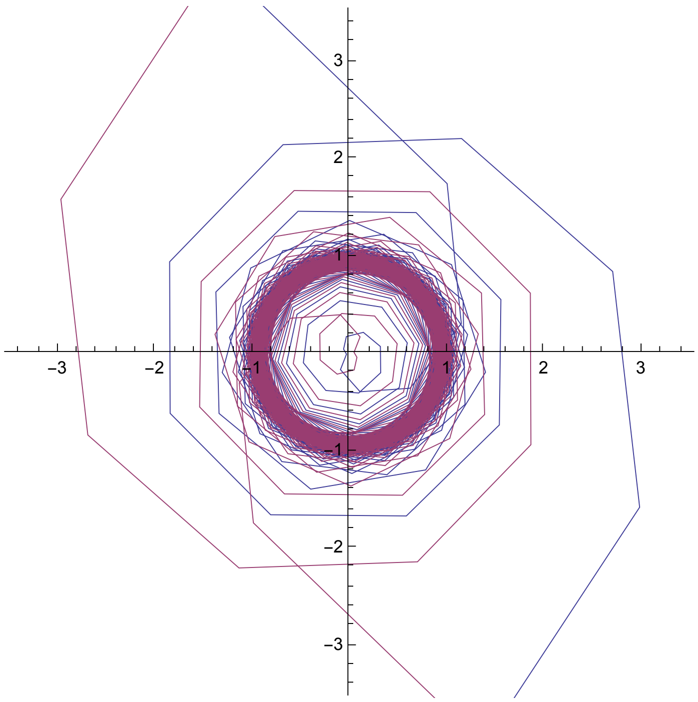
$$\text{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



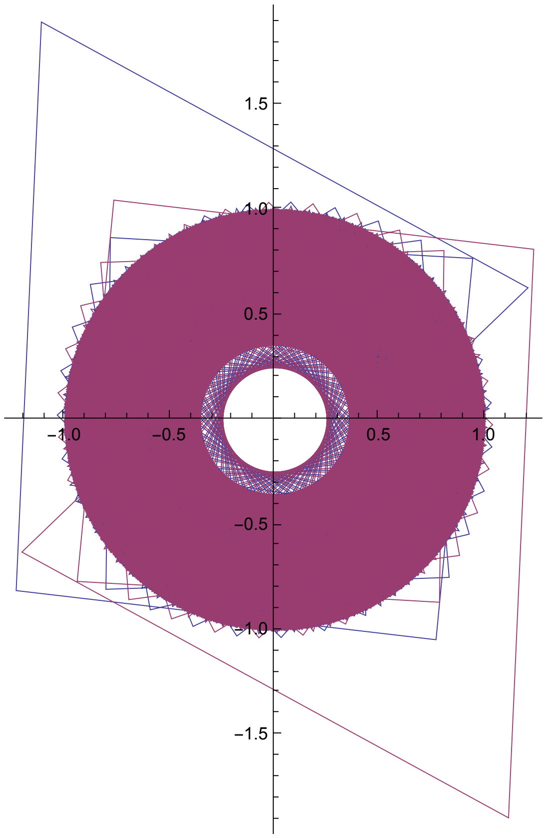
$$\text{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -130,\ 130\}\right]$$



$$\text{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -1300,\ 1300\}\right]$$



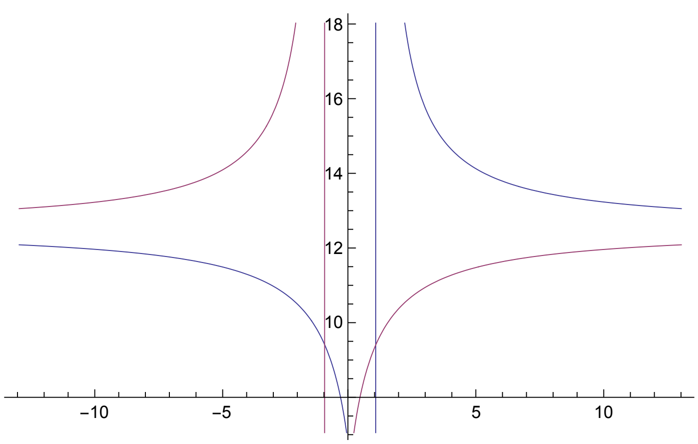
$$\text{PolarPlot}\left[\left\{-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \{\theta,\ -13\,000,\ 13\,000\}\right]$$



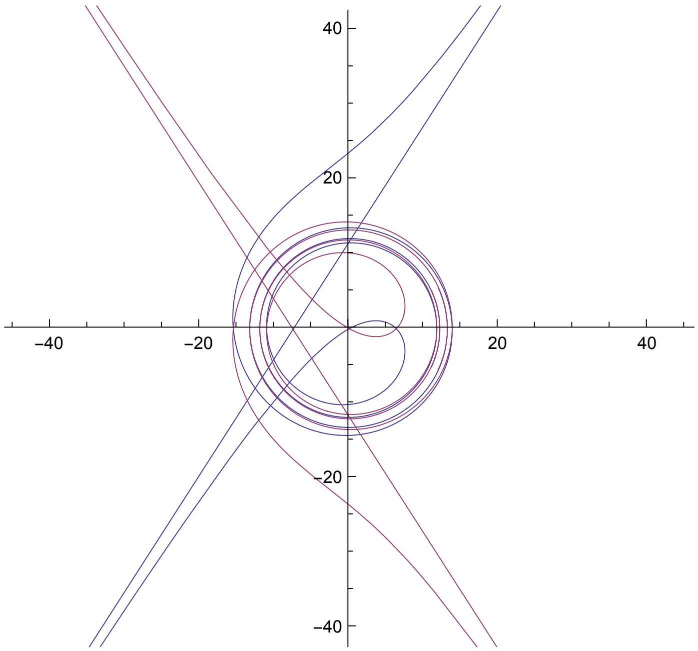
$$\text{Solve}\left[r == \sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,(-\pi+2\,\pi\,r)}{-1+r}\right\},\ \left\{\theta \to \frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\}\right\}$$

$$\text{Plot}\left[\left\{\frac{2\,(-\pi+2\,\pi\,r)}{-1+r},\ \frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\},\ \{r,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\left\{\frac{2\,(-\pi+2\,\pi\,r)}{-1+r},\ \frac{2\,(\pi+2\,\pi\,r)}{1+r}\right\},\ \{r,\ -13,\ 13\}\right]$$



V. Dealing with n

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$v = \lambda\,\nu = r\,(1/(1080/\pi)\,\theta) = ((1/(1080/\pi))\,D[\eta,\,\theta]) = 1/(1080/\pi))\;D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,\theta\right] \quad (112)$$

The velocity of η is equal to the first derivative of η with respect to time. The constant (1/(1080/π)) is taken out of the equation in order to perform the derivative.

$$(1/(1080/\pi))\;D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$v = \lambda * \nu$$

$$\text{Solve}\left[m\, c\,^\wedge 2 == \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\; n\,(1/(1080/\pi)\,\theta),\, n\right]$$

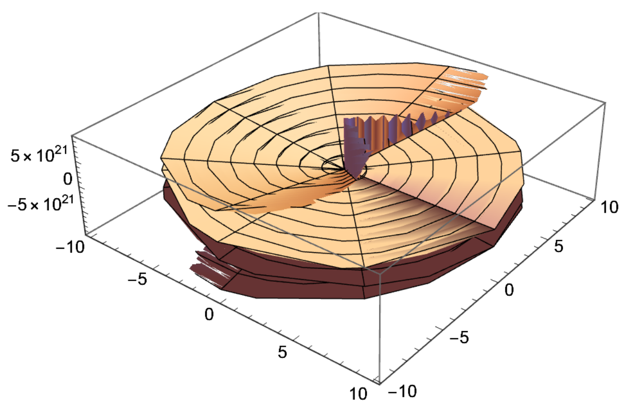
$$\left\{\left\{n \to \frac{1080\, c^2\, m}{\pi\, \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\;\theta}\right\}\right\}$$

```
c := (2.99792458 * 10^8)
```

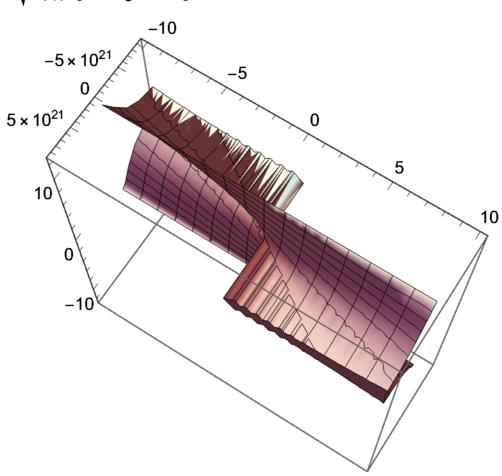
$$\text{Solve}\left[m\, c\,^\wedge 2 == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\,\sqrt{\theta}}\; n\,(1/(1080/\pi)\,\theta),\, n\right]$$

$$\left\{\left\{n \to \frac{4320\, c^2\, m}{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{4320\, c^2\, m}{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}},\, \{m, -10, 10\},\, \{\theta, -4\pi, 4\pi\}\right]$$



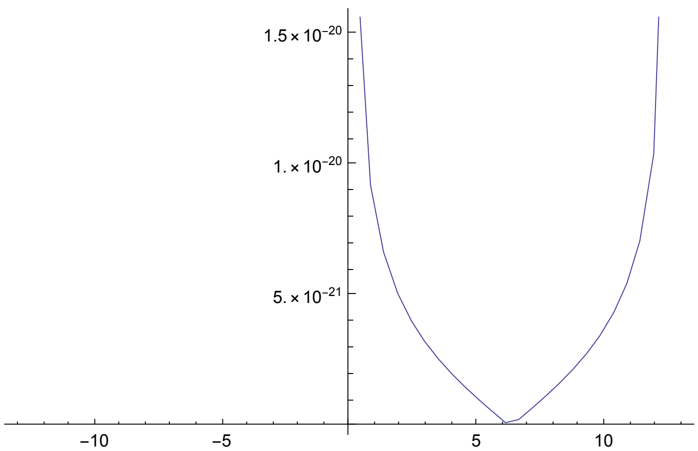
$$\text{Plot3D}\left[\frac{4320\, c^2\, m}{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}},\, \{m, -10, 10\},\, \{\theta, -4\pi, 4\pi\}\right]$$



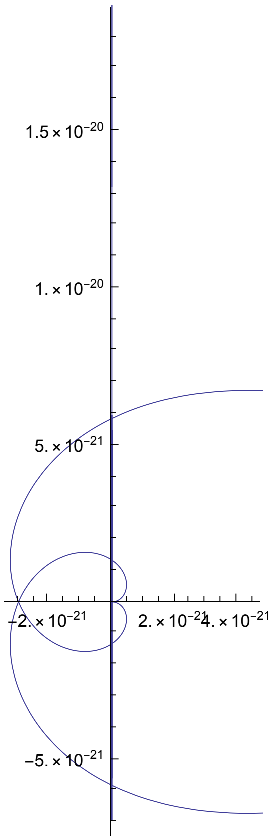
$$\text{Solve}\left[m\,c^{\wedge}2 == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\;(1/(1080/\pi)\,\theta),\,m\right]$$

$$\left\{\left\{m\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}}{4320\,c^2}\right\}\right\}$$

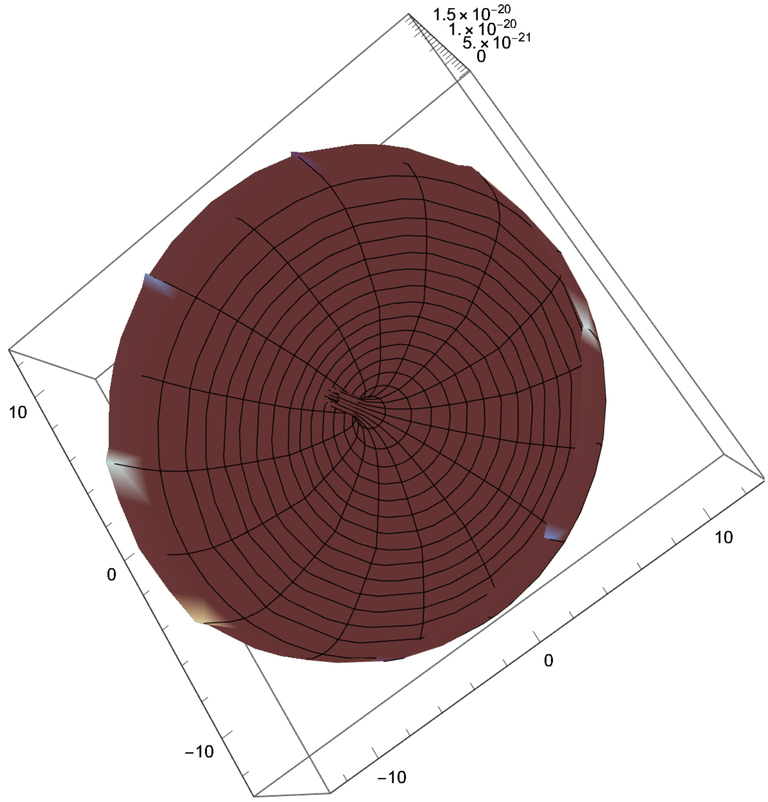
$$\text{Plot}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}}{4320\,c^2},\,\{\theta,-13,13\}\right]$$



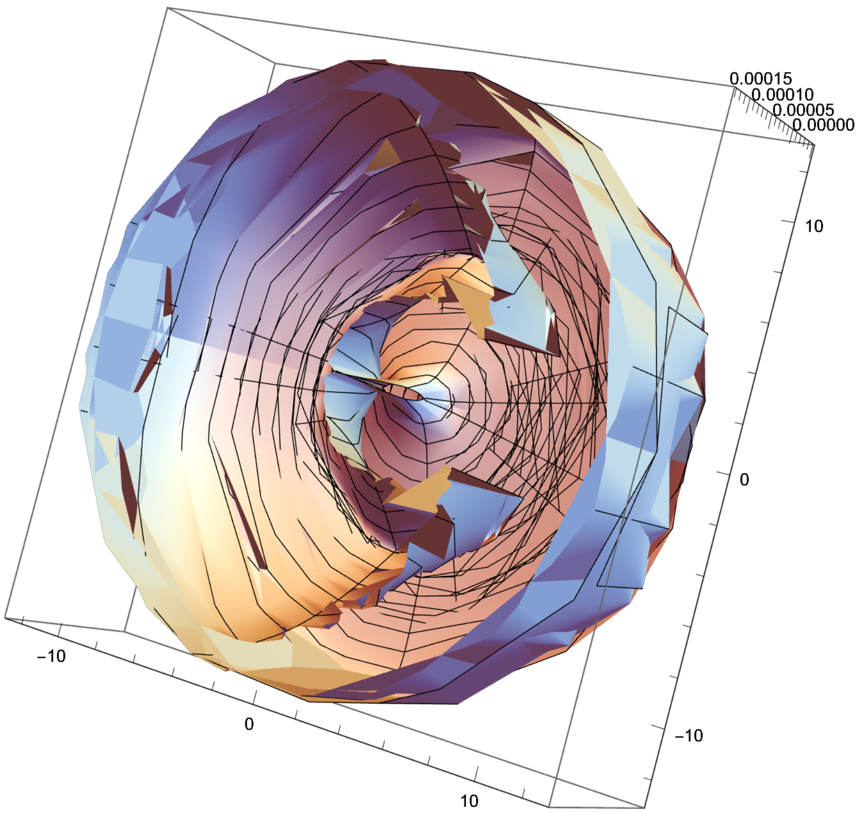
$$\text{PolarPlot}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{\theta}}{4320\,c^2},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}{4320\,c^2},\{\theta,-13,13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}{4320\ c^2}, \{\theta, -13, 13\}, \{c, -13, 13\}\right]$$



$$\left\{\left\{r \to -\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}, \left\{r \to \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\ \sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\ \sqrt{\theta}}\right\}\right\}$$

```
Solve[m c^2 == r n (1 / (1080 / π) θ), n]
```

$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320\ \sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\ n\ (1 / (1080 / \pi)\ \theta),\ n\right]$$

$$\left\{\left\{n \to \frac{r\ (2\pi-\theta)}{2\pi\theta\ \sqrt{r^2\ (4\pi-\theta)\ \theta}}\right\}\right\}$$

$$\left\{\left\{\eta \to \frac{135\ \sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}\right\}\right\}$$

$$\mathbf{D}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\theta\right]$$

$$\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ (4\pi-2\theta)}{2\pi^3\sqrt{\theta}\ \sqrt{4\pi\theta-\theta^2}}-\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{2\pi^3\theta^{3/2}}+\frac{135\left(\frac{1}{(4\pi-\theta)^2}-\frac{8\pi}{\theta^3}+\frac{3}{\theta^2}\right)\sqrt{4\pi\theta-\theta^2}}{2\pi^3\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}$$

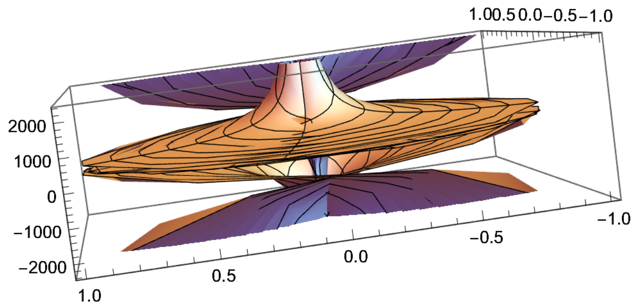
$$\mathbf{Solve}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ (4\pi-2\theta)}{2\pi^3\sqrt{\theta}\ \sqrt{4\pi\theta-\theta^2}}-\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{2\pi^3\theta^{3/2}}+\frac{135\left(\frac{1}{(4\pi-\theta)^2}-\frac{8\pi}{\theta^3}+\frac{3}{\theta^2}\right)\sqrt{4\pi\theta-\theta^2}}{2\pi^3\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}==\mathrm{r\ n}\ (1/(1080/\pi)\ \theta),\ \mathrm{n}\right]$$

$$\left\{\left\{n\to-\frac{1}{\pi\,r\,\theta}1080\left(-\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ (4\pi-2\theta)}{2\pi^3\sqrt{\theta}\ \sqrt{4\pi\theta-\theta^2}}+\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{2\pi^3\theta^{3/2}}-\frac{135\left(\frac{1}{(4\pi-\theta)^2}-\frac{8\pi}{\theta^3}+\frac{3}{\theta^2}\right)\sqrt{4\pi\theta-\theta^2}}{2\pi^3\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}\right)\right\}\right\}$$

$$\mathbf{Solve}\left[-\frac{1}{\pi\,r\,\theta}1080\left(-\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ (4\pi-2\theta)}{2\pi^3\sqrt{\theta}\ \sqrt{4\pi\theta-\theta^2}}+\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{2\pi^3\theta^{3/2}}-\frac{135\left(\frac{1}{(4\pi-\theta)^2}-\frac{8\pi}{\theta^3}+\frac{3}{\theta^2}\right)\sqrt{4\pi\theta-\theta^2}}{2\pi^3\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{\theta}}\right)==\frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}},\ r\right]$$

$$\left\{\left\{r\to-\frac{1\,166\,400\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}}{\pi^2\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}\right\},\left\{r\to\frac{1\,166\,400\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}}{\pi^2\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}\right\}\right\}$$

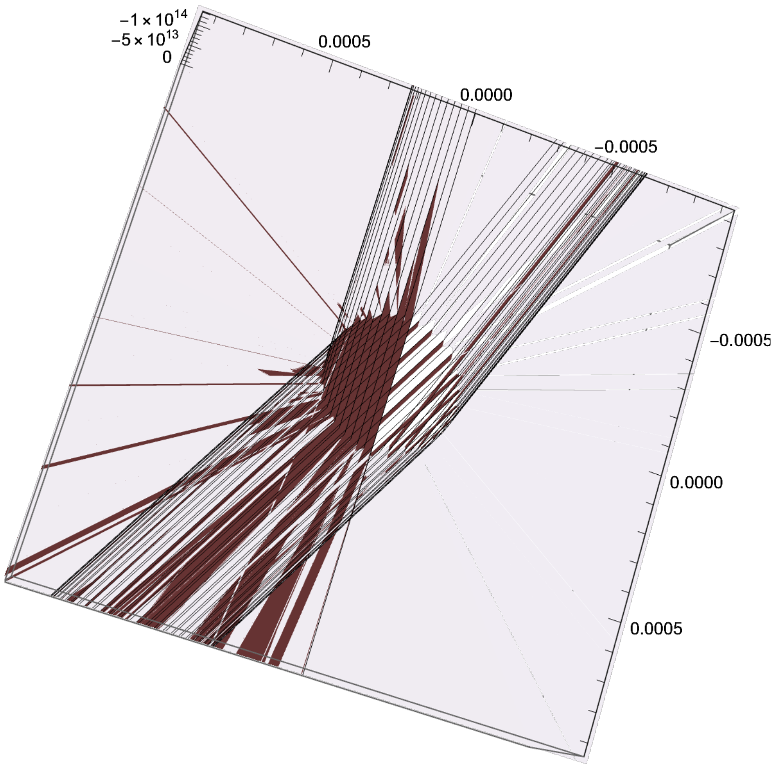
$$\text{RevolutionPlot3D}\Big[-\frac{1}{\pi\, r\, \theta}\, 1080 \left(-\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\,(4\pi-2\theta)}{2\pi^3\sqrt{\theta}\sqrt{4\pi\theta-\theta^2}}+\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{2\pi^3\theta^{3/2}}-\frac{135\left(\frac{1}{(4\pi-\theta)^2}-\frac{8\pi}{\theta^3}+\frac{3}{\theta^2}\right)\sqrt{4\pi\theta-\theta^2}}{2\pi^3\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{\theta}}\right), \{r, -1, 1\}, \{\theta, -13, 13\}\Big]$$



$$\text{D}\Big[\frac{1166400\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}}{\pi^2\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}, \theta\Big]$$

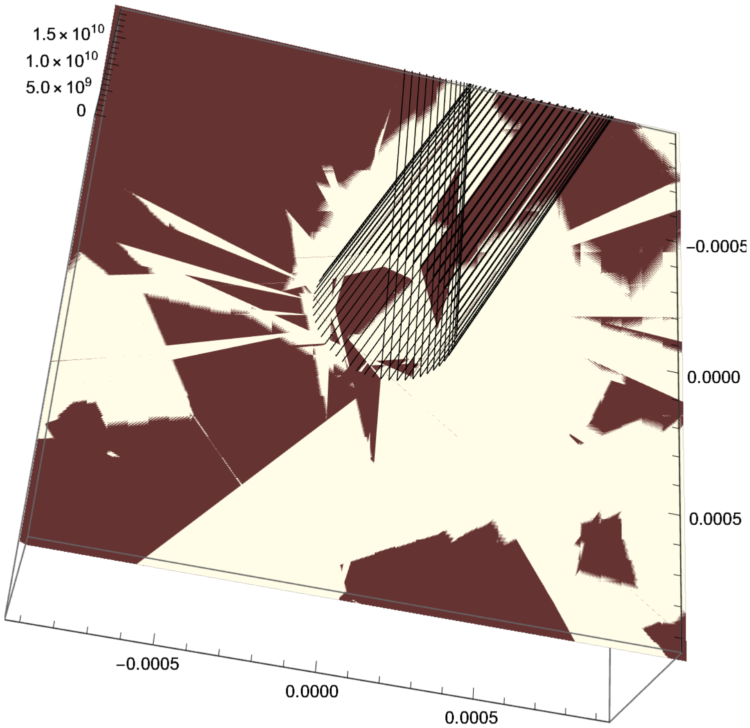
$$-\frac{583200\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}\left(-8\pi^3+24\pi^2\theta-18\pi\theta^2+4\theta^3\right)}{\pi^2\left(-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4\right)^{3/2}}+\frac{583200\left(\frac{16\pi^2}{\theta^3}-\frac{6\pi}{\theta^2}\right)}{\pi^2\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}$$

$$\text{RevolutionPlot3D}\left[-\frac{583\,200\,\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}\,\left(-8\pi^3+24\pi^2\theta-18\pi\theta^2+4\theta^3\right)}{\pi^2\left(-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4\right)^{3/2}}+\frac{583\,200\left(\frac{16\pi^2}{\theta^3}-\frac{6\pi}{\theta^2}\right)}{\pi^2\,\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}\,\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}},\{\theta,-13,13\}\right]$$

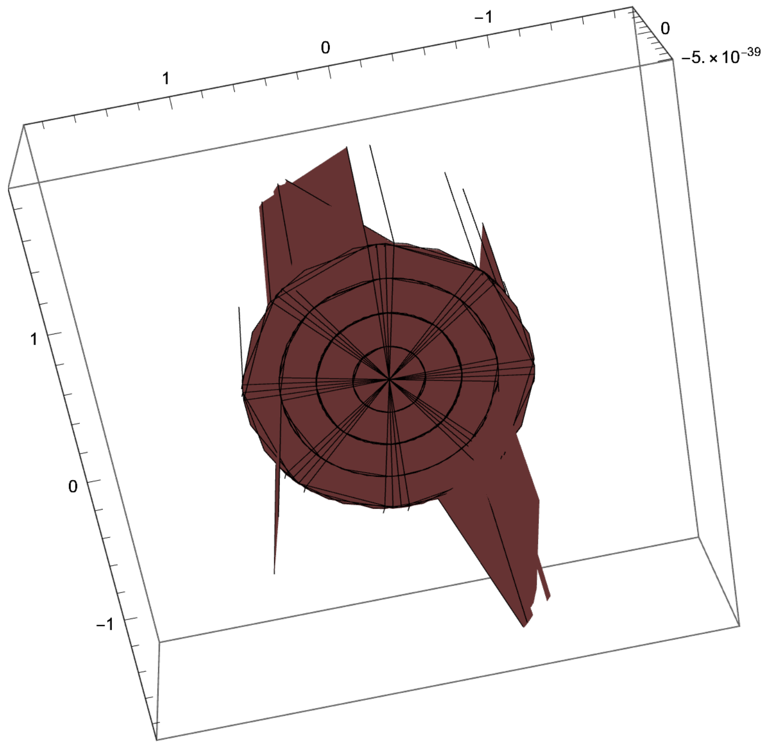


$$\left\{\left\{r\to-\frac{1\,166\,400\,\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}}{\pi^2\,\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}\right\},\left\{r\to\frac{1\,166\,400\,\sqrt{-1-\frac{8\pi^2}{\theta^2}+\frac{6\pi}{\theta}}}{\pi^2\,\sqrt{-8\pi^3\theta+12\pi^2\theta^2-6\pi\theta^3+\theta^4}}\right\}\right\}$$

$$\texttt{RevolutionPlot3D}\left[\frac{1\,166\,400\,\sqrt{-1-\frac{8\,\pi^2}{\theta^2}+\frac{6\,\pi}{\theta}}}{\pi^2\,\sqrt{-8\,\pi^3\,\theta+12\,\pi^2\,\theta^2-6\,\pi\,\theta^3+\theta^4}},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{r\text{^}1155\ (2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{r,-13,13\},\ \{\theta,-13,13\}\right]$$



Options for assigning functions that are expressions of r.

From the velocity when r is changing :

$$\left\{\left\{r\to-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\ \left\{r\to\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\theta,-13,13\}\right]$$

$$\left\{\left\{r\to-\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\},\ \left\{r\to\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\}\right\}$$

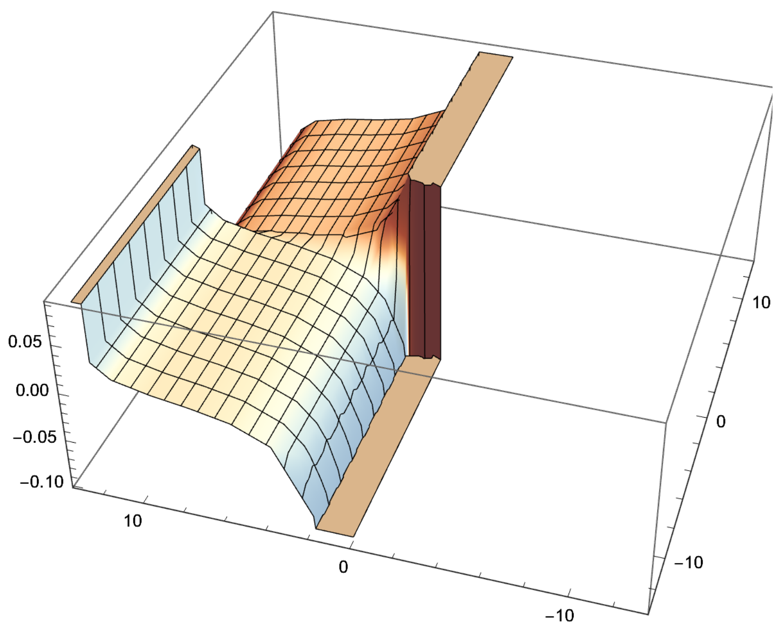
$$\left\{\left\{\eta\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right\}\right\}$$

$$n = \frac{r\,(2\pi-\theta)}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}} =$$

$$\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\,(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}} = \frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\,(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}} =$$

$$\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\,(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}} = \frac{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}}$$

$$\text{Plot3D}\left[\frac{r\,(2\pi-\theta)}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}},\ \{r, -13, 13\},\ \{\theta, -13, 13\}\right]$$



$$\texttt{PolarPlot}\Bigg[\Bigg\{\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\;(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}},$$

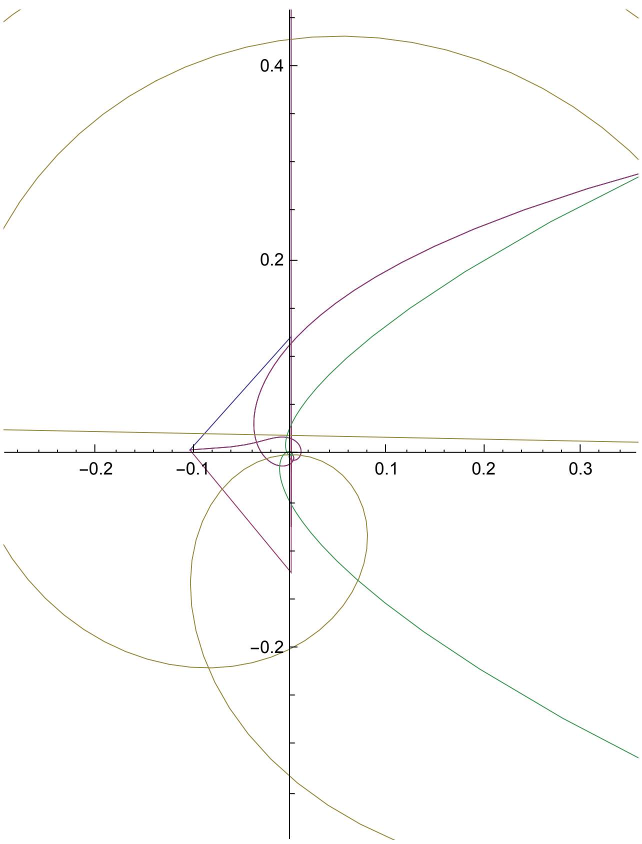
$$\frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\;(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}},\;\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\;(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}},$$

$$\frac{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}}\Bigg\},\;\{\theta,\,-130,\,130\}\Bigg]$$

$$\text{PolarPlot}\Bigg[\Bigg\{\frac{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\;(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)^2\,(4\,\pi-\theta)\,\theta}},$$

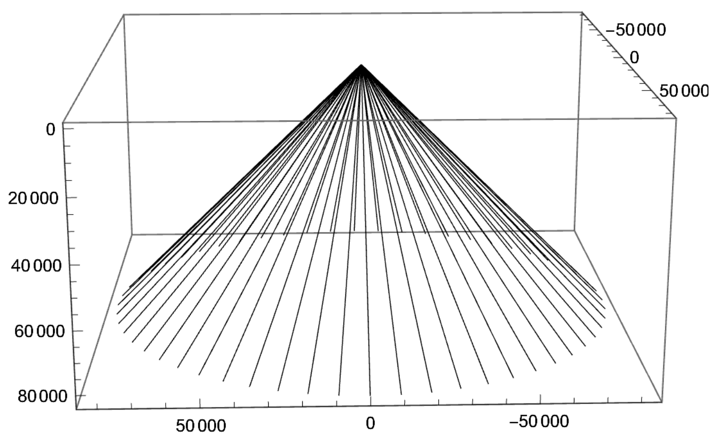
$$\frac{\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\;(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2\,(4\,\pi-\theta)\,\theta}},\;\frac{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\;(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2\,(4\,\pi-\theta)\,\theta}},$$

$$\frac{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\;(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)^2\,(4\,\pi-\theta)\,\theta}}\Bigg\},\;\{\theta,\,-130,\,130\}\Bigg]$$



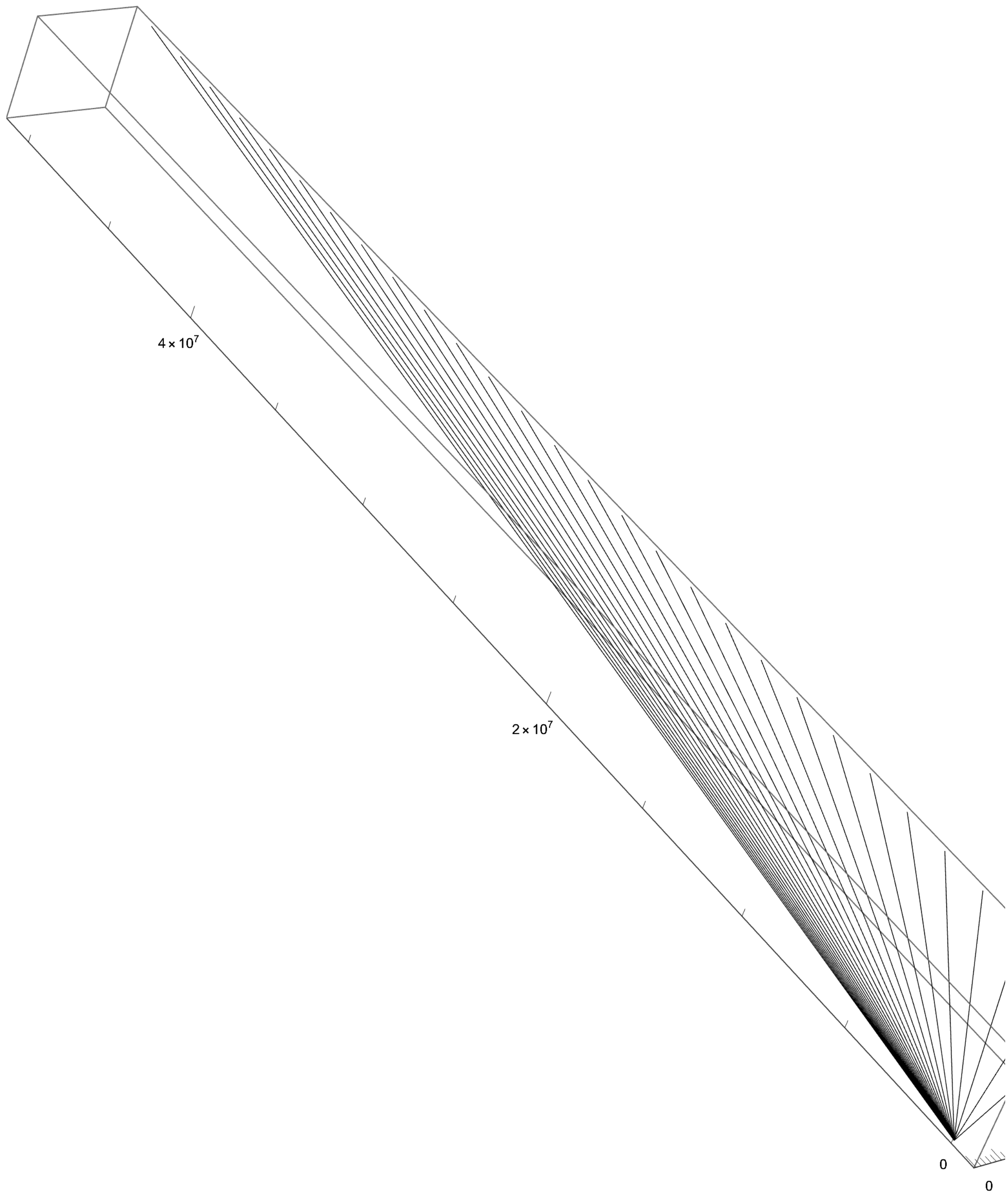
$$\text{RevolutionPlot3D}\left[\left\{\frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\theta}},\right.\right.$$

$$\left.\left.\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\,(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\theta}}\right\},\{\theta,-13,13\}\right]$$



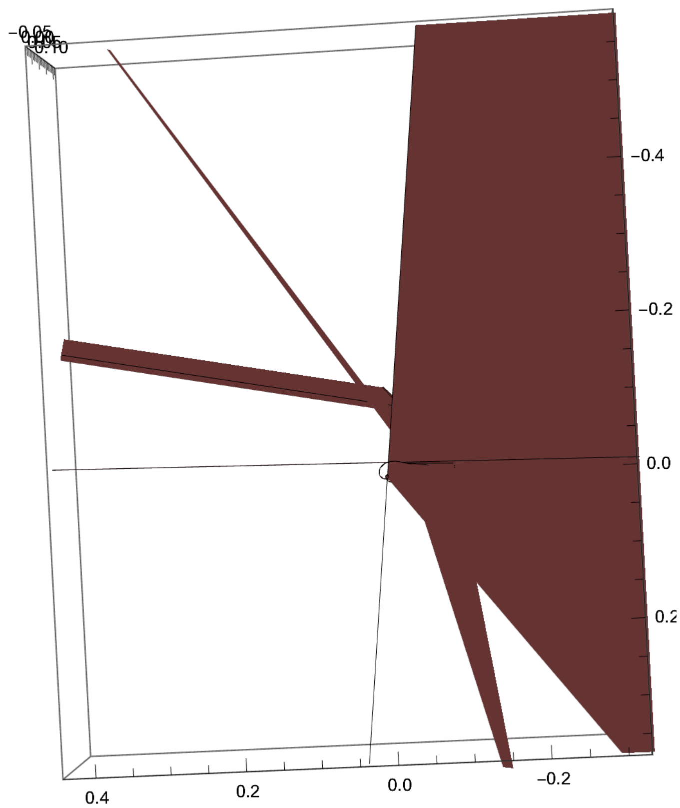
$$\text{RevolutionPlot3D}\left[\left\{\frac{r\wedge 2\,(2\pi-\theta)}{2\pi\theta\sqrt{r^2(4\pi-\theta)\theta}},\frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\theta}},\right.\right.$$

$$\left.\left.\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\,(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\theta}}\right\},\{r,-13,13\},\{\theta,-1,1\}\right]$$



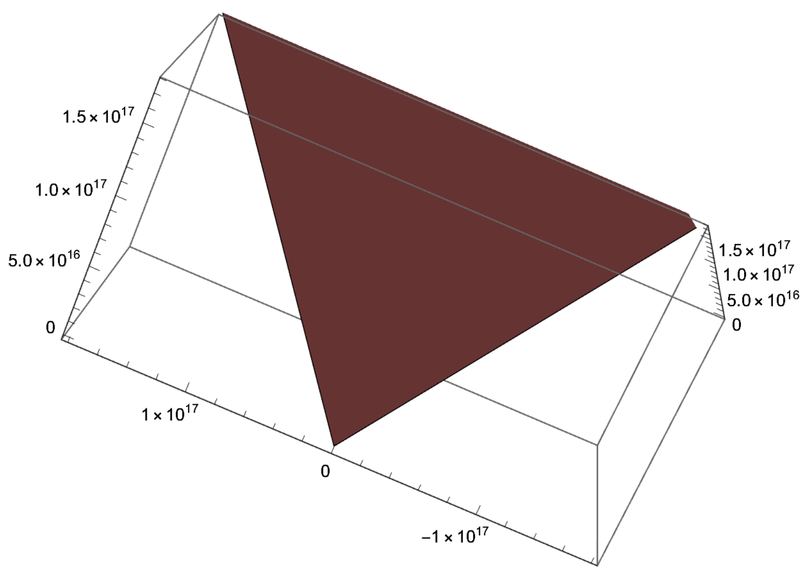
4 × 10^7
2 × 10^7
0
0

$$\texttt{RevolutionPlot3D}\left[\left\{\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\;(2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2(4\pi-\theta)\,\theta}},\ \frac{r\,(2\pi-\theta)}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}},\ \frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\;(2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2(4\pi-\theta)\,\theta}}\right\},\ \{r,-13,13\},\ \{\theta,-13,13\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\ (2\pi-\theta)}{2\pi\theta\sqrt{\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)^2 (4\pi-\theta)\ \theta}},\ \frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}},\right.\right.$$

$$\left.\left.\frac{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\ (2\pi-\theta)}{2\pi\theta\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2 (4\pi-\theta)\ \theta}}\right\},\ \{r,\ -13\,000,\ 13\,000\},\ \{\theta,\ -13\,000,\ 13\,000\}\right]$$



$$\frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}}$$

$$\text{Solve}\left[\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}} == r\ n\ (1/(1080/\pi)\ \theta),\ n\right]$$

$$\left\{\left\{n\to\frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}}\right\}\right\}$$

$$\text{D}\left[\frac{r\ (2\pi-\theta)}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}},\ \theta\right]$$

$$-\frac{r\ (2\pi-\theta)}{2\pi\theta^2\sqrt{r^2\ (4\pi-\theta)\ \theta}}-\frac{r}{2\pi\theta\sqrt{r^2\ (4\pi-\theta)\ \theta}}-\frac{r\ (2\pi-\theta)\ \left(r^2\ (4\pi-\theta)-r^2\theta\right)}{4\pi\theta\left(r^2\ (4\pi-\theta)\ \theta\right)^{3/2}}$$

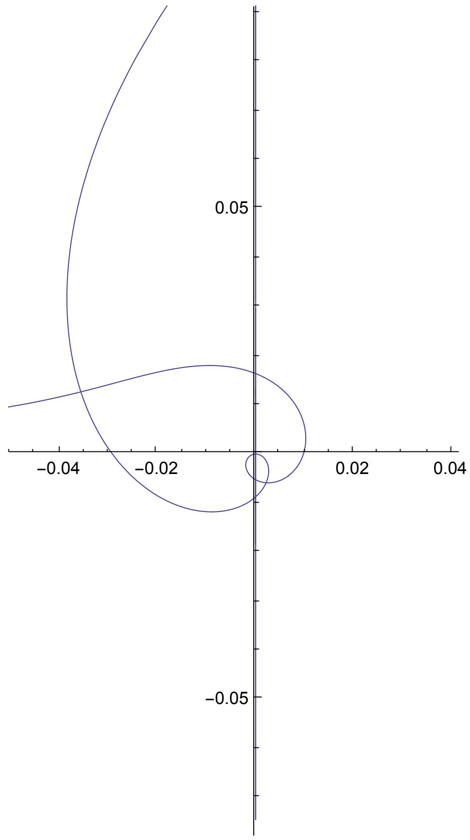
$$\text{Solve}\left[-\frac{r\,(2\pi-\theta)}{2\pi\theta^2\sqrt{r^2\,(4\pi-\theta)\,\theta}}-\frac{r}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}}-\frac{r\,(2\pi-\theta)\left(r^2\,(4\pi-\theta)-r^2\theta\right)}{4\pi\theta\left(r^2\,(4\pi-\theta)\,\theta\right)^{3/2}}==r\,(1/(1080/\pi)\,\theta),\ r\right]$$

$$\left\{\left\{r\to-\frac{135\sqrt{\frac{1}{(4\pi-\theta)^3}+\frac{36\pi}{\theta^4}-\frac{9}{\theta^3}+\frac{6}{(4\pi-\theta)\,\theta^2}}}{\pi^2\,\theta^{3/2}}\right\},\left\{r\to\frac{135\sqrt{\frac{1}{(4\pi-\theta)^3}+\frac{36\pi}{\theta^4}-\frac{9}{\theta^3}+\frac{6}{(4\pi-\theta)\,\theta^2}}}{\pi^2\,\theta^{3/2}}\right\}\right\}$$

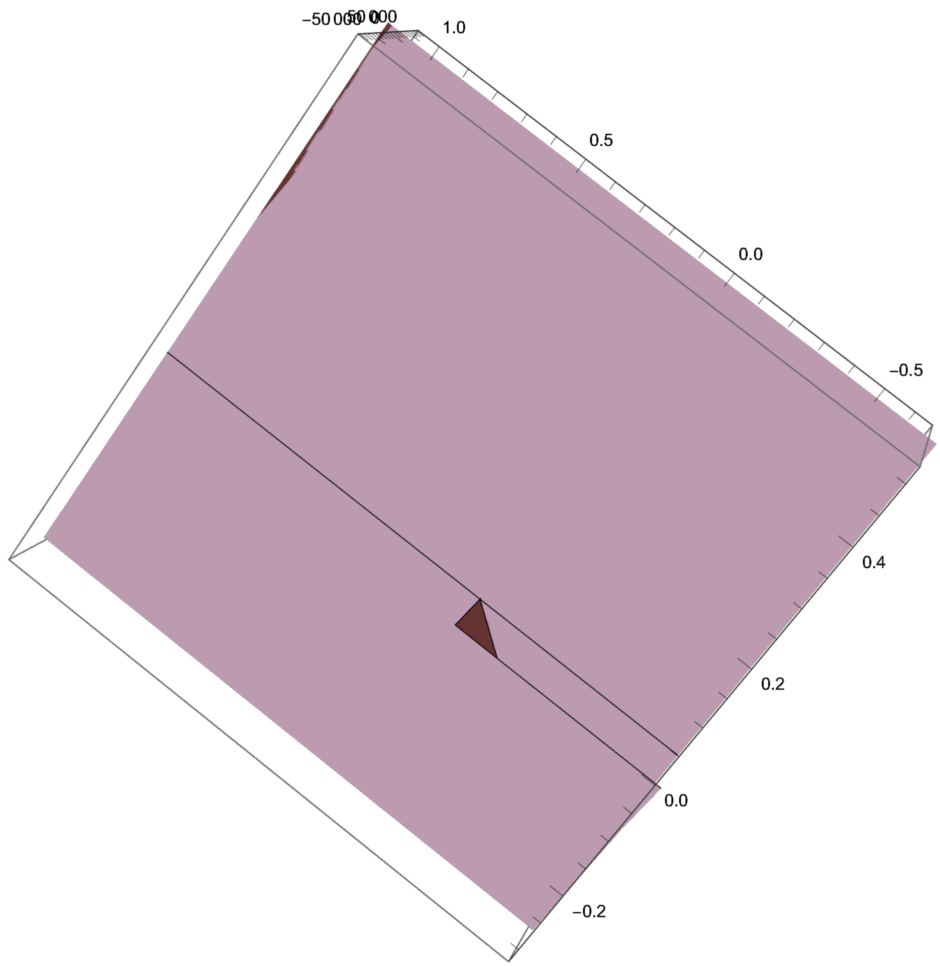
$$\text{Solve}\left[-\frac{r\,(2\pi-\theta)}{2\pi\theta^2\sqrt{r^2\,(4\pi-\theta)\,\theta}}-\frac{r}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}}-\frac{r\,(2\pi-\theta)\left(r^2\,(4\pi-\theta)-r^2\theta\right)}{4\pi\theta\left(r^2\,(4\pi-\theta)\,\theta\right)^{3/2}}==r\,(1/(1080/\pi)\,\theta),\ \theta\right]$$

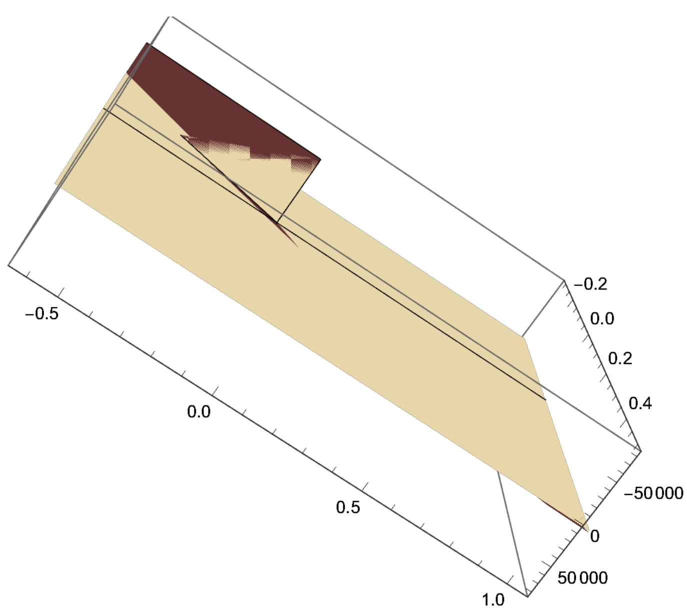
$$\{\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,1]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,2]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,3]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,4]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,5]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,6]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,7]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,8]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,9]\},$$
$$\{\theta\to\text{Root}[41\,990\,400\,\pi^4-41\,990\,400\,\pi^3\,\#1+17\,496\,000\,\pi^2\,\#1^2-3\,499\,200\,\pi\,\#1^3+291\,600\,\#1^4-64\,\pi^7\,r^2\,\#1^7+48\,\pi^6\,r^2\,\#1^8-12\,\pi^5\,r^2\,\#1^9+\pi^4\,r^2\,\#1^{10}\,\&,\,10]\}\}$$

$$\text{PolarPlot}\left[\frac{(1)\ (2\,\pi - \theta)}{2\,\pi\,\theta\,\sqrt{(1)^2\ (4\,\pi - \theta)\ \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\,\{r,\,-13,\,13\},\,\{\theta,\,-13,\,13\}\right]$$





VI. Solving for r_1

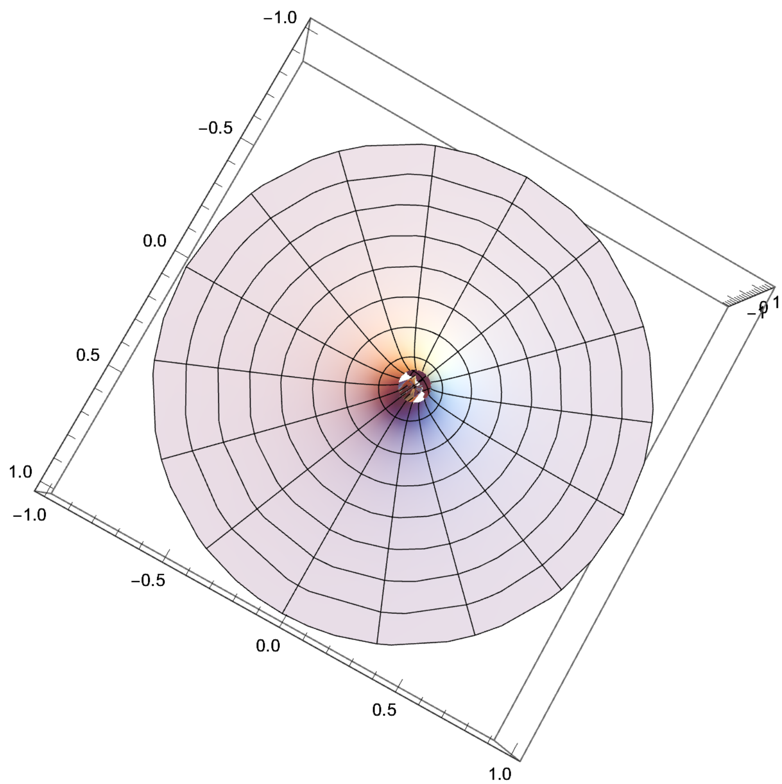
$$r_1 \to \sqrt{r^2 - \eta^2}$$

$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\pi\theta - \theta^2}}{8\pi^2\sqrt{\theta}}\right\}\right\}$$

$$\text{Solve}\left[\eta == \frac{\sqrt{\frac{1}{4\pi-\theta} + \frac{4\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\pi\theta - \theta^2}}{8\pi^2\sqrt{\theta}}, \theta\right]$$

$$\left\{\left\{\theta \to -\frac{2\pi}{-1 + 4\pi^2\eta}\right\}, \left\{\theta \to \frac{2\pi}{1 + 4\pi^2\eta}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{2\pi}{1 + 4\pi^2\eta}, \{\eta, -1, 1\}\right]$$



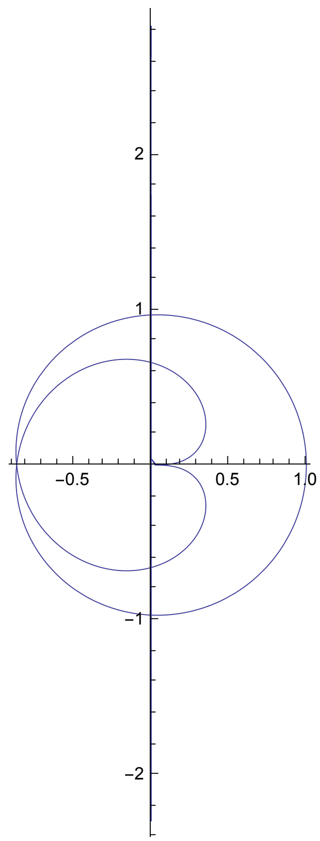
The Constant r

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}\right\}$$

$$\text{Solve}\left[1 == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \eta\right]$$

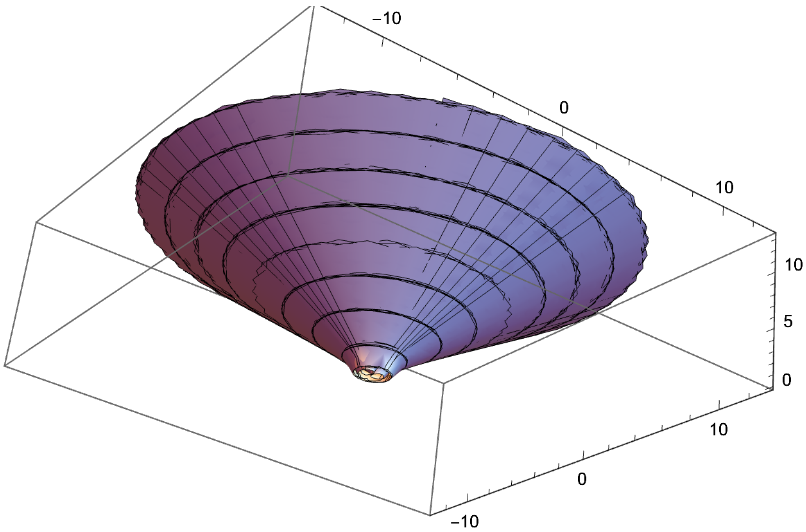
$$\left\{\left\{\eta \to \frac{\sqrt{(4\,\pi - \theta)\ \theta}}{2\,\pi}\right\}\right\}$$

$$\text{PolarPlot}\left[\frac{\sqrt{(4\,\pi - \theta)\ \theta}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$

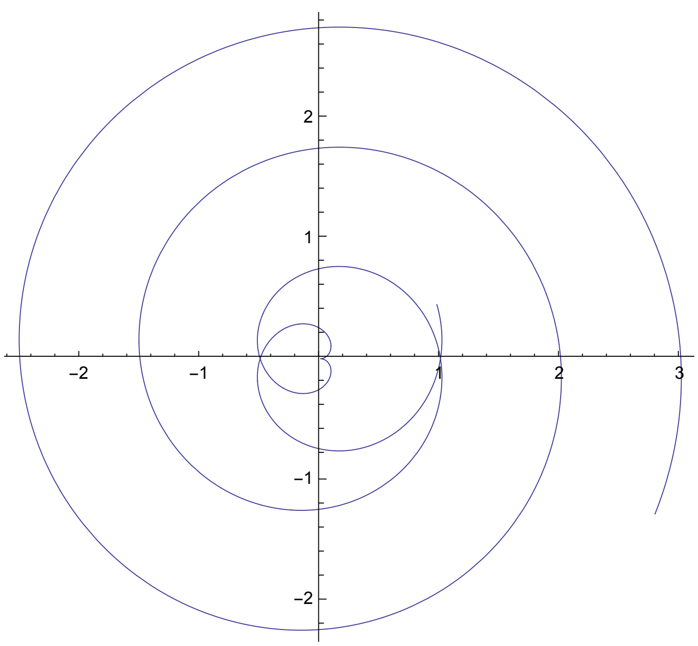


$$\sqrt{r^2 - \eta^2}\ =\ \sqrt{(1)^2 - \left(\frac{\sqrt{(4\,\pi - \theta)\ \theta}}{2\,\pi}\right)^2}$$

$$\text{RevolutionPlot3D}\left[\sqrt{(r)^2 - \left(\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right)^2},\ \{r, -13, 13\},\ \{\theta, -13, 13\}\right]$$



$$\text{PolarPlot}\left[\sqrt{(1)^2 - \left(\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right)^2},\ \{\theta, -13, 13\}\right]$$



The changing r

$$r_1 = \sqrt{r^2 - \eta^2}$$

$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right\}\right\}$$

$$r_1 = \sqrt{r^2-\eta^2} = \sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2} =$$

$$\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2} =$$

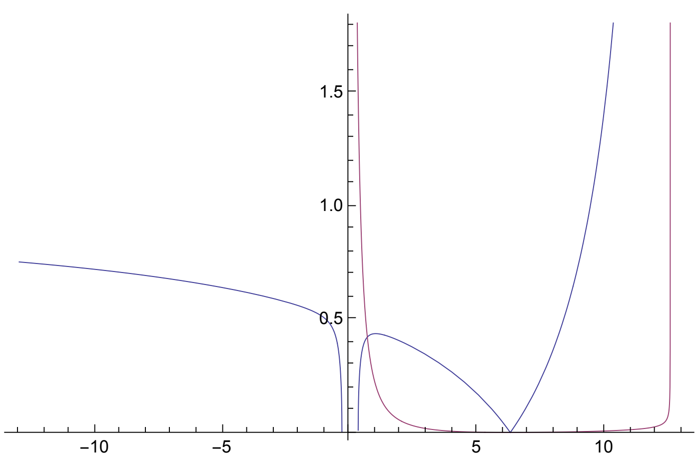
$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}$$

$$\left\{\left\{r \to -\sqrt{1+\frac{4\pi^2}{(4\pi-\Theta)^2}-\frac{4\pi}{4\pi-\Theta}}\right\}, \left\{r \to \sqrt{1+\frac{4\pi^2}{(4\pi-\Theta)^2}-\frac{4\pi}{4\pi-\Theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

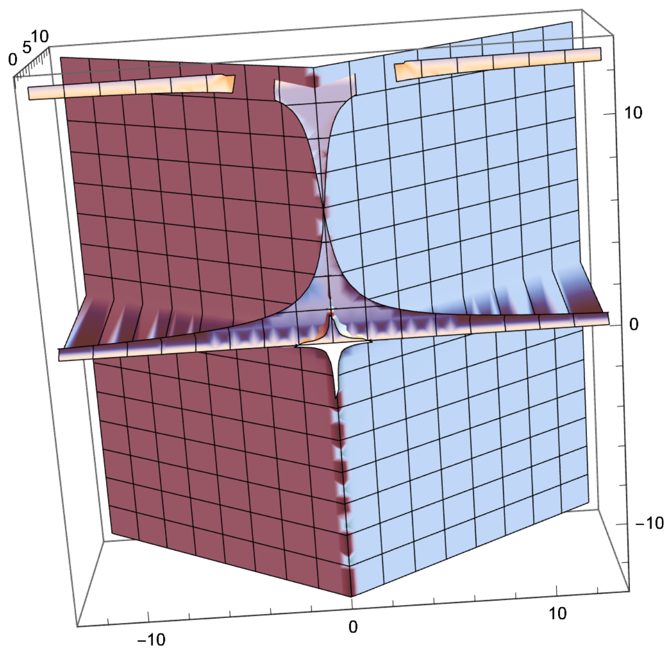
$$\text{Plot}\left[\left\{\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right\}, \{\theta, -13, 13\}\right]$$



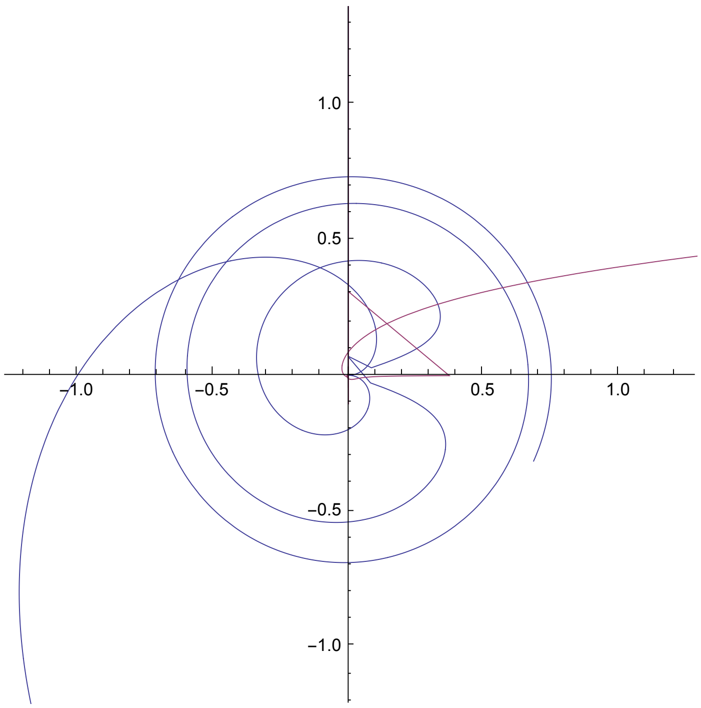
$$\text{Plot3D}\left[\left\{\sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{r\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right\},\right.$$

$$\left.\{\theta,-13,13\},\{r,-13,13\}\right]$$



$$\texttt{PolarPlot}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\;\sqrt{\theta}}\right)^2},\right.\right.$$

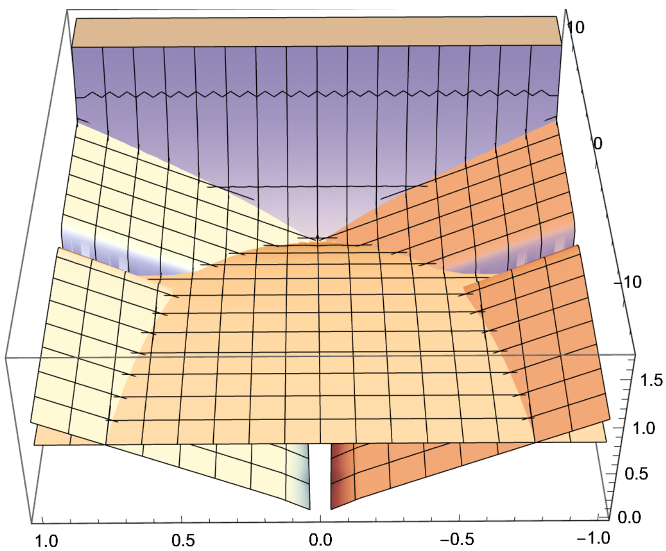
$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\;\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\;\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



This is a platform equation. ©Parker Emmerson 2009

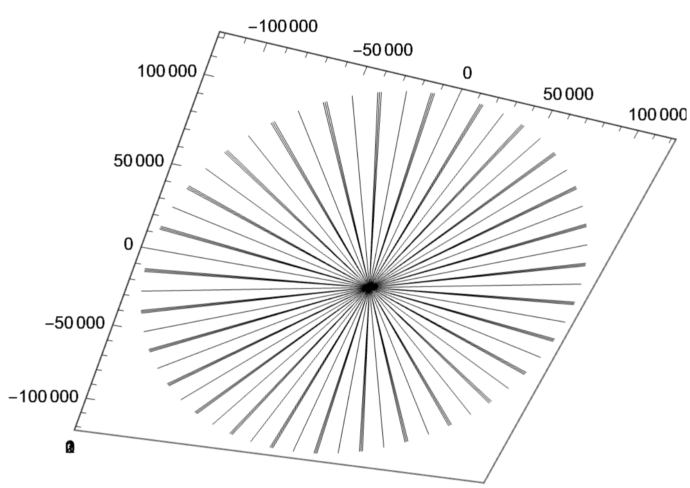
$$\text{Plot3D}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{r\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\,-13,\,13\},\ \{r,\,-1,\,1\}\right]$$



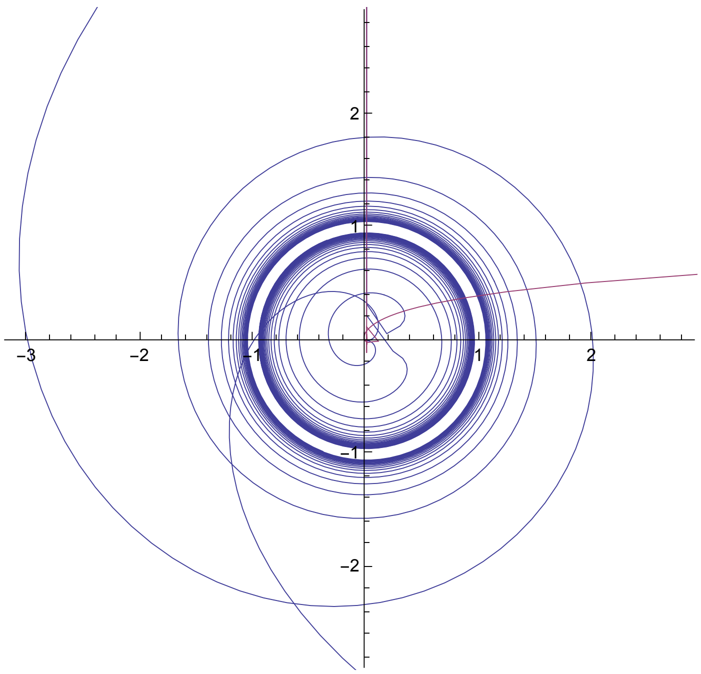
$$\text{RevolutionPlot3D}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\,-13,\,13\}\right]$$



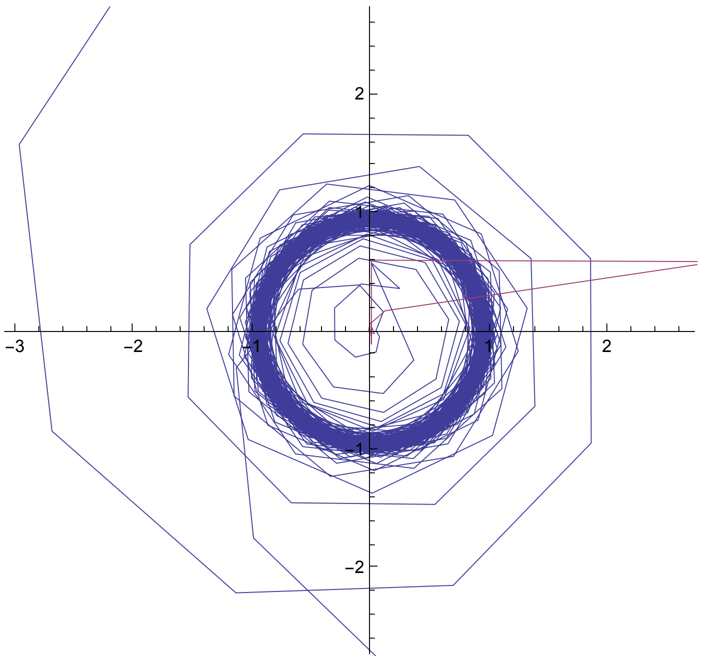
$$\texttt{PolarPlot}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\ -130,\ 130\}\right]$$



$$\texttt{PolarPlot}\left[\left\{\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},\right.\right.$$

$$\left.\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\;\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\right\},\ \{\theta,\ -1300,\ 1300\}\right]$$



$$\text{Solve}\left[\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2} ==\right.$$

$$\left.\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \theta\right]$$

$$\Big\{\{\theta\to 2\pi\},$$

$$\left\{\theta\to-\left(\frac{2}{1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}}\right)^{1/3}+\frac{\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{12\pi^2}\right\},$$

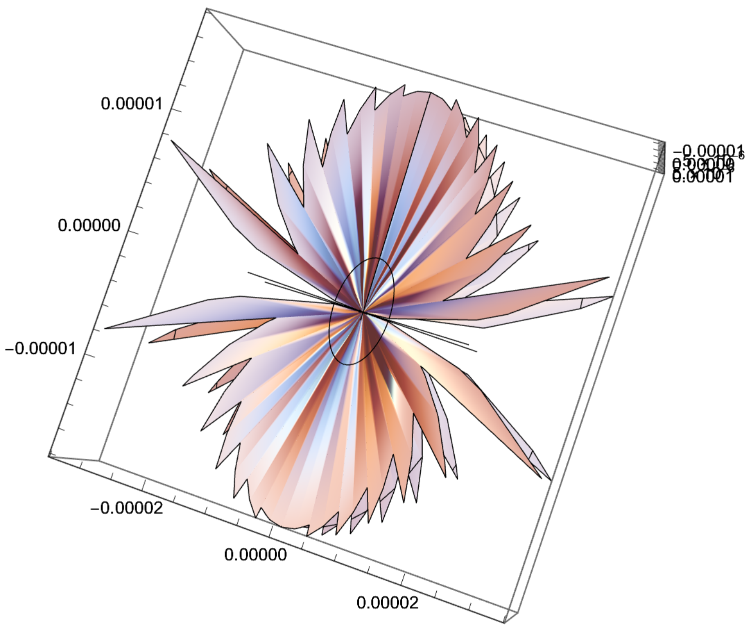
$$\left\{\theta\to-\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{24\pi^2}+\right.$$

$$\left.\frac{1-i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)^{1/3}}\right\},$$

$$\left\{\theta\to-\frac{\left(1-i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{24\pi^2}+\right.$$

$$\left.\frac{1+i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)^{1/3}}\right\}\Big\}$$

$$\texttt{RevolutionPlot3D}\left[r\left(-\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}\right),\ \{r,-1,1\}\right]$$

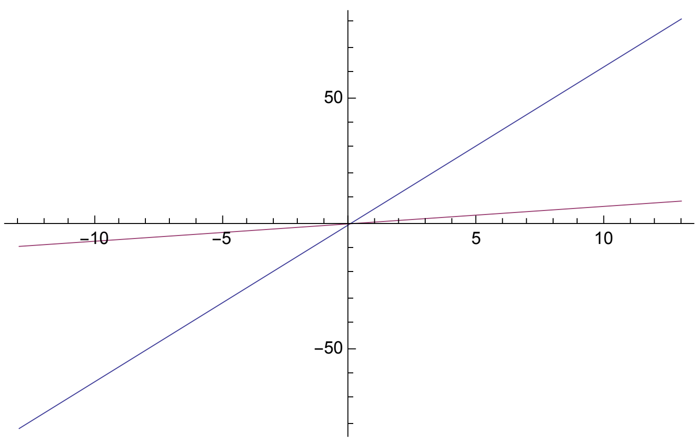


If these are theta solutions, what is r ⋆ θ, the change in circumference?

$$\text{Plot}\Big[\Big\{\{r\,2\,\pi\},\ \Big\{r\left(\left(\frac{2}{1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}}\right)^{1/3}+\frac{\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{12\,\pi^2}\right)\Big\},$$

$$\Big\{r\left(-\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\frac{1-i\sqrt{3}}{2^{2/3}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right)\Big\},$$

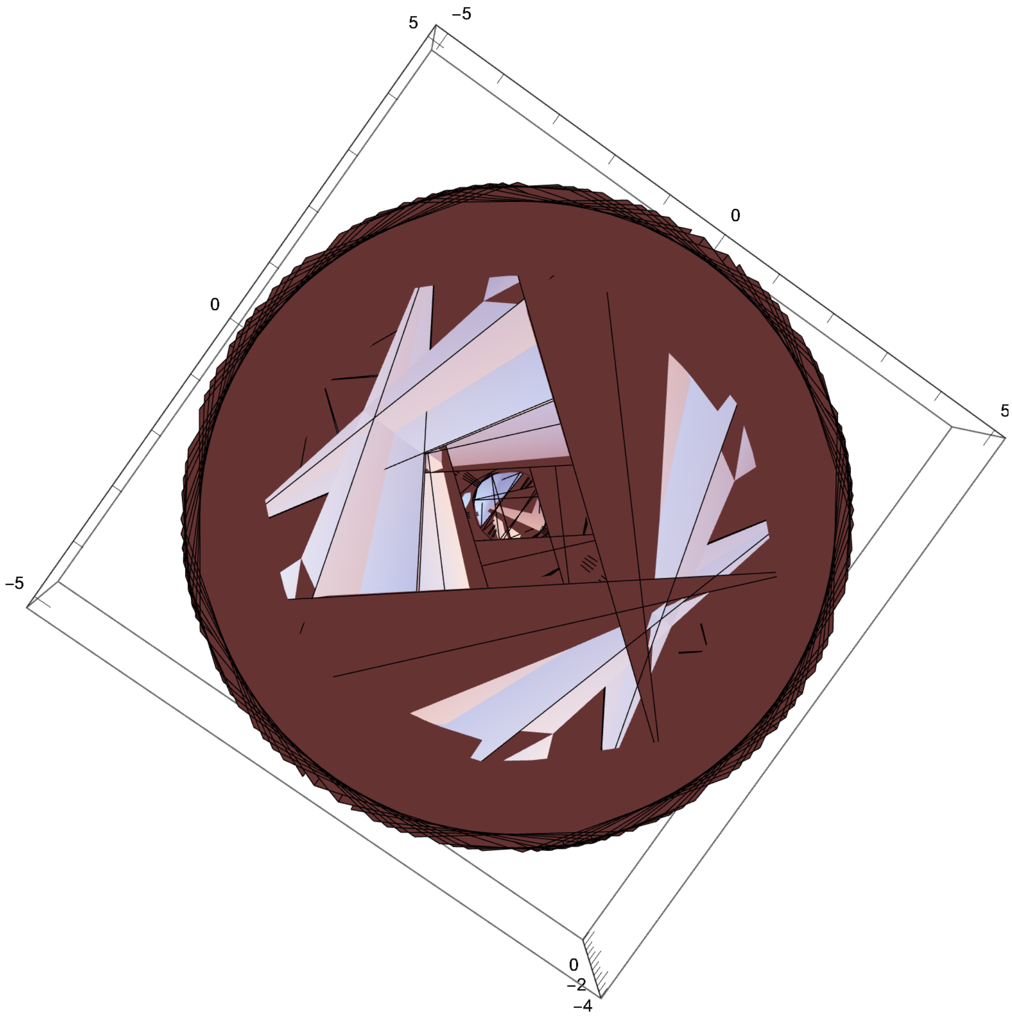
$$\Big\{r\left(-\frac{\left(1-i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)\right)^{1/3}}{24\,\pi^2}+\frac{1+i\sqrt{3}}{2^{2/3}\left(1728\,\pi^5+\sqrt{6912\,\pi^6+2\,985\,984\,\pi^{10}}\right)^{1/3}}\right)\Big\}\Big\},\ \{r,-13,13\}\Big]$$

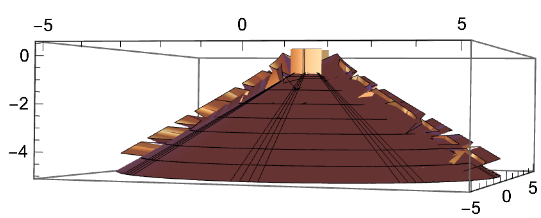


$$\text{Solve}\left[\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}==\frac{\sqrt{4\,\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\,\pi},\ r\right]$$

$$\left\{\left\{r\to-\frac{\sqrt{1+\frac{4\,\pi^2}{\theta^2}-\frac{4\,\pi}{\theta}}}{\pi\,\sqrt{16\,\pi^2-16\,\pi\,\theta+4\,\theta^2}}\right\},\ \left\{r\to\frac{\sqrt{1+\frac{4\,\pi^2}{\theta^2}-\frac{4\,\pi}{\theta}}}{\pi\,\sqrt{16\,\pi^2-16\,\pi\,\theta+4\,\theta^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left(\frac{\sqrt{1+\frac{4\pi^2}{\theta^2}-\frac{4\pi}{\theta}}}{\pi\sqrt{16\pi^2-16\pi\theta+4\theta^2}}-\sqrt{(r)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}\right),\right.$$
$$\left.\{r,-5,5\},\{\theta,-13\,000,13\,000\}\right]$$

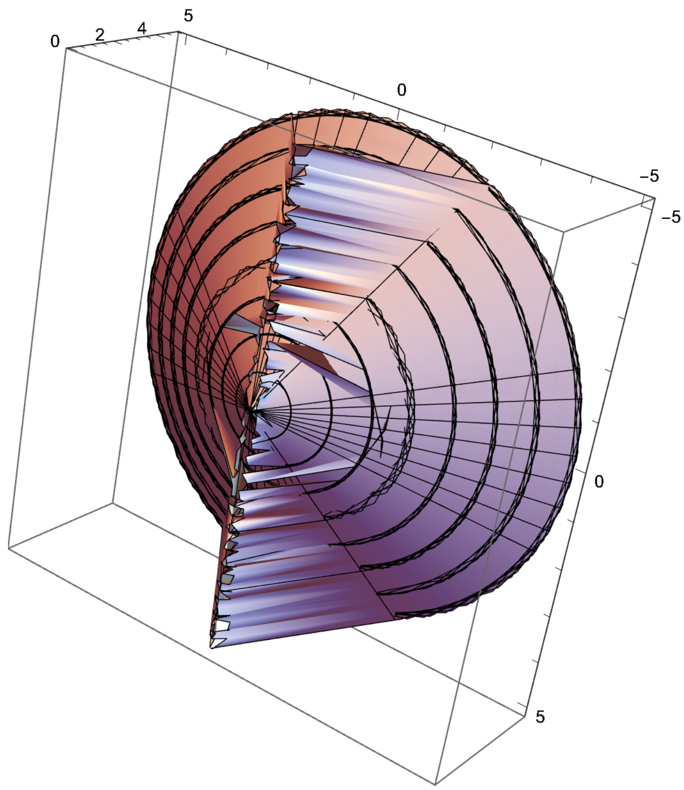


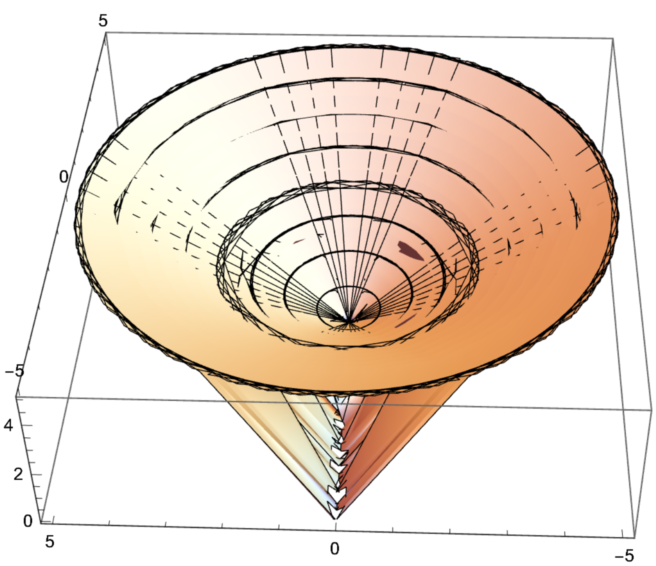


$$\text{Solve}\left[r_1==\sqrt{\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\theta\right]$$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$\text{RevolutionPlot3D}\left[\sqrt{(r)^2 - \left(\frac{\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}\ \sqrt{4\,\pi\,\theta - \theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2}\text{, \{r, -5, 5\}, \{}\theta\text{, -13, 13\}}\right]$$





$$\text{Plot}\left[\left\{\left\{\frac{2\,\pi\,\left(1 + 8\,\pi^4\,r_1^2\right)}{1 + 16\,\pi^4\,r_1^2} - \frac{1}{2}\,\sqrt{\left(\frac{16\,\pi^2\,\left(1 + 8\,\pi^4\,r_1^2\right)^2}{\left(1 + 16\,\pi^4\,r_1^2\right)^2} - \right.}\right.\right.\right.$$

$$\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)-\frac{1}{2}\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-\left(\frac{512\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\right.$$

$$\left.\frac{768\,\pi^3\,\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Bigg/\left(4\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}\right.$$

$$\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\right\},$$

$$\left\{\frac{2\,\pi\,\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}-\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)+\frac{1}{2}\sqrt{\left(\frac{32\,\pi^2\,\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\,\left(1+16\,\pi^4\,r_1^2\right)^2\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\,\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\,\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}-$$

$$\left(\frac{512\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)}\right)\Bigg\},$$

$$\Bigg\{\frac{2\,\pi\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)}-$$

$$\frac{1}{2}\surd\Bigg(\frac{32\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

$$\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}+$$

$$\left(\frac{512\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Big/$$

$$\Bigg(4\surd\Bigg(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-$$

$$\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\Bigg\},$$

$$\Bigg\{\frac{2\,\pi\left(1+8\,\pi^4\,r_1^2\right)}{1+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\left(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}$$

$$\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)+\frac{1}{2}\sqrt{\left(\frac{32\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\right.}$$

$$\frac{32\,\pi^2}{1+16\,\pi^4\,r_1^2}+\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}-$$

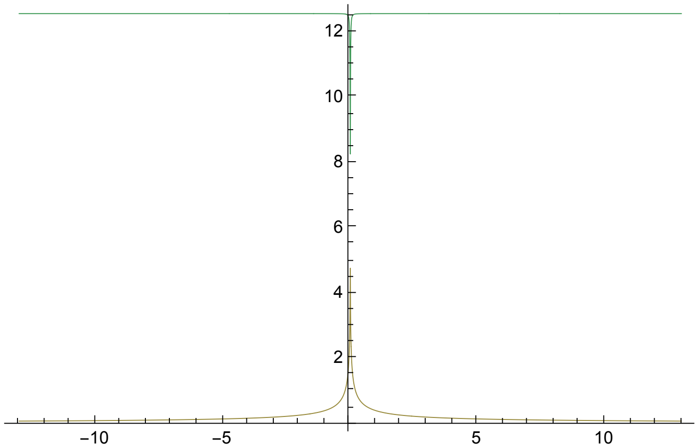
$$\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}+$$

$$\left(\frac{512\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)^3}{\left(1+16\,\pi^4\,r_1^2\right)^3}-\frac{768\,\pi^3\left(1+8\,\pi^4\,r_1^2\right)}{\left(1+16\,\pi^4\,r_1^2\right)^2}+\frac{256\,\pi^3}{1+16\,\pi^4\,r_1^2}\right)\Bigg/$$

$$\left(4\sqrt{\left(\frac{16\,\pi^2\left(1+8\,\pi^4\,r_1^2\right)^2}{\left(1+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2}{1+16\,\pi^4\,r_1^2}-\right.}\right.$$

$$\frac{32\,\pi^4\,r_1^2\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}{3^{1/3}\left(1+16\,\pi^4\,r_1^2\right)^2\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}+$$

$$\left.\left.\left.\frac{32\,\pi^4\left(9\,\pi^2\,r_1^4+\sqrt{3}\,\sqrt{r_1^6+27\,\pi^4\,r_1^8}\right)^{1/3}}{3^{2/3}\left(1+48\,\pi^4\,r_1^2+768\,\pi^8\,r_1^4+4096\,\pi^{12}\,r_1^6\right)^{1/3}}\right)\right)\right)\Bigg\}\Bigg\},\ \{r_1,\,-13,\,13\}\Bigg]$$



$$\text{Solve}\left[\sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2}==r_1,\ \theta\right]$$

$$\Bigg\{\Bigg\{\theta\to\frac{\pi\left(3-16\pi^4+32\pi^4 r_1^2\right)}{1-16\pi^4+16\pi^4 r_1^2}-$$

$$\frac{1}{2}\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\left(2^{1/3}\left(16\pi^4-512\pi^8+\right.\right.\right.}$$

$$\left.\left.4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/\ \left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\right.$$

$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14}\right.$$

$$r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18}$$

$$r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-\right.}$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$\left.\left.356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Big)+$$

$$\Big(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+$$

$$6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+$$

$$\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-\right.}$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+$$

$$89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424$$

$$\left.\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\Big)^{1/3}\Big/\ \left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\Bigg)-$$

$$\frac{1}{2}\sqrt{\left(\frac{8\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{16\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}-\right.}$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\Big(3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\ \Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}$$
$$r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}$$
$$r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)-$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/$$
$$\left(3\times 2^{1/3}\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)-\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-\right.$$
$$\left.\frac{64\,\pi^3\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\ \left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right)\Big/$$
$$\Bigg(4\,\sqrt{\Bigg(\frac{4\,\pi^2\ \left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\ \left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+}$$
$$\left(2^{1/3}\ \left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$
$$\Big(3\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\ \Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$
$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$
$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big)+$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$
$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$
$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$
$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\ \left(3\times 2^{1/3}\ \left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\theta \to \frac{\pi\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)}{1-16\,\pi^4+16\,\pi^4\,r_1^2} - \frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2} -}$$

$$\frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)} +$$

$$\left(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\right)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big/\;\left(3\times 2^{1/3}\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\right)\Bigg) +$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2} - \frac{16\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)} -}$$

$$\left(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\right)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$

$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$

$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\right)-\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^3}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^3}-$$

$$\frac{64\,\pi^3\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}\Bigg)\Big/$$

$$\Bigg(4\,\sqrt{\Bigg(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-\frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)}+}$$

$$\left(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\right)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\,\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$

$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$

$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-$$

$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$

$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$

$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$

$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$

$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$

$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$

$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$

$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$

$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$

$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)\right)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{\pi\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-}$$

$$\frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)}+$$

$$\left(2^{1/3}\,(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4)\right)\Big/$$

$$\Big(3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$

$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$

$$r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\big)^{1/3}\Big)+$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Big)-$$

$$\frac{1}{2}\surd\left(\frac{8\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}-\right.$$
$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$
$$\Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$
$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$
$$r_1^6+\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\big)^{1/3}\Big)-$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\surd\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\big)^{1/3}\Big/$$
$$\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)+\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-\right.$$
$$\left.\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right)\Big/$$
$$\left(4\surd\left(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.\right.$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Bigg(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$
$$24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-$$
$$25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Bigg)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456$$
$$\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+$$
$$33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976$$
$$\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\theta\to\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{}\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-$$
$$\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$
$$\Bigg(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}$$
$$r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}$$
$$r_1^6+\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Bigg)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+$$
$$6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+$$
$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424$$

$$\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8\Big)\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\, \left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)\right)\Bigg) +$$

$$\frac{1}{2}\sqrt{\left(\frac{8\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\, r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)^2} - \frac{16\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\, r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)} - \right.}$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\, r_1^2-32\,768\,\pi^{12}\, r_1^2+65\,536\,\pi^{12}\, r_1^4\right)\right) \Big/$$

$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\, r_1^2+6\,291\,456\,\pi^{14}$$
$$r_1^2+6\,291\,456\,\pi^{18}\, r_1^2+1\,572\,864\,\pi^{14}\, r_1^4-25\,165\,824\,\pi^{18}\, r_1^4+33\,554\,432\,\pi^{18}$$
$$r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\, r_1^2-86\,973\,087\,744\,\pi^{24}\, r_1^2+1\,391\,569\,403\,904\,\pi^{28}\, r_1^2-\right.}$$
$$7\,421\,703\,487\,488\,\pi^{32}\, r_1^2+347\,892\,350\,976\,\pi^{24}\, r_1^4+38\,963\,943\,309\,312\,\pi^{28}\, r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\, r_1^4+22\,265\,110\,462\,464\,\pi^{28}\, r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\, r_1^6+474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)\Big)^{1/3}\Big) -$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\, r_1^2+6\,291\,456\,\pi^{14}\, r_1^2+$$
$$6\,291\,456\,\pi^{18}\, r_1^2+1\,572\,864\,\pi^{14}\, r_1^4-25\,165\,824\,\pi^{18}\, r_1^4+33\,554\,432\,\pi^{18}\, r_1^6+$$
$$\sqrt{\left(1\,811\,939\,328\,\pi^{20}\, r_1^2-86\,973\,087\,744\,\pi^{24}\, r_1^2+1\,391\,569\,403\,904\,\pi^{28}\, r_1^2-\right.}$$
$$7\,421\,703\,487\,488\,\pi^{32}\, r_1^2+347\,892\,350\,976\,\pi^{24}\, r_1^4+38\,963\,943\,309\,312\,\pi^{28}\, r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\, r_1^4+22\,265\,110\,462\,464\,\pi^{28}\, r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\, r_1^6+474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)\Big)^{1/3} \Big/$$

$$\left(3\times 2^{1/3}\,\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)\right) + \left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\, r_1^2} + \frac{64\,\pi^3\,\left(3-16\,\pi^4+32\,\pi^4\, r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)^3} - \right.$$

$$\left.\frac{64\,\pi^3\,\left(3-16\,\pi^4+32\,\pi^4\, r_1^2\right)\,\left(13-16\,\pi^4+64\,\pi^4\, r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)^2}\right) \Big/$$

$$\left(4\sqrt{\left(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\, r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\, r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)} + \right.}\right.$$

$$\left(2^{1/3}\,\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\, r_1^2-32\,768\,\pi^{12}\, r_1^2+65\,536\,\pi^{12}\, r_1^4\right)\right) \Big/$$

$$\Big(3\,\left(1-16\,\pi^4+16\,\pi^4\, r_1^2\right)\,\Big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+$$
$$24\,576\,\pi^{10}\, r_1^2+6\,291\,456\,\pi^{14}\, r_1^2+6\,291\,456\,\pi^{18}\, r_1^2+1\,572\,864\,\pi^{14}\, r_1^4-$$
$$25\,165\,824\,\pi^{18}\, r_1^4+33\,554\,432\,\pi^{18}\, r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\, r_1^2-\right.}$$
$$86\,973\,087\,744\,\pi^{24}\, r_1^2+1\,391\,569\,403\,904\,\pi^{28}\, r_1^2-7\,421\,703\,487\,488$$
$$\pi^{32}\, r_1^2+347\,892\,350\,976\,\pi^{24}\, r_1^4+38\,963\,943\,309\,312\,\pi^{28}\, r_1^4+$$
$$89\,060\,441\,849\,856\,\pi^{32}\, r_1^4+22\,265\,110\,462\,464\,\pi^{28}\, r_1^6-$$
$$356\,241\,767\,399\,424\,\pi^{32}\, r_1^6+474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Big)\Big)\Big)\}\}$$

$$\mathbf{Plot}\Big[\Big\{\Big\{\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2} -$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)} + \left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/ \Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\Big) + \left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)} -$$

$$\frac{1}{2}\sqrt{\Bigg(\frac{8\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2} - \frac{16\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)} - \left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/ \Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\Big) -$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$

$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/$$

$$\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right) - \left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3} - \frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$

$$\Bigg(4\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)} + }$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{\pi\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2} - \frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)} + }$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$

$$\Big(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg) +$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{16\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} -$$
$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\Big(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}$$
$$r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}$$
$$r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 +$$
$$38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) -$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 +$$
$$6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +$$
$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/$$
$$\left(3\times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) - \Bigg(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} -$$
$$\frac{64\,\pi^3\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\Bigg) \Big/$$
$$\Bigg(4\sqrt{}\Bigg(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} +$$
$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\Big(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\frac{\pi\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\sqrt{\left(\frac{4\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} + \right.}$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/ \left(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\right) +$$

$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3} \Big/ \left(3 \times 2^{1/3}\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg) -$$

$$\frac{1}{2}\sqrt{\left(\frac{8\,\pi^2\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{16\,\pi^2\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} - \right.}$$

$$\left(2^{1/3}\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/ \left(3\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\right) -$$

$$\left(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 +\right.$$

$$\sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3} \Big/$$
$$\left(3\times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right) + \left(\frac{768\,\pi^3}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^3}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^3} -\right.$$
$$\left.\frac{64\,\pi^3\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2}\right) \Big/$$
$$\left(4\,\sqrt{\left(\frac{4\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} + \right.}\right.$$
$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\Big(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\,\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} +$$
$$24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 -$$
$$25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 -$$
$$86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488$$
$$\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$
$$356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3}\Big) +$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456$$
$$\pi^{14}\,r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 +$$
$$33\,554\,432\,\pi^{18}\,r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 +$$
$$1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976$$
$$\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 +$$
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8)\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Big)\Big)\Big)\Big\},$$

$$\left\{\frac{\pi\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)}{1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2} + \frac{1}{2}\,\sqrt{\left(\frac{4\,\pi^2\,\left(3 - 16\,\pi^4 + 32\,\pi^4\,r_1^2\right)^2}{\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)^2} - \frac{8\,\pi^2\,\left(13 - 16\,\pi^4 + 64\,\pi^4\,r_1^2\right)}{3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)} + \right.}\right.$$
$$\left(2^{1/3}\,\left(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\,r_1^2 - 32\,768\,\pi^{12}\,r_1^2 + 65\,536\,\pi^{12}\,r_1^4\right)\right) \Big/$$
$$\Big(3\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)$$
$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\,r_1^2 + 6\,291\,456\,\pi^{14}$$
$$r_1^2 + 6\,291\,456\,\pi^{18}\,r_1^2 + 1\,572\,864\,\pi^{14}\,r_1^4 - 25\,165\,824\,\pi^{18}\,r_1^4 + 33\,554\,432\,\pi^{18}$$
$$r_1^6 + \sqrt{}\Big(1\,811\,939\,328\,\pi^{20}\,r_1^2 - 86\,973\,087\,744\,\pi^{24}\,r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\,r_1^2 -$$
$$7\,421\,703\,487\,488\,\pi^{32}\,r_1^2 + 347\,892\,350\,976\,\pi^{24}\,r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\,r_1^4 +$$
$$89\,060\,441\,849\,856\,\pi^{32}\,r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 -$$

$$356241767399424\,\pi^{32}\,r_1^6+474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98304\,\pi^{14}-524288\,\pi^{18}+24576\,\pi^{10}\,r_1^2+6291456\,\pi^{14}\,r_1^2+$$
$$6291456\,\pi^{18}\,r_1^2+1572864\,\pi^{14}\,r_1^4-25165824\,\pi^{18}\,r_1^4+33554432\,\pi^{18}\,r_1^6+$$
$$\sqrt{}\,\big(1811939328\,\pi^{20}\,r_1^2-86973087744\,\pi^{24}\,r_1^2+1391569403904\,\pi^{28}\,r_1^2-$$
$$7421703487488\,\pi^{32}\,r_1^2+347892350976\,\pi^{24}\,r_1^4+38963943309312\,\pi^{28}\,r_1^4+$$
$$89060441849856\,\pi^{32}\,r_1^4+22265110462464\,\pi^{28}\,r_1^6-356241767399424$$
$$\pi^{32}\,r_1^6+474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/\ \Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)\Bigg)+$$

$$\frac{1}{2}\sqrt{}\Bigg(\frac{8\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{16\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}-$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32768\,\pi^{12}\,r_1^2+65536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$
$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)$$
$$\Big(128\,\pi^6-6144\,\pi^{10}+98304\,\pi^{14}-524288\,\pi^{18}+24576\,\pi^{10}\,r_1^2+6291456\,\pi^{14}$$
$$r_1^2+6291456\,\pi^{18}\,r_1^2+1572864\,\pi^{14}\,r_1^4-25165824\,\pi^{18}\,r_1^4+33554432\,\pi^{18}$$
$$r_1^6+\sqrt{}\,\big(1811939328\,\pi^{20}\,r_1^2-86973087744\,\pi^{24}\,r_1^2+1391569403904\,\pi^{28}\,r_1^2-$$
$$7421703487488\,\pi^{32}\,r_1^2+347892350976\,\pi^{24}\,r_1^4+38963943309312\,\pi^{28}\,r_1^4+$$
$$89060441849856\,\pi^{32}\,r_1^4+22265110462464\,\pi^{28}\,r_1^6-$$
$$356241767399424\,\pi^{32}\,r_1^6+474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)-$$

$$\Big(128\,\pi^6-6144\,\pi^{10}+98304\,\pi^{14}-524288\,\pi^{18}+24576\,\pi^{10}\,r_1^2+6291456\,\pi^{14}\,r_1^2+$$
$$6291456\,\pi^{18}\,r_1^2+1572864\,\pi^{14}\,r_1^4-25165824\,\pi^{18}\,r_1^4+33554432\,\pi^{18}\,r_1^6+$$
$$\sqrt{}\,\big(1811939328\,\pi^{20}\,r_1^2-86973087744\,\pi^{24}\,r_1^2+1391569403904\,\pi^{28}\,r_1^2-$$
$$7421703487488\,\pi^{32}\,r_1^2+347892350976\,\pi^{24}\,r_1^4+38963943309312\,\pi^{28}\,r_1^4+$$
$$89060441849856\,\pi^{32}\,r_1^4+22265110462464\,\pi^{28}\,r_1^6-$$
$$356241767399424\,\pi^{32}\,r_1^6+474989023199232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/$$

$$\Big(3\times 2^{1/3}\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\Big)+\Bigg(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^3}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^3}-$$

$$\frac{64\,\pi^3\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}\Bigg)\Bigg/$$

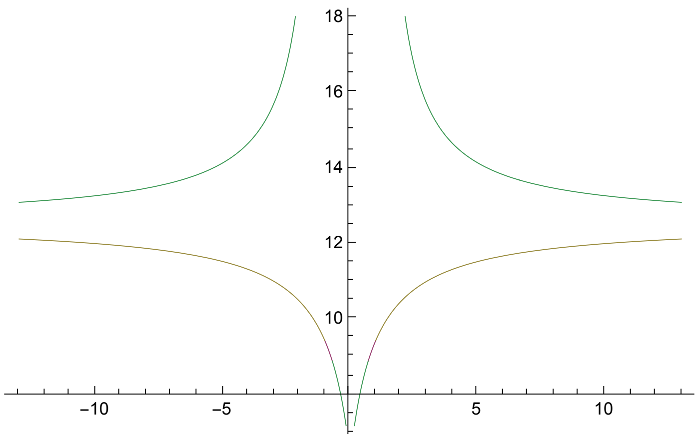
$$\Bigg(4\sqrt{}\Bigg(\frac{4\,\pi^2\,\big(3-16\,\pi^4+32\,\pi^4\,r_1^2\big)^2}{\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)^2}-\frac{8\,\pi^2\,\big(13-16\,\pi^4+64\,\pi^4\,r_1^2\big)}{3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}+$$

$$\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32768\,\pi^{12}\,r_1^2+65536\,\pi^{12}\,r_1^4\big)\Big)\Big/$$
$$\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\,\Big(128\,\pi^6-6144\,\pi^{10}+98304\,\pi^{14}-524288\,\pi^{18}+$$
$$24576\,\pi^{10}\,r_1^2+6291456\,\pi^{14}\,r_1^2+6291456\,\pi^{18}\,r_1^2+1572864\,\pi^{14}\,r_1^4-$$
$$25165824\,\pi^{18}\,r_1^4+33554432\,\pi^{18}\,r_1^6+\sqrt{}\,\big(1811939328\,\pi^{20}\,r_1^2-$$
$$86973087744\,\pi^{24}\,r_1^2+1391569403904\,\pi^{28}\,r_1^2-7421703487488$$

$$\pi^{32}\, r_1^2 + 347\,892\,350\,976\,\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\, r_1^2 + 6\,291\,456\,\pi^{14}\, r_1^2 + 6\,291\,456\,\pi^{18}\, r_1^2 + 1\,572\,864\,\pi^{14}\, r_1^4 - 25\,165\,824\,\pi^{18}\, r_1^4 + 33\,554\,432\,\pi^{18}\, r_1^6 + \sqrt{\Big(1\,811\,939\,328\,\pi^{20}\, r_1^2 - 86\,973\,087\,744\,\pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\, r_1^2 + 347\,892\,350\,976\,\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)}\Big)^{1/3} \Big/$$

$$\Big(3 \times 2^{1/3}\,\big(1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2\big)\Big)\Big)\Big)\Big)\Big\}\Big\},\ \{r_1, -13, 13\}\Big]$$



$$\text{Plot3D}\Big[$$

$$\Bigg\{\Bigg(\frac{\pi\,\big(3 - 16\,\pi^4 + 32\,\pi^4\, r_1^2\big)}{1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2} - \frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\,\big(3 - 16\,\pi^4 + 32\,\pi^4\, r_1^2\big)^2}{\big(1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2\big)^2} - \frac{8\,\pi^2\,\big(13 - 16\,\pi^4 + 64\,\pi^4\, r_1^2\big)}{3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2\big)} +}$$

$$\Big(2^{1/3}\,\big(16\,\pi^4 - 512\,\pi^8 + 4096\,\pi^{12} + 2048\,\pi^8\, r_1^2 - 32\,768\,\pi^{12}\, r_1^2 + 65\,536\,\pi^{12}\, r_1^4\big)\Big) \Big/$$

$$\Big(3\,\big(1 - 16\,\pi^4 + 16\,\pi^4\, r_1^2\big)\,\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\, r_1^2 + 6\,291\,456\,\pi^{14}\, r_1^2 + 6\,291\,456\,\pi^{18}\, r_1^2 + 1\,572\,864\,\pi^{14}\, r_1^4 - 25\,165\,824\,\pi^{18}\, r_1^4 + 33\,554\,432\,\pi^{18}\, r_1^6 + \sqrt{\Big(1\,811\,939\,328\,\pi^{20}\, r_1^2 - 86\,973\,087\,744\,\pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\, r_1^2 + 347\,892\,350\,976\,\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\,\pi^{32}\, r_1^8\Big)}\Big)^{1/3}\Big) +$$

$$\Big(128\,\pi^6 - 6144\,\pi^{10} + 98\,304\,\pi^{14} - 524\,288\,\pi^{18} + 24\,576\,\pi^{10}\, r_1^2 + 6\,291\,456\,\pi^{14}\, r_1^2 + 6\,291\,456\,\pi^{18}\, r_1^2 + 1\,572\,864\,\pi^{14}\, r_1^4 - 25\,165\,824\,\pi^{18}\, r_1^4 + 33\,554\,432\,\pi^{18}\, r_1^6 + \sqrt{\Big(1\,811\,939\,328\,\pi^{20}\, r_1^2 - 86\,973\,087\,744\,\pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\,\pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\,\pi^{32}\, r_1^2 + 347\,892\,350\,976\,\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\,\pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\,\pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\,\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424}$$

$$\pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8\Big)\Big)^{1/3} \Big/ \Big(3 \times 2^{1/3}\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)\Big)\Bigg) +$$

$$\frac{1}{2} \sqrt{}\Bigg(\frac{8\, \pi^2\, \big(3 - 16\, \pi^4 + 32\, \pi^4\, r_1^2\big)^2}{\big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)^2} - \frac{16\, \pi^2\, \big(13 - 16\, \pi^4 + 64\, \pi^4\, r_1^2\big)}{3\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)} -$$

$$\Big(2^{1/3}\, \big(16\, \pi^4 - 512\, \pi^8 + 4096\, \pi^{12} + 2048\, \pi^8\, r_1^2 - 32\,768\, \pi^{12}\, r_1^2 + 65\,536\, \pi^{12}\, r_1^4\big)\Big) \Big/$$

$$\Big(3\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)\, \big(128\, \pi^6 - 6144\, \pi^{10} + 98\,304\, \pi^{14} - 524\,288\, \pi^{18} + 24\,576\, \pi^{10}$$

$$r_1^2 + 6\,291\,456\, \pi^{14}\, r_1^2 + 6\,291\,456\, \pi^{18}\, r_1^2 + 1\,572\,864\, \pi^{14}\, r_1^4 - 25\,165\,824\, \pi^{18}$$

$$r_1^4 + 33\,554\,432\, \pi^{18}\, r_1^6 + \sqrt{}\big(1\,811\,939\,328\, \pi^{20}\, r_1^2 - 86\,973\,087\,744\, \pi^{24}\, r_1^2 +$$

$$1\,391\,569\,403\,904\, \pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\, \pi^{32}\, r_1^2 + 347\,892\,350\,976\, \pi^{24}\, r_1^4 +$$

$$38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 + 22\,265\,110\,462\,464$$

$$\pi^{28}\, r_1^6 - 356\,241\,767\,399\,424\, \pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8\big)\big)^{1/3}\Big) -$$

$$\Big(128\, \pi^6 - 6144\, \pi^{10} + 98\,304\, \pi^{14} - 524\,288\, \pi^{18} + 24\,576\, \pi^{10}\, r_1^2 + 6\,291\,456\, \pi^{14}\, r_1^2 +$$

$$6\,291\,456\, \pi^{18}\, r_1^2 + 1\,572\,864\, \pi^{14}\, r_1^4 - 25\,165\,824\, \pi^{18}\, r_1^4 + 33\,554\,432\, \pi^{18}\, r_1^6 +$$

$$\sqrt{}\big(1\,811\,939\,328\, \pi^{20}\, r_1^2 - 86\,973\,087\,744\, \pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\, \pi^{28}\, r_1^2 -$$

$$7\,421\,703\,487\,488\, \pi^{32}\, r_1^2 + 347\,892\,350\,976\, \pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 +$$

$$89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\, \pi^{28}\, r_1^6 -$$

$$356\,241\,767\,399\,424\, \pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8\big)\Big)^{1/3} \Big/$$

$$\Big(3 \times 2^{1/3}\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)\Big) - \Bigg(\frac{768\, \pi^3}{1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2} + \frac{64\, \pi^3\, \big(3 - 16\, \pi^4 + 32\, \pi^4\, r_1^2\big)^3}{\big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)^3} -$$

$$\frac{64\, \pi^3\, \big(3 - 16\, \pi^4 + 32\, \pi^4\, r_1^2\big)\, \big(13 - 16\, \pi^4 + 64\, \pi^4\, r_1^2\big)}{\big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)^2}\Bigg) \Big/$$

$$\Bigg(4 \sqrt{}\Bigg(\frac{4\, \pi^2\, \big(3 - 16\, \pi^4 + 32\, \pi^4\, r_1^2\big)^2}{\big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)^2} - \frac{8\, \pi^2\, \big(13 - 16\, \pi^4 + 64\, \pi^4\, r_1^2\big)}{3\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)} +$$

$$\Big(2^{1/3}\, \big(16\, \pi^4 - 512\, \pi^8 + 4096\, \pi^{12} + 2048\, \pi^8\, r_1^2 - 32\,768\, \pi^{12}\, r_1^2 + 65\,536\, \pi^{12}\, r_1^4\big)\Big) \Big/$$

$$\Big(3\, \big(1 - 16\, \pi^4 + 16\, \pi^4\, r_1^2\big)\, \big(128\, \pi^6 - 6144\, \pi^{10} + 98\,304\, \pi^{14} - 524\,288\, \pi^{18} +$$

$$24\,576\, \pi^{10}\, r_1^2 + 6\,291\,456\, \pi^{14}\, r_1^2 + 6\,291\,456\, \pi^{18}\, r_1^2 + 1\,572\,864\, \pi^{14}\, r_1^4 -$$

$$25\,165\,824\, \pi^{18}\, r_1^4 + 33\,554\,432\, \pi^{18}\, r_1^6 + \sqrt{}\big(1\,811\,939\,328\, \pi^{20}\, r_1^2 -$$

$$86\,973\,087\,744\, \pi^{24}\, r_1^2 + 1\,391\,569\,403\,904\, \pi^{28}\, r_1^2 - 7\,421\,703\,487\,488$$

$$\pi^{32}\, r_1^2 + 347\,892\,350\,976\, \pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 +$$

$$89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 + 22\,265\,110\,462\,464\, \pi^{28}\, r_1^6 -$$

$$356\,241\,767\,399\,424\, \pi^{32}\, r_1^6 + 474\,989\,023\,199\,232\, \pi^{32}\, r_1^8\big)\big)^{1/3}\Big) +$$

$$\Big(128\, \pi^6 - 6144\, \pi^{10} + 98\,304\, \pi^{14} - 524\,288\, \pi^{18} + 24\,576\, \pi^{10}\, r_1^2 + 6\,291\,456$$

$$\pi^{14}\, r_1^2 + 6\,291\,456\, \pi^{18}\, r_1^2 + 1\,572\,864\, \pi^{14}\, r_1^4 - 25\,165\,824\, \pi^{18}\, r_1^4 +$$

$$33\,554\,432\, \pi^{18}\, r_1^6 + \sqrt{}\big(1\,811\,939\,328\, \pi^{20}\, r_1^2 - 86\,973\,087\,744\, \pi^{24}\, r_1^2 +$$

$$1\,391\,569\,403\,904\, \pi^{28}\, r_1^2 - 7\,421\,703\,487\,488\, \pi^{32}\, r_1^2 + 347\,892\,350\,976$$

$$\pi^{24}\, r_1^4 + 38\,963\,943\,309\,312\, \pi^{28}\, r_1^4 + 89\,060\,441\,849\,856\, \pi^{32}\, r_1^4 +$$

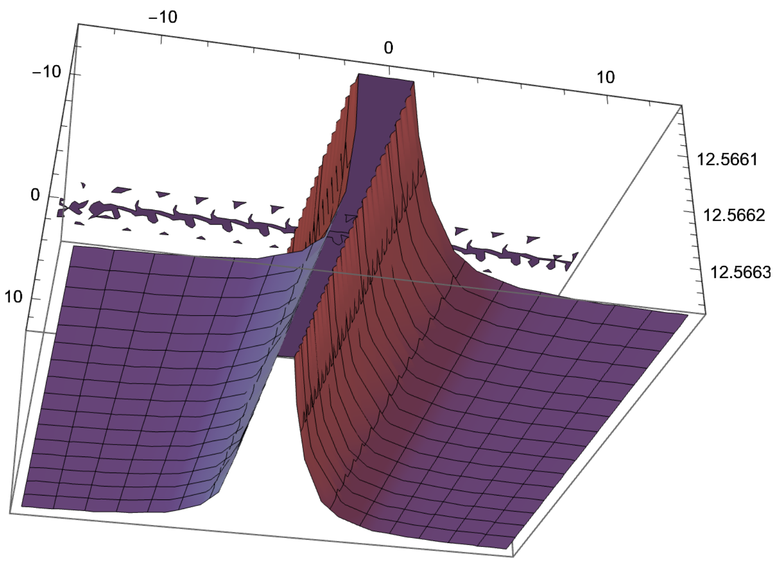
$$22\,265\,110\,462\,464\,\pi^{28}\,r_1^6 - 356\,241\,767\,399\,424\,\pi^{32}\,r_1^6 +$$

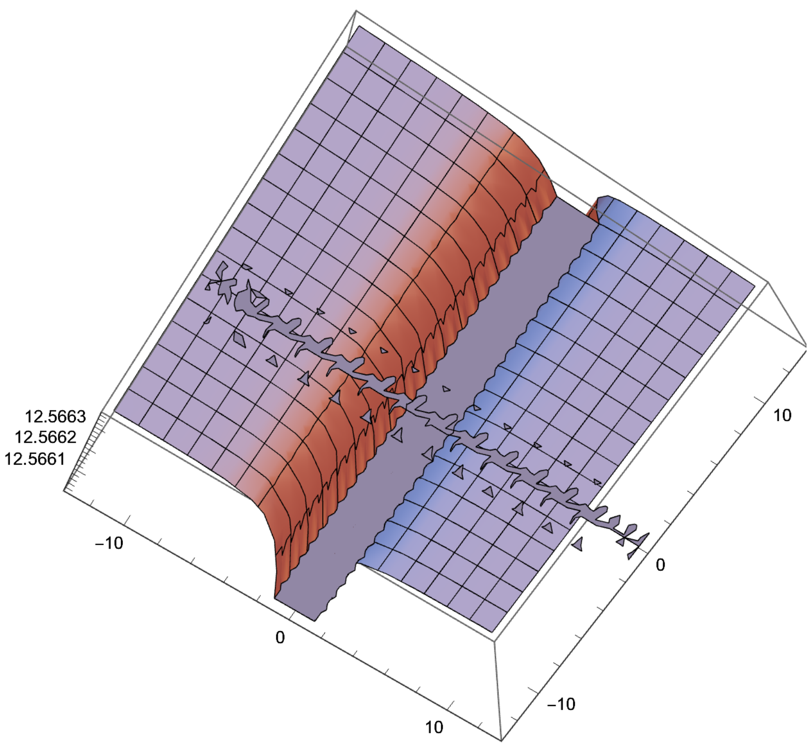
$$474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\Big)\Big)^{1/3} \Big/ \left(3\times 2^{1/3}\,\left(1 - 16\,\pi^4 + 16\,\pi^4\,r_1^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg),$$

$$\Bigg(\pi + \frac{1}{2}\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)} +$$

$$\frac{1}{2}\sqrt{\Bigg(8\,\pi^2 - \frac{1}{3\,\pi^2\,r^2} - \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} - \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2} + \left(64\,\pi^3 + \frac{4}{\pi\,r^2}\right) \Big/ \left(4\sqrt{\left(4\,\pi^2 - \frac{1}{6\,\pi^2\,r^2} + \frac{1}{12\,\pi^2\,r^2\,\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}} + \frac{\left(1 + 13\,824\,\pi^8\,r^4 + 96\,\sqrt{3}\,\pi^4\,\sqrt{r^4 + 6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\Bigg)}\Bigg)\Bigg\},$$

$$\{r_1, -13, 13\}, \{r, -13, 13\}\Big]$$





Math like mana falling

$$\text{Solve}\Big[\Big(\frac{\pi\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\Big(\frac{4\,\pi^2\,(3-16\,\pi^4+32\,\pi^4\,r_1^2)^2}{(1-16\,\pi^4+16\,\pi^4\,r_1^2)^2}-\frac{8\,\pi^2\,(13-16\,\pi^4+64\,\pi^4\,r_1^2)}{3\,(1-16\,\pi^4+16\,\pi^4\,r_1^2)}+\Big(2^{1/3}\,\big(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\big)\Big)\Big/\Big(3\,\big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)}$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\Bigg)+$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)\Bigg)+$$

$$\frac{1}{2}\sqrt{\left(\frac{8\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{16\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}-\right.}$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\left(3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\right)-$$

$$\left(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{\left(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\right)}\right)^{1/3}\Big/$$

$$\left(3\times 2^{1/3}\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)\right)+\left(\frac{768\,\pi^3}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^3}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^3}-\frac{64\,\pi^3\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{4\,\pi^2\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\right.}\right.$$

$$\left(2^{1/3}\left(16\,\pi^4-512\,\pi^8+4096\,\pi^{12}+2048\,\pi^8\,r_1^2-32\,768\,\pi^{12}\,r_1^2+65\,536\,\pi^{12}\,r_1^4\right)\right)\Big/$$

$$\Big(3\ \big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\ \big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big)+$$

$$\big(128\,\pi^6-6144\,\pi^{10}+98\,304\,\pi^{14}-524\,288\,\pi^{18}+24\,576\,\pi^{10}\,r_1^2+6\,291\,456\,\pi^{14}\,r_1^2+6\,291\,456\,\pi^{18}\,r_1^2+1\,572\,864\,\pi^{14}\,r_1^4-25\,165\,824\,\pi^{18}\,r_1^4+33\,554\,432\,\pi^{18}\,r_1^6+\sqrt{}\big(1\,811\,939\,328\,\pi^{20}\,r_1^2-86\,973\,087\,744\,\pi^{24}\,r_1^2+1\,391\,569\,403\,904\,\pi^{28}\,r_1^2-7\,421\,703\,487\,488\,\pi^{32}\,r_1^2+347\,892\,350\,976\,\pi^{24}\,r_1^4+38\,963\,943\,309\,312\,\pi^{28}\,r_1^4+89\,060\,441\,849\,856\,\pi^{32}\,r_1^4+22\,265\,110\,462\,464\,\pi^{28}\,r_1^6-356\,241\,767\,399\,424\,\pi^{32}\,r_1^6+474\,989\,023\,199\,232\,\pi^{32}\,r_1^8\big)\big)^{1/3}\Big/\ \big(3\times2^{1/3}\ \big(1-16\,\pi^4+16\,\pi^4\,r_1^2\big)\big)\Big)\Big)\Big)\Big)\Big)\ ==$$

$$\Bigg(\pi-\frac{1}{2}\sqrt{\Bigg(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)}-$$

$$\frac{1}{2}\sqrt{\Bigg(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}-\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Bigg/\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\,\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)}\right)\Bigg)}\Bigg),\ r\Big]$$

Solve[

$$\frac{\pi\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)}{1-16\,\pi^4+16\,\pi^4\,r_1^2}+\frac{1}{2}\sqrt{\Bigg(\frac{4\,\pi^2\,\left(3-16\,\pi^4+32\,\pi^4\,r_1^2\right)^2}{\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)^2}-\frac{8\,\pi^2\,\left(13-16\,\pi^4+64\,\pi^4\,r_1^2\right)}{3\,\left(1-16\,\pi^4+16\,\pi^4\,r_1^2\right)}+\big(2^{1/3}}$$

$$(16 \pi^4 - 512 \pi^8 + 4096 \pi^{12} + 2048 \pi^8 r_1^2 - 32\,768 \pi^{12} r_1^2 + 65\,536 \pi^{12} r_1^4))\Big/ \Big(3 (1 - 16 \pi^4 +$$
$$16 \pi^4 r_1^2) \Big(128 \pi^6 - 6144 \pi^{10} + 98\,304 \pi^{14} - 524\,288 \pi^{18} + 24\,576 \pi^{10} r_1^2 + 6\,291\,456 \pi^{14}$$
$$r_1^2 + 6\,291\,456 \pi^{18} r_1^2 + 1\,572\,864 \pi^{14} r_1^4 - 25\,165\,824 \pi^{18} r_1^4 + 33\,554\,432 \pi^{18} r_1^6 +$$
$$\sqrt{}\Big(1\,811\,939\,328 \pi^{20} r_1^2 - 86\,973\,087\,744 \pi^{24} r_1^2 + 1\,391\,569\,403\,904 \pi^{28} r_1^2 -$$
$$7\,421\,703\,487\,488 \pi^{32} r_1^2 + 347\,892\,350\,976 \pi^{24} r_1^4 + 38\,963\,943\,309\,312 \pi^{28} r_1^4 +$$
$$89\,060\,441\,849\,856 \pi^{32} r_1^4 + 22\,265\,110\,462\,464 \pi^{28} r_1^6 -$$
$$356\,241\,767\,399\,424 \pi^{32} r_1^6 + 474\,989\,023\,199\,232 \pi^{32} r_1^8)\Big)^{1/3}\Big) +$$
$$\Big(128 \pi^6 - 6144 \pi^{10} + 98\,304 \pi^{14} - 524\,288 \pi^{18} + 24\,576 \pi^{10} r_1^2 + 6\,291\,456 \pi^{14} r_1^2 +$$
$$6\,291\,456 \pi^{18} r_1^2 + 1\,572\,864 \pi^{14} r_1^4 - 25\,165\,824 \pi^{18} r_1^4 + 33\,554\,432 \pi^{18} r_1^6 +$$
$$\sqrt{}\Big(1\,811\,939\,328 \pi^{20} r_1^2 - 86\,973\,087\,744 \pi^{24} r_1^2 + 1\,391\,569\,403\,904 \pi^{28} r_1^2 -$$
$$7\,421\,703\,487\,488 \pi^{32} r_1^2 + 347\,892\,350\,976 \pi^{24} r_1^4 + 38\,963\,943\,309\,312 \pi^{28}$$
$$r_1^4 + 89\,060\,441\,849\,856 \pi^{32} r_1^4 + 22\,265\,110\,462\,464 \pi^{28} r_1^6 - 356\,241\,767\,399\,424$$
$$\pi^{32} r_1^6 + 474\,989\,023\,199\,232 \pi^{32} r_1^8)\Big)^{1/3}\Big/ \left(3 \times 2^{1/3} (1 - 16 \pi^4 + 16 \pi^4 r_1^2)\right)\Bigg) +$$
$$\frac{1}{2} \sqrt{}\left(\frac{8 \pi^2 (3 - 16 \pi^4 + 32 \pi^4 r_1^2)^2}{(1 - 16 \pi^4 + 16 \pi^4 r_1^2)^2} - \frac{16 \pi^2 (13 - 16 \pi^4 + 64 \pi^4 r_1^2)}{3 (1 - 16 \pi^4 + 16 \pi^4 r_1^2)} -\right.$$
$$\Big(2^{1/3} (16 \pi^4 - 512 \pi^8 + 4096 \pi^{12} + 2048 \pi^8 r_1^2 - 32\,768 \pi^{12} r_1^2 + 65\,536 \pi^{12} r_1^4)\Big)\Big/$$
$$\Big(3 (1 - 16 \pi^4 + 16 \pi^4 r_1^2) \Big(128 \pi^6 - 6144 \pi^{10} + 98\,304 \pi^{14} - 524\,288 \pi^{18} + 24\,576 \pi^{10} r_1^2 +$$
$$6\,291\,456 \pi^{14} r_1^2 + 6\,291\,456 \pi^{18} r_1^2 + 1\,572\,864 \pi^{14} r_1^4 - 25\,165\,824 \pi^{18} r_1^4 +$$
$$33\,554\,432 \pi^{18} r_1^6 + \sqrt{}\Big(1\,811\,939\,328 \pi^{20} r_1^2 - 86\,973\,087\,744 \pi^{24} r_1^2 +$$
$$1\,391\,569\,403\,904 \pi^{28} r_1^2 - 7\,421\,703\,487\,488 \pi^{32} r_1^2 + 347\,892\,350\,976 \pi^{24} r_1^4 +$$
$$38\,963\,943\,309\,312 \pi^{28} r_1^4 + 89\,060\,441\,849\,856 \pi^{32} r_1^4 + 22\,265\,110\,462\,464$$
$$\pi^{28} r_1^6 - 356\,241\,767\,399\,424 \pi^{32} r_1^6 + 474\,989\,023\,199\,232 \pi^{32} r_1^8)\Big)^{1/3}\Big) -$$
$$\Big(128 \pi^6 - 6144 \pi^{10} + 98\,304 \pi^{14} - 524\,288 \pi^{18} + 24\,576 \pi^{10} r_1^2 + 6\,291\,456 \pi^{14} r_1^2 +$$
$$6\,291\,456 \pi^{18} r_1^2 + 1\,572\,864 \pi^{14} r_1^4 - 25\,165\,824 \pi^{18} r_1^4 + 33\,554\,432 \pi^{18} r_1^6 +$$
$$\sqrt{}\Big(1\,811\,939\,328 \pi^{20} r_1^2 - 86\,973\,087\,744 \pi^{24} r_1^2 + 1\,391\,569\,403\,904 \pi^{28}$$
$$r_1^2 - 7\,421\,703\,487\,488 \pi^{32} r_1^2 + 347\,892\,350\,976 \pi^{24} r_1^4 + 38\,963\,943\,309\,312$$
$$\pi^{28} r_1^4 + 89\,060\,441\,849\,856 \pi^{32} r_1^4 + 22\,265\,110\,462\,464 \pi^{28}$$
$$r_1^6 - 356\,241\,767\,399\,424 \pi^{32} r_1^6 + 474\,989\,023\,199\,232 \pi^{32} r_1^8)\Big)^{1/3}\Big/$$
$$\left(3 \times 2^{1/3} (1 - 16 \pi^4 + 16 \pi^4 r_1^2)\right) + \left(\frac{768 \pi^3}{1 - 16 \pi^4 + 16 \pi^4 r_1^2} + \frac{64 \pi^3 (3 - 16 \pi^4 + 32 \pi^4 r_1^2)^3}{(1 - 16 \pi^4 + 16 \pi^4 r_1^2)^3} -\right.$$
$$\left.\frac{64 \pi^3 (3 - 16 \pi^4 + 32 \pi^4 r_1^2) (13 - 16 \pi^4 + 64 \pi^4 r_1^2)}{(1 - 16 \pi^4 + 16 \pi^4 r_1^2)^2}\right)\Big/$$

$$\left(4\sqrt{\left(\frac{4\pi^2\left(3-16\pi^4+32\pi^4 r_1^2\right)^2}{\left(1-16\pi^4+16\pi^4 r_1^2\right)^2}-\frac{8\pi^2\left(13-16\pi^4+64\pi^4 r_1^2\right)}{3\left(1-16\pi^4+16\pi^4 r_1^2\right)}+\right.}\right.$$

$$\left(2^{1/3}\left(16\pi^4-512\pi^8+4096\pi^{12}+2048\pi^8 r_1^2-32\,768\pi^{12} r_1^2+65\,536\pi^{12} r_1^4\right)\right)\Big/$$

$$\left(3\left(1-16\pi^4+16\pi^4 r_1^2\right)\right.$$

$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\pi^{14} r_1^2+\right.$$

$$6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+33\,554\,432\pi^{18} r_1^6+$$

$$\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+1\,391\,569\,403\,904\pi^{28} r_1^2-\right.}$$

$$7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976\pi^{24} r_1^4+38\,963\,943\,309\,312$$

$$\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+22\,265\,110\,462\,464\pi^{28} r_1^6-$$

$$\left.\left.356\,241\,767\,399\,424\pi^{32} r_1^6+474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Bigg)+$$

$$\left(128\pi^6-6144\pi^{10}+98\,304\pi^{14}-524\,288\pi^{18}+24\,576\pi^{10} r_1^2+6\,291\,456\right.$$

$$\pi^{14} r_1^2+6\,291\,456\pi^{18} r_1^2+1\,572\,864\pi^{14} r_1^4-25\,165\,824\pi^{18} r_1^4+$$

$$33\,554\,432\pi^{18} r_1^6+\sqrt{\left(1\,811\,939\,328\pi^{20} r_1^2-86\,973\,087\,744\pi^{24} r_1^2+\right.}$$

$$1\,391\,569\,403\,904\pi^{28} r_1^2-7\,421\,703\,487\,488\pi^{32} r_1^2+347\,892\,350\,976$$

$$\pi^{24} r_1^4+38\,963\,943\,309\,312\pi^{28} r_1^4+89\,060\,441\,849\,856\pi^{32} r_1^4+$$

$$22\,265\,110\,462\,464\pi^{28} r_1^6-356\,241\,767\,399\,424\pi^{32} r_1^6+$$

$$\left.\left.\left.\left.474\,989\,023\,199\,232\pi^{32} r_1^8\right)\right)^{1/3}\Big/\left(3\times 2^{1/3}\left(1-16\pi^4+16\pi^4 r_1^2\right)\right)\right)\right)\right)==$$

$$\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\right.}$$

$$\left.\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-$$

$$\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\pi^8 r^4+96\sqrt{3}\,\pi^4\sqrt{r^4+6912\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)\Bigg)\Bigg),\ r\Bigg]$$

$$v=\lambda\,\nu=r\,(1/(1080/\pi)\,\theta)=(1/(1080/\pi))\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \theta\right]$$

E = h ν = h n f = m c^2

Solve[h (1 / (1080 / π) θ) == m c^2, m]

$$\{\{m\to 2.14457\times 10^{-53}\,\theta\}\}$$

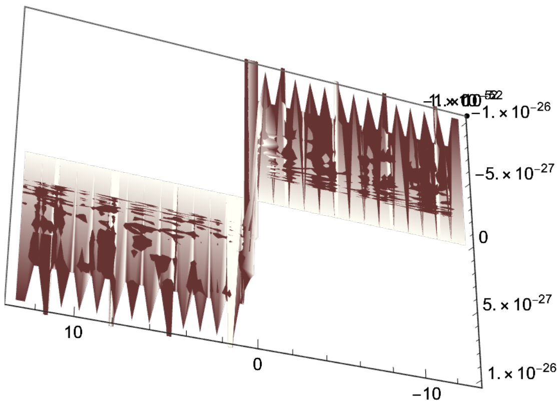
$$m*a=\left(\frac{1}{1\,166\,400}\,\pi^2\left(-\frac{15\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)^2}{32\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{7/2}}+\frac{3\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\left(8\,\pi\,\theta-2\,\theta^2\right)}{16\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+\frac{3\,(8\,\pi\,r-4\,r\,\theta)\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{4\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{3\,r^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)^2}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{(8\,\pi\,r-4\,r\,\theta)^2}{4\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{(8\,\pi-4\,\theta)\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\left(8\,\pi\,\theta-2\,\theta^2\right)}{4\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{1}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)$$

c := (2.99792458 * 10 ^ 8)

h := (6.626068 * 10 ^ -34)

$$\text{RevolutionPlot3D}\left[2.144571844054625\grave{}*\text{^}-53\,\theta\,\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\right.$$

$$\left.\{r,-13,13\},\{\theta,-10\text{^}-53,10\text{^}-53\}\right]$$

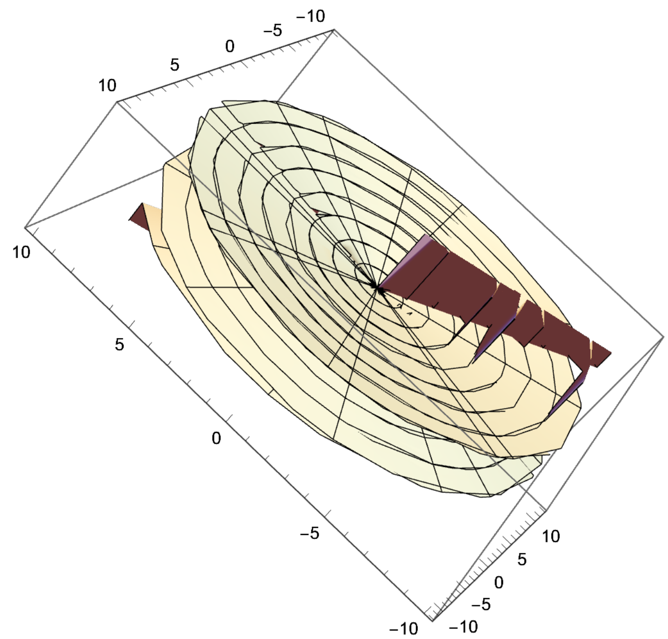


$$\int m\,\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\,d\theta$$

$$\frac{m\,\sqrt{\theta}\,\sqrt{\frac{(-2\,\pi+\theta)^2}{(4\,\pi-\theta)\,\theta^2}}\,\left(4\,\pi-\theta+2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{ArcSin}\left[\frac{\sqrt{\theta}}{2\,\sqrt{\pi}}\right]\right)}{2\,\pi\,(-2\,\pi+\theta)}$$

$$\text{RevolutionPlot3D}\left[\frac{m\sqrt{\theta}\sqrt{\frac{(-2\pi+\theta)^2}{(4\pi-\theta)\,\theta^2}}\left(4\pi-\theta+2\sqrt{(4\pi-\theta)\,\theta}\,\text{ArcSin}\left[\frac{\sqrt{\theta}}{2\sqrt{\pi}}\right]\right)}{2\pi(-2\pi+\theta)},\right.$$

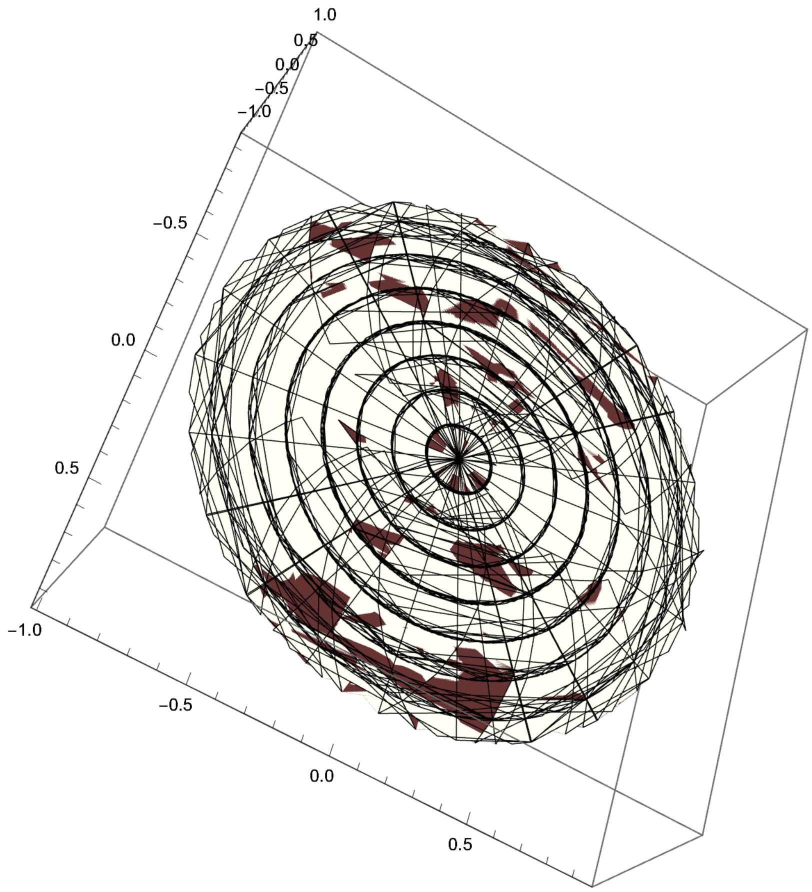
$$\left.\{m,-10,10\},\{\theta,-13,13\}\right]$$



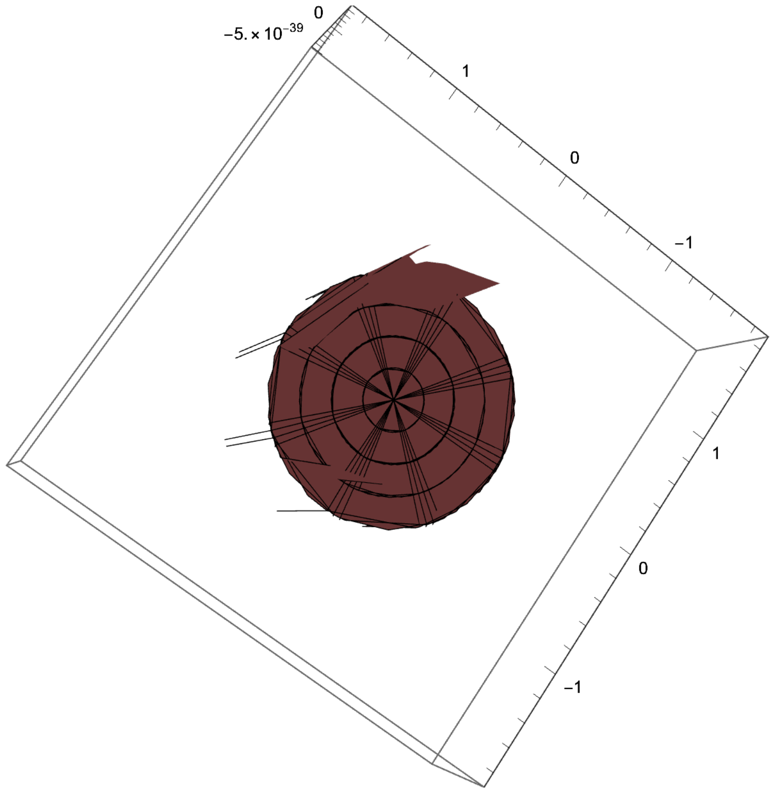
$$\text{RevolutionPlot3D}\left[2.144571844054625\text{`*}\wedge\text{-}53\,\theta\,\frac{r\,(2\pi-\theta)}{2\pi\theta\sqrt{r^2\,(4\pi-\theta)\,\theta}},\right.$$

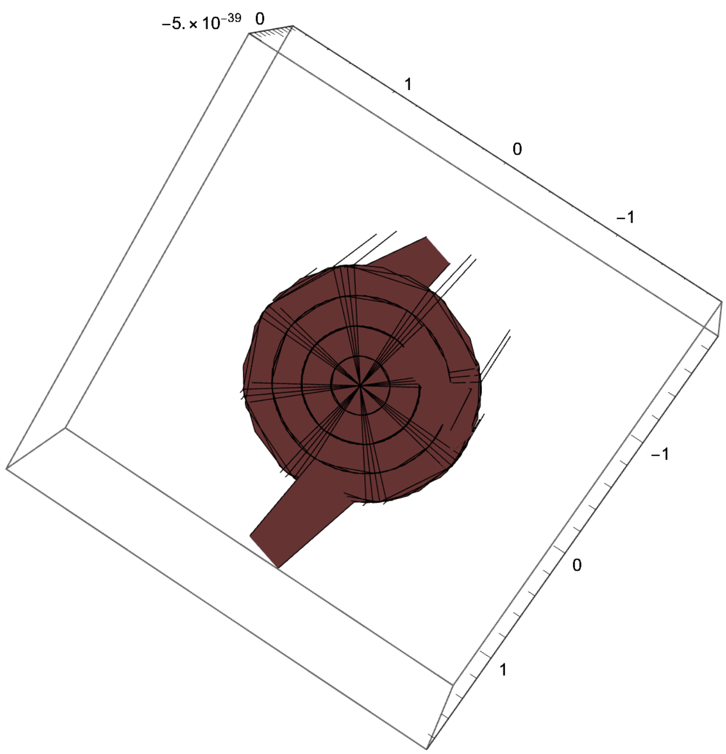
$$\left.\{r,-13,13\},\{\theta,-10^{\wedge}-53,10^{\wedge}-53\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{r^{\wedge}100\,000\,000\,000\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^{2}\,(4\,\pi-\theta)\,\theta}},\,\{r,-13,13\},\,\{\theta,-13,13\}\right]$$

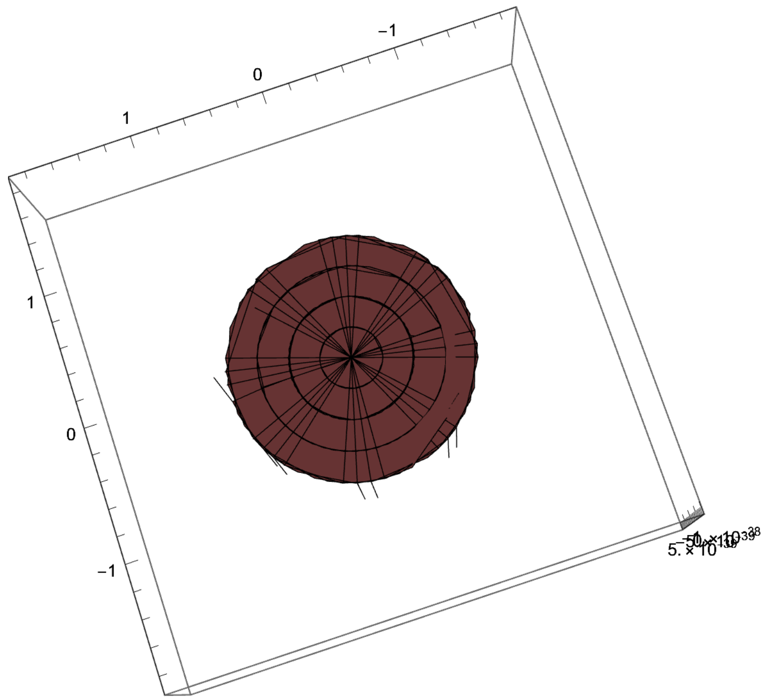


$$\text{RevolutionPlot3D}\left[\frac{r^{\wedge}1155\ (2\ \pi - \theta)}{2\ \pi\ \theta\ \sqrt{r^2\ (4\ \pi - \theta)\ \theta}}, \{r, -13, 13\}, \{\theta, -13, 13\}\right]$$

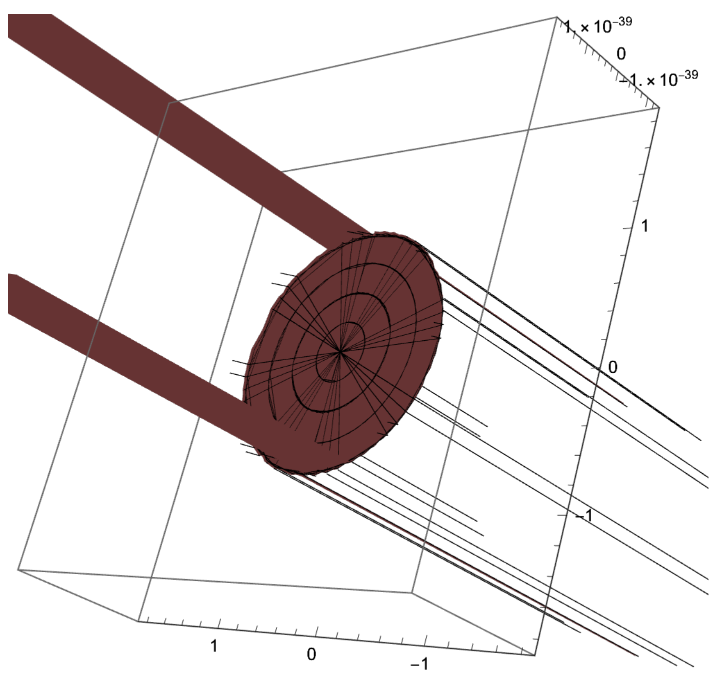




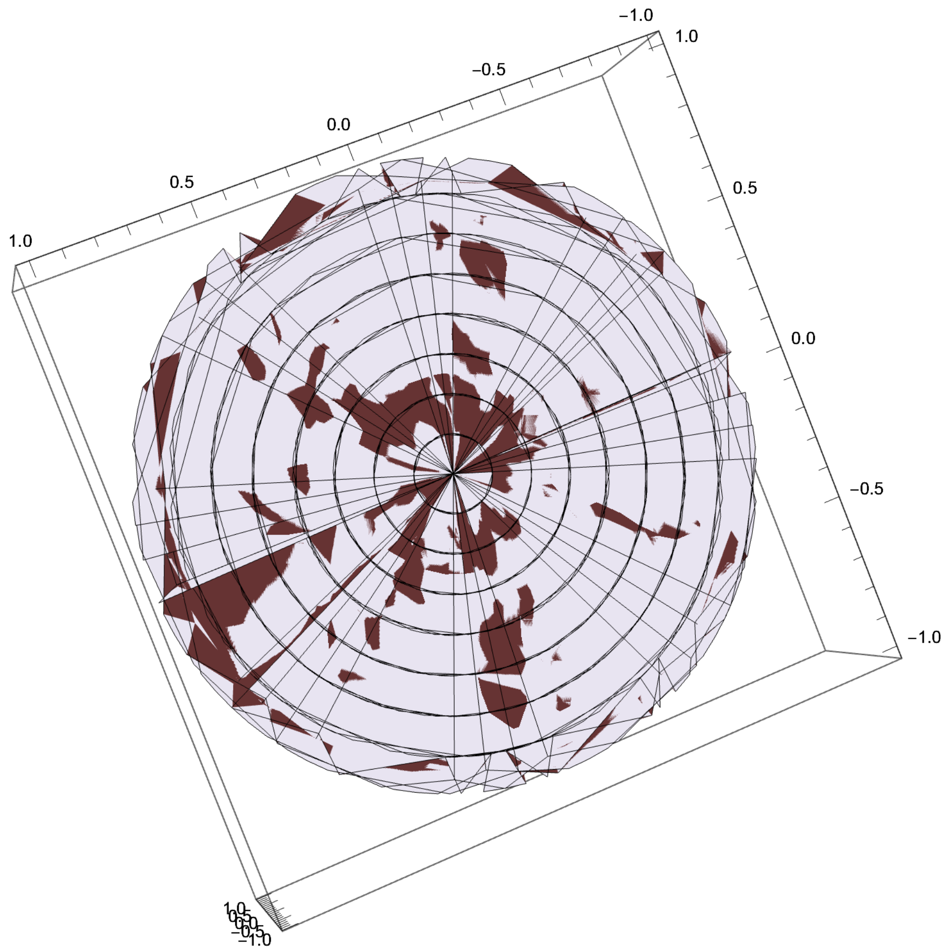
$$\texttt{RevolutionPlot3D}\left[\frac{r^{\wedge}1157\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{r,-13,13\},\ \{\theta,-13,13\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\frac{r^{\wedge}1182\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{r,-13,13\},\ \{\theta,-13,13\}\right]$$

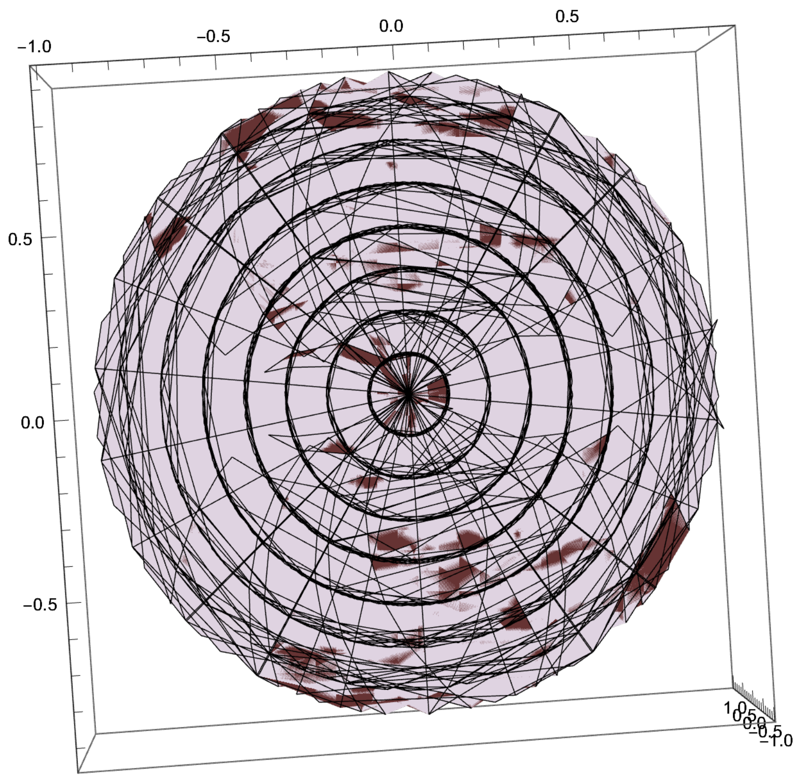


$$\text{RevolutionPlot3D}\left[\frac{r^{\wedge}99\,999\,999\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^{2}\,(4\,\pi-\theta)\,\theta}},\{r,-13,13\},\{\theta,-13,13\}\right]$$

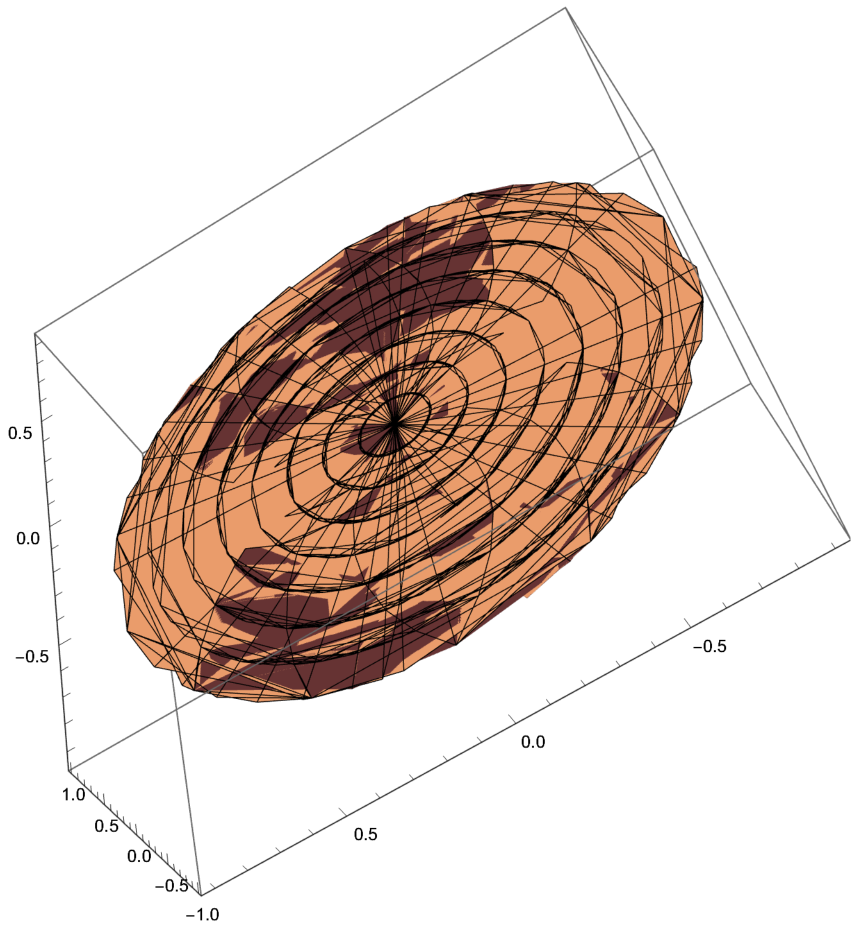


$$\text{RevolutionPlot3D}\left[\frac{1}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right.$$

$$\left. r^{\wedge}100\,000\,000\,000\,000\,000\,000\,000\,000\,000\,199\,999\,999\,(2\,\pi-r),\{r,-13,13\},\{\theta,-13,13\}\right]$$

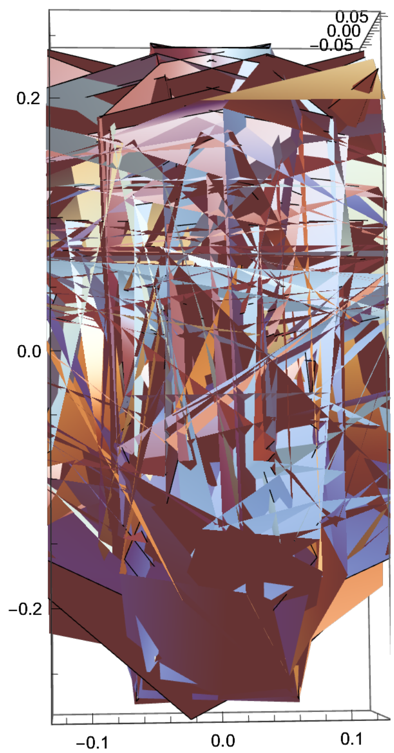


```
RevolutionPlot3D[
 r ^ 1 000 000 000 000 000 000 000 000 000 000 000 000 000 000 199 999 999 (2 π - r)
 ──────────────────────────────────────────────────────────────────────────────────── ,
                               2 π θ √(r² (4 π - θ) θ)
 {r, -13, 13}, {θ, -4 π, 4 π}]
```



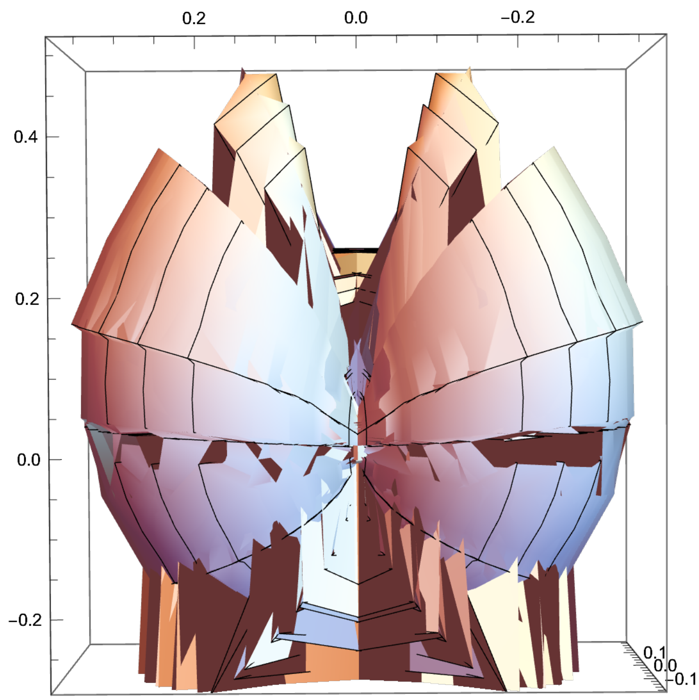
$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,\,-3600,\,3600\},\,\{\beta,\,-3600,\,3600\}\right]$$



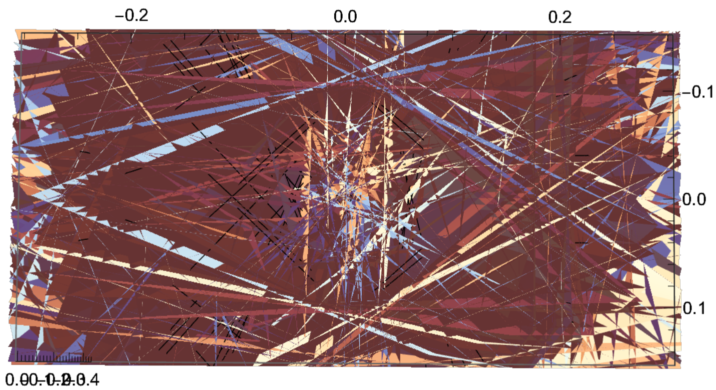
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,-360,360\},\{\beta,-360,360\}\right]$$



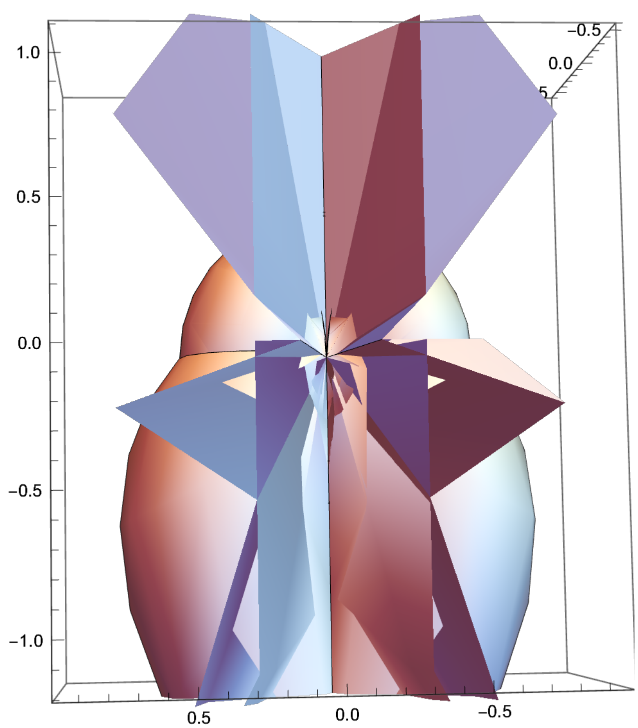
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,-10,10\text{^}4\},\{\beta,-10\text{^}9,10\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,\,-4\,\pi,\,4\,\pi\},\,\{\beta,\,-4\,\pi,\,4\,\pi\}\right]$$



The Four Noble Truths of θ, The

Hologram of Vision

by Parker Matthew Davis Emmerson

Postulates, polar coordinates, etc.

$$\mathrm{Sin}[\beta] = \eta / r \tag{113}$$

$$\mathrm{Tan}[\beta] = \eta / r_1 \tag{114}$$

$$\mathrm{Cos}[\beta] = r_1 / r \tag{115}$$

$$\eta = r\,\mathrm{Sin}[\beta] \tag{116}$$

r = η / Sin[β]

Cos[β] = r₁ / r = r₁ / (η / Sin[β])

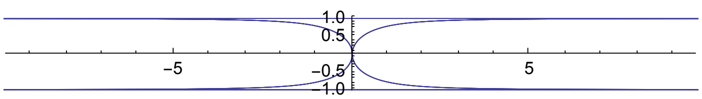
Simplify[r₁ / (η / Sin[β])]

$$\frac{\mathrm{Sin}[\beta]\, r_1}{\eta}$$

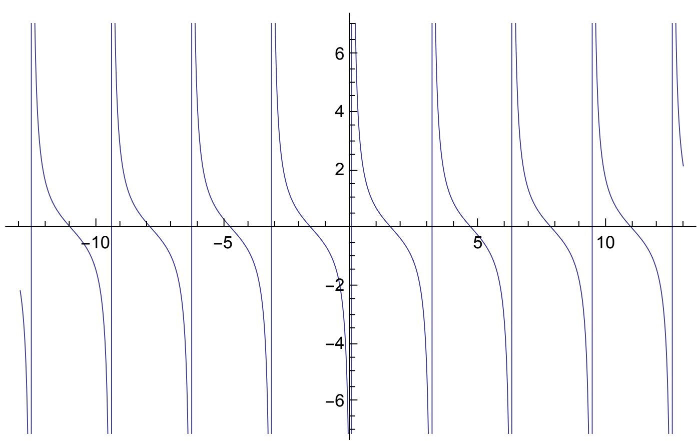
$$\frac{\mathrm{Sin}[\beta]\, r_1}{\eta} = \mathrm{Cos}[\beta]$$

$$\mathrm{Cos}[\beta] / \mathrm{Sin}[\beta] = \frac{r_1}{\eta}$$

PolarPlot[Cos[β] / Sin[β], {β, -13, 13}]



Plot[Cos[β] / Sin[β], {β, -13, 13}]



Solve$\left[\theta\, r == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)^{\wedge}2 - \eta^{\wedge}2)}\,,\,\eta\right]$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\},\left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

go from the philosophy to the axioms / geometric description,
backed up with psych and philosophy

take the geometric situation described and working out what follows.

$$\eta == \frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta - \left(\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi} = \mathrm{rate} * \mathrm{time} = \mathrm{rate} * 6\,((180/\pi)\,\theta) \tag{117}$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\},\left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\} \tag{118}$$

$$\left\{\left\{r_1 \to -\sqrt{r^2 - \eta^2}\right\},\left\{r_1 \to \sqrt{r^2 - \eta^2}\right\}\right\} \tag{119}$$

$$r_1 = \sqrt{r^2 - \eta^2} = r\,\mathrm{Cos}[\beta] \tag{120}$$

There are special cases of the system when $h = r$, when $\beta = \theta$,
when $r_1 = r$ (the initial condition), and when $r_1 = h$.

Usually, we would think that $\beta \le \pi/2$, whereas $\theta \le 4\,\pi$. (121)

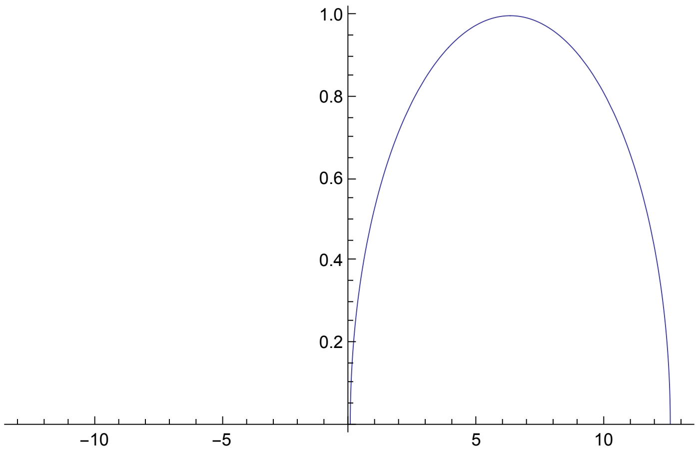
We can show that $\theta \le 4\,\pi$ by setting r equal to one in the equation $r = \dfrac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}$

$\beta \le \pi/2$ comes from the fact that when the cone folds all the way up,
it makes a right angle with the x axis.

Solve$\left[1 == \dfrac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}},\,\eta\right]$

$$\left\{\left\{\eta \to \frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right\}\right\}$$

$$\text{Plot}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}, \{\theta, -13, 13\}\right]$$



There is a particularly interesting special case of the system, however, when the square of the height of the cone is equal to the area of the base of the cone.

So What's the Point? How to Find the Four Noble θ Solutions, or Truths of θ.

$$r_1 = \sqrt{r^2 - \eta^2}$$

$$\eta = r\,\text{Sin}[\beta]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right\}\right\}$$

$$\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)\text{^}2 = \eta\text{^}2$$

$$\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)\text{^}2$$

$$\frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2}$$

$$\frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2} = \pi\,(r_1\text{^}2) = \pi\left(r^2 - \eta^2\right) = \pi\left(r^2 - \frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2}\right)$$

$$\text{Solve}\left[\pi\left(r^2-\frac{4\pi r^2\theta-r^2\theta^2}{4\pi^2}\right)==\frac{4\pi r^2\theta-r^2\theta^2}{4\pi^2},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}\right\},\ \left\{\theta\to\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)}\right\}\right\}$$

$$N\left[\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}\right]$$

3.19576

$$N\left[\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)}\right]$$

9.37061

$$\text{Solve}\left[\pi\left(r^2-\frac{4\pi r^2\theta-r^2\theta^2}{4\pi^2}\right)==\frac{4\pi r^2\theta-r^2\theta^2}{4\pi^2},\ r\right]$$

$$\{\{r\to 0\},\ \{r\to 0\}\}$$

Thus, we have shown that a point, by definition, is the place at which the square of the height of a cone is equal to the area of the base of the cone when talking about a transition or even a translation of points along an axis. We have also shown that the point has an inherent angle of $\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)}$ and $\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}$radians.

So, what does θ r look like now?

$$\theta\, r = r\,\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)},\ r\,\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}$$

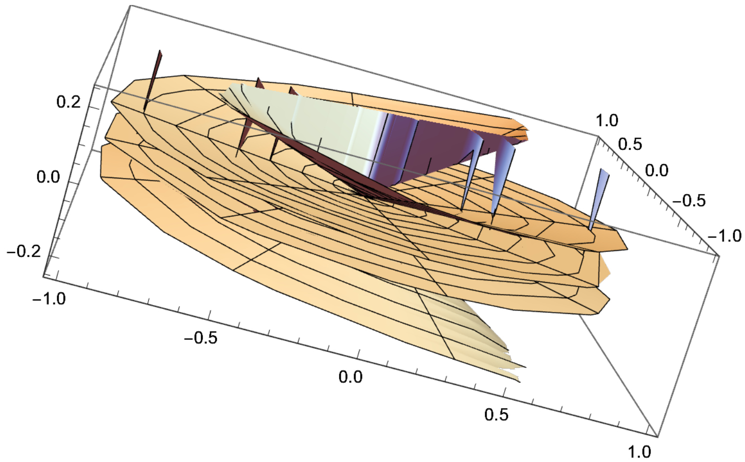
$$v=\lambda\nu=r\,(1/(1080/\pi)\,\theta)=D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\ \theta\right]$$

The velocity of η is equal to the first derivative of η with respect to time.

$$D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\frac{4\pi r^2-2r^2\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

$$\texttt{RevolutionPlot3D}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{r,-1,1\},\ \{\theta,-13,13\}\right]$$



$$\texttt{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==r\,(1/(1080/\pi)\,\theta),\ \theta\right]$$

$$\Big\{\Big\{\theta\to\pi-\frac{1}{2}\sqrt{\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+}$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}+$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}\Bigg)-$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{388\,800}{\pi^4}+8\,\pi^2-\frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+}$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\left(\frac{4\,665\,600}{\pi^3}+64\,\pi^3\right)\Big/\ \Bigg(4\sqrt{\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000}$$

$$\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\right.}$$

$$\left.\pi^{24}\right)\Big)\Big)^{1/3}+\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+$$

$$503\,884\,800\,\pi^{12}+\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+\right.}$$

$$253\,899\,891\,671\,040\,000\,\pi^{24}\Big)\Big)\Big)^{1/3}\Big)\Big)\Big)\Big\},$$

$$\Big\{\Theta \to \pi - \frac{1}{2}\sqrt{\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3} +$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{2}\sqrt{\Big(-\frac{388\,800}{\pi^4} + 8\,\pi^2 - \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3} -$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3} -$$

$$\Big(\frac{4\,665\,600}{\pi^3} + 64\,\pi^3\Big)\Big/\,\Big(4\sqrt{\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000}$$

$$\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000}$$

$$\pi^{24}\Big)\Big)\Big)^{1/3} + \frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 +$$

$$503\,884\,800\,\pi^{12} + \sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} +}$$

$$253\,899\,891\,671\,040\,000\,\pi^{24}\Big)\Big)\Big)^{1/3}\Big)\Big)\Big)\Big\},$$

$$\Big\{\Theta \to \pi + \frac{1}{2}\sqrt{\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3} +$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{2}\sqrt{\Big(-\frac{388\,800}{\pi^4} + 8\,\pi^2 - \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\Big)}\Big)\Big)^{1/3} -$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})}\,)\,)^{1/3} +$$

$$\left(\frac{4\,665\,600}{\pi^3} + 64\,\pi^3\right) \Big/ \Bigg(4\sqrt{\Bigg(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000}$$

$$(2 \Big/ (49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000}$$

$$\pi^{24})\,)\,)^{1/3} + \frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,(49\,589\,822\,592\,000\,000 +$$

$$503\,884\,800\,\pi^{12} + \sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} +}$$

$$253\,899\,891\,671\,040\,000\,\pi^{24})\,)\,)^{1/3}\,)\,)\,)\,)\},$$

$$\Big\{\theta \to \pi + \frac{1}{2}\sqrt{\Bigg(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2 \Big/ (49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})}\,)\,)^{1/3} +$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})}\,)\,)^{1/3}\,\Big) +$$

$$\frac{1}{2}\sqrt{\Bigg(-\frac{388\,800}{\pi^4} + 8\,\pi^2 - \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2 \Big/ (49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +}$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})}\,)\,)^{1/3} -$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})}\,)\,)^{1/3} +$$

$$\left(\frac{4\,665\,600}{\pi^3} + 64\,\pi^3\right) \Big/ \Bigg(4\sqrt{\Bigg(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000}$$

$$(2 \Big/ (49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000}$$

$$\pi^{24})\,)\,)^{1/3} + \frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,(49\,589\,822\,592\,000\,000 +$$

$$503\,884\,800\,\pi^{12} + \sqrt{(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} +}$$

$$253\,899\,891\,671\,040\,000\,\pi^{24})\,)\,)^{1/3}\,)\,)\,)\,)\}\}$$

These are mathematical expressions of the reality of the four noble truths.

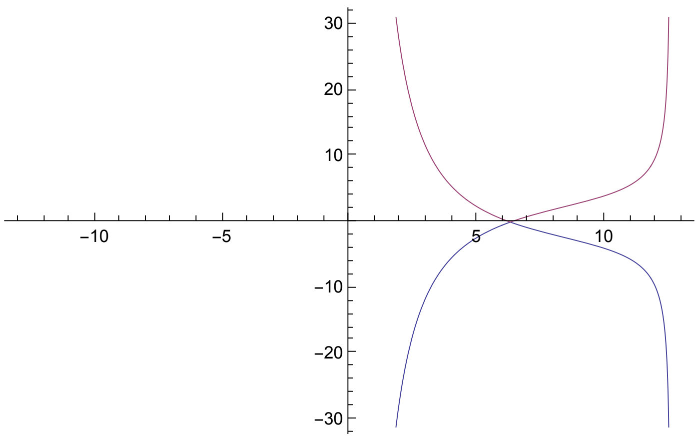
$$\text{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ r,\ \theta\right]$$

$$-\frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta - 2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)^{3/2}} + \frac{8\,\pi\,r - 4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

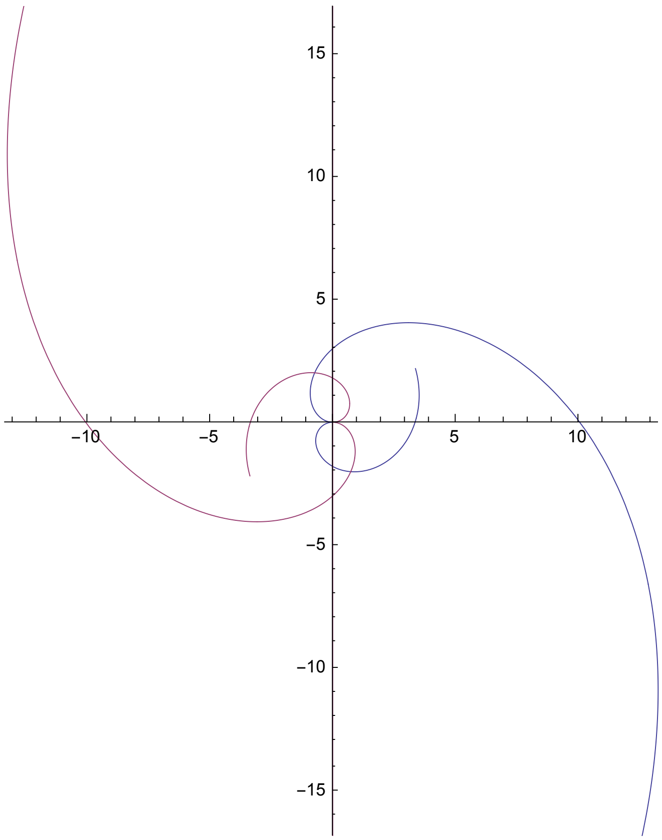
$$\text{Solve}\left[\left(-\frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta - 2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)^{3/2}} + \frac{8\,\pi\,r - 4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right) == r\,(1\,/\,(1080\,/\,\pi)\,\theta),\ r\right]$$

$$\left\{\left\{r \to -\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\},\ \left\{r \to \frac{270\,\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\}\right\}$$

$$\text{Plot}\left[\left\{-\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}},\ \frac{270\,\sqrt{\frac{1}{4\,\pi-\theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\left\{-\frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}},\ \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}}\right\},\ \{\theta,-10,10\}\right]$$



$$\sqrt{r^2-\eta^2}$$

$$\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}} = r = \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}}$$

$$\text{Solve}\left[\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}} == \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}},\ \eta\right]$$

$$\left\{\left\{\eta\to\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}}\right\}\right\}$$

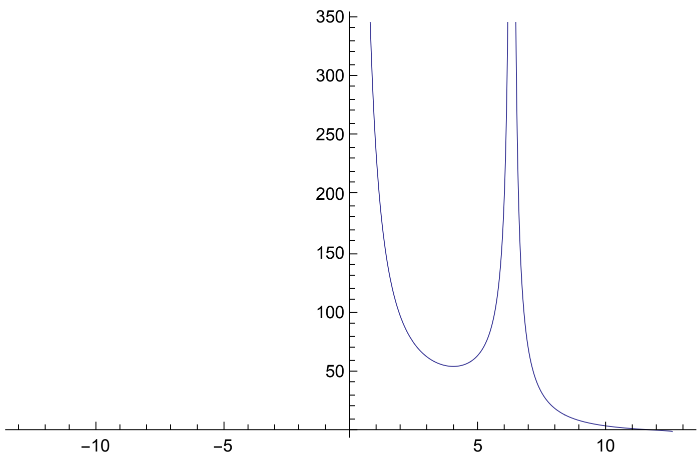
$\lambda\nu = r\ (1/(1080/\pi)\ \theta) =$

$$(1/(1080/\pi))\ D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right] = (1/(1080/\pi))\ D[\eta,\theta] = \text{velocity}$$

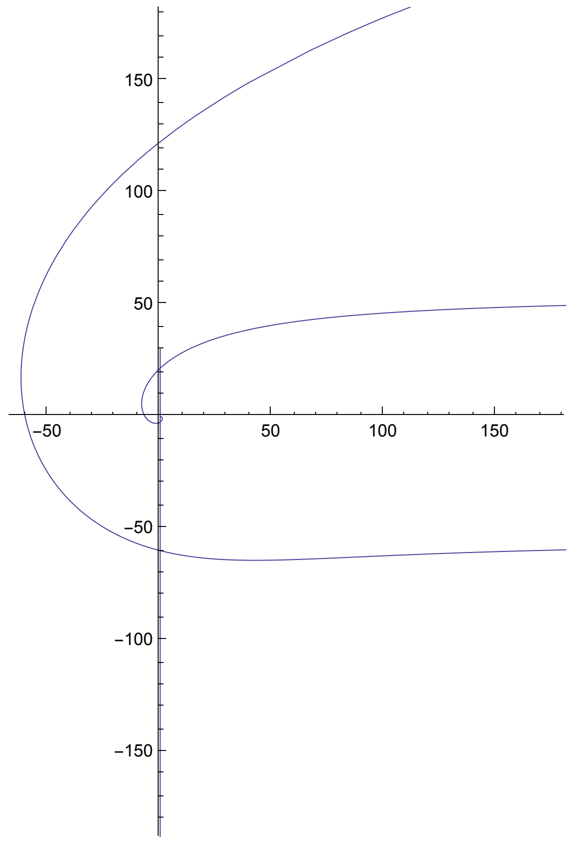
$$\text{Solve}\left[\text{D}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}},\theta\right]==\text{D}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right],r\right]$$

$$\left\{\left\{r\to-\frac{1080\sqrt{-\frac{8\pi^2}{\theta^3}+\frac{6\pi}{\theta^2}-\frac{1}{\theta}}}{\pi\ \sqrt{-8\pi^3+12\pi^2\theta-6\pi\theta^2+\theta^3}}\right\},\left\{r\to\frac{1080\sqrt{-\frac{8\pi^2}{\theta^3}+\frac{6\pi}{\theta^2}-\frac{1}{\theta}}}{\pi\ \sqrt{-8\pi^3+12\pi^2\theta-6\pi\theta^2+\theta^3}}\right\}\right\}$$

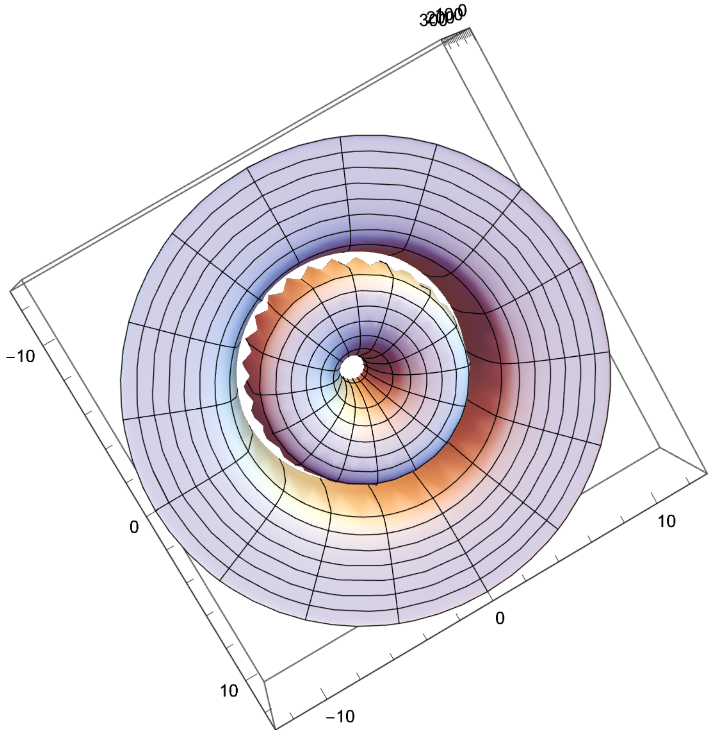
$$\text{Plot}\left[\frac{1080\sqrt{-\frac{8\pi^2}{\theta^3}+\frac{6\pi}{\theta^2}-\frac{1}{\theta}}}{\pi\ \sqrt{-8\pi^3+12\pi^2\theta-6\pi\theta^2+\theta^3}},\{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\frac{1080\sqrt{-\frac{8\pi^2}{\theta^3}+\frac{6\pi}{\theta^2}-\frac{1}{\theta}}}{\pi\sqrt{-8\pi^3+12\pi^2\theta-6\pi\theta^2+\theta^3}}, \{\theta, -13, 13\}\right]$$



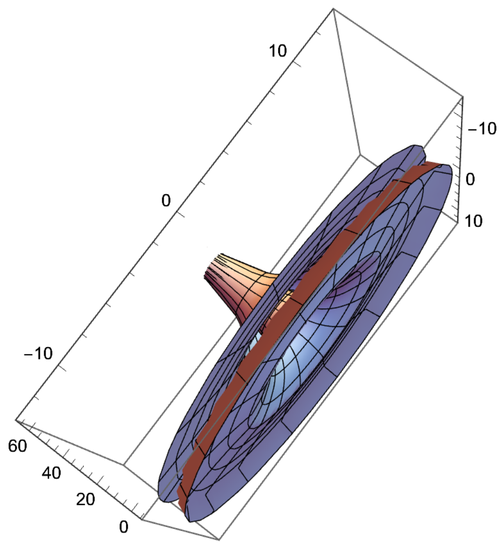
$$\text{RevolutionPlot3D}\left[\frac{1080\sqrt{-\frac{8\pi^2}{\theta^3}+\frac{6\pi}{\theta^2}-\frac{1}{\theta}}}{\pi\sqrt{-8\pi^3+12\pi^2\theta-6\pi\theta^2+\theta^3}},\{\theta,-13,13\}\right]$$



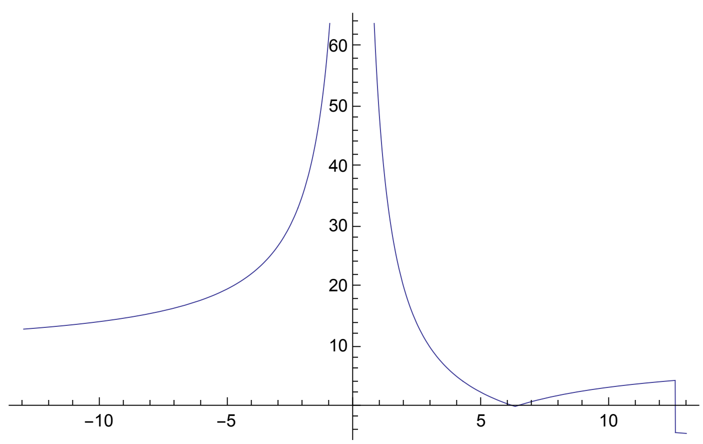
$$\text{Solve}\left[\text{D}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\theta\right]==\text{D}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right],\theta\right]$$

$$\{\{\theta\to\text{Root}[-4\,665\,600\,\pi+1\,166\,400\,\#1+4\pi^4 r^2\#1^3-4\pi^3 r^2\#1^4+\pi^2 r^2\#1^5\,\&,1]\},$$
$$\{\theta\to\text{Root}[-4\,665\,600\,\pi+1\,166\,400\,\#1+4\pi^4 r^2\#1^3-4\pi^3 r^2\#1^4+\pi^2 r^2\#1^5\,\&,2]\},$$
$$\{\theta\to\text{Root}[-4\,665\,600\,\pi+1\,166\,400\,\#1+4\pi^4 r^2\#1^3-4\pi^3 r^2\#1^4+\pi^2 r^2\#1^5\,\&,3]\},$$
$$\{\theta\to\text{Root}[-4\,665\,600\,\pi+1\,166\,400\,\#1+4\pi^4 r^2\#1^3-4\pi^3 r^2\#1^4+\pi^2 r^2\#1^5\,\&,4]\},$$
$$\{\theta\to\text{Root}[-4\,665\,600\,\pi+1\,166\,400\,\#1+4\pi^4 r^2\#1^3-4\pi^3 r^2\#1^4+\pi^2 r^2\#1^5\,\&,5]\}\}$$

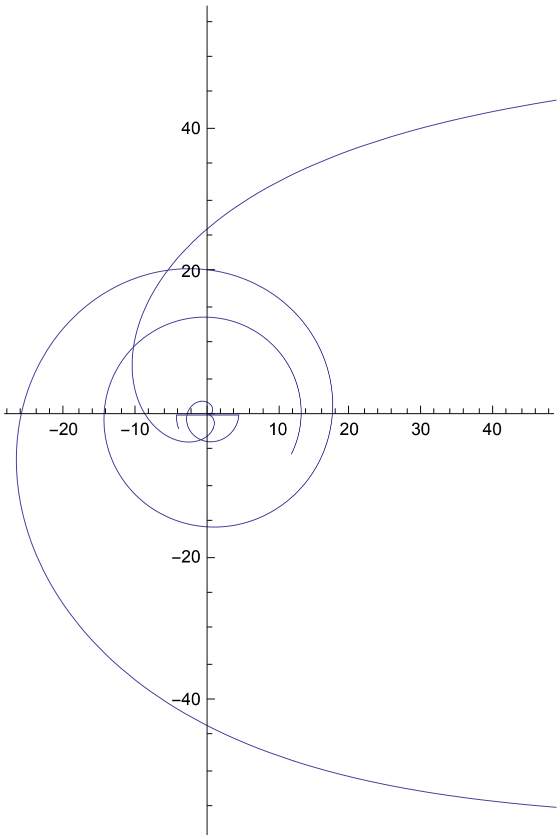
$$\texttt{RevolutionPlot3D}\left[\frac{135\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\pi^3\,\sqrt{\theta}},\,\{\theta,\,-13,\,13\}\right]$$



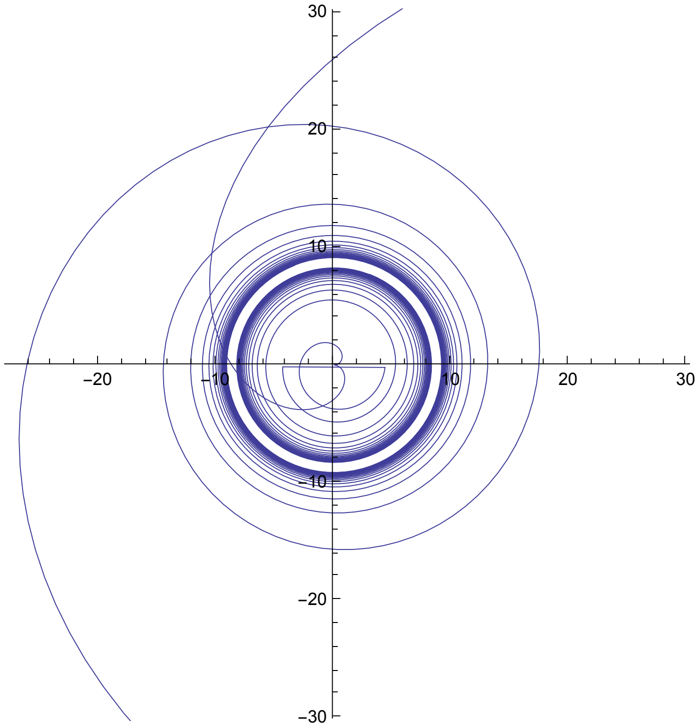
$$\texttt{Plot}\left[\frac{135\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\pi^3\,\sqrt{\theta}},\,\{\theta,\,-13,\,13\}\right]$$



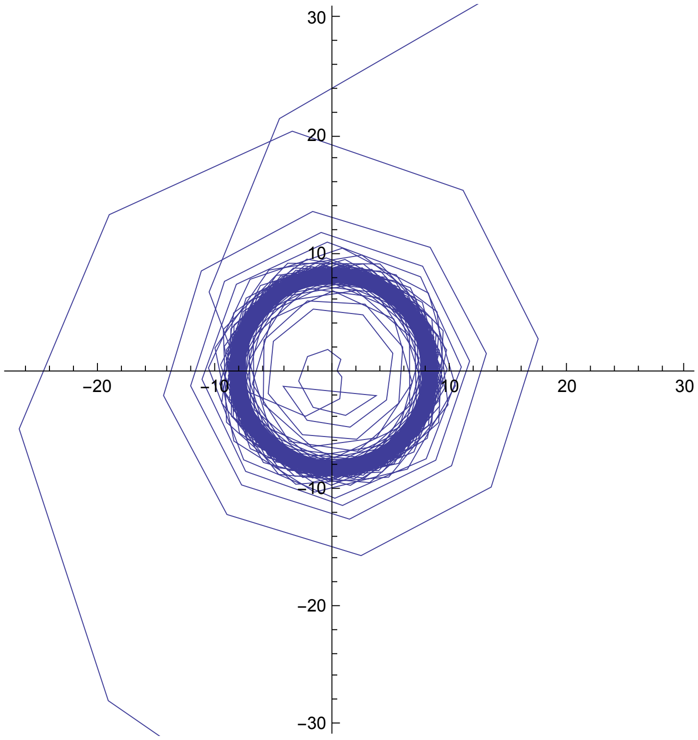
$$\texttt{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\ \{\theta,\ -13,\ 13\}\right]$$



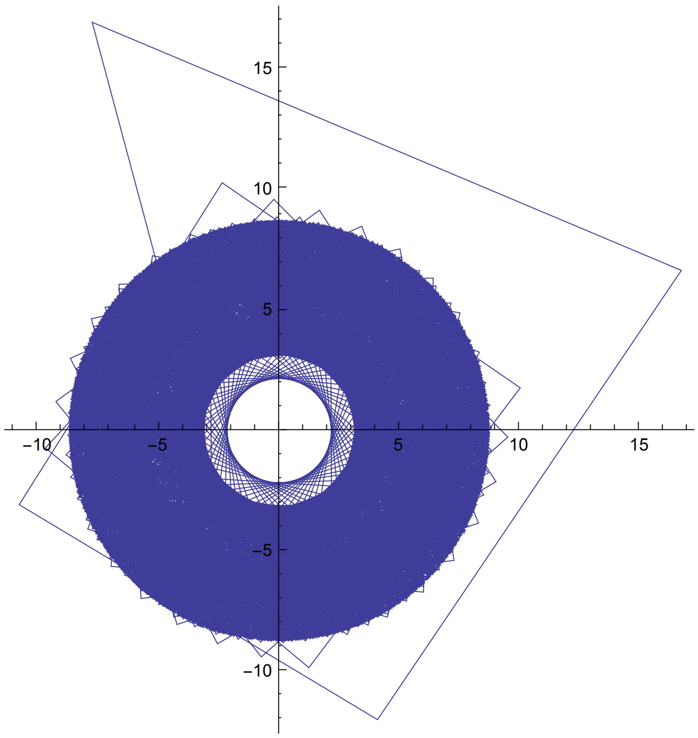
$$\texttt{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}},\ \{\theta,\ -130,\ 130\}\right]$$



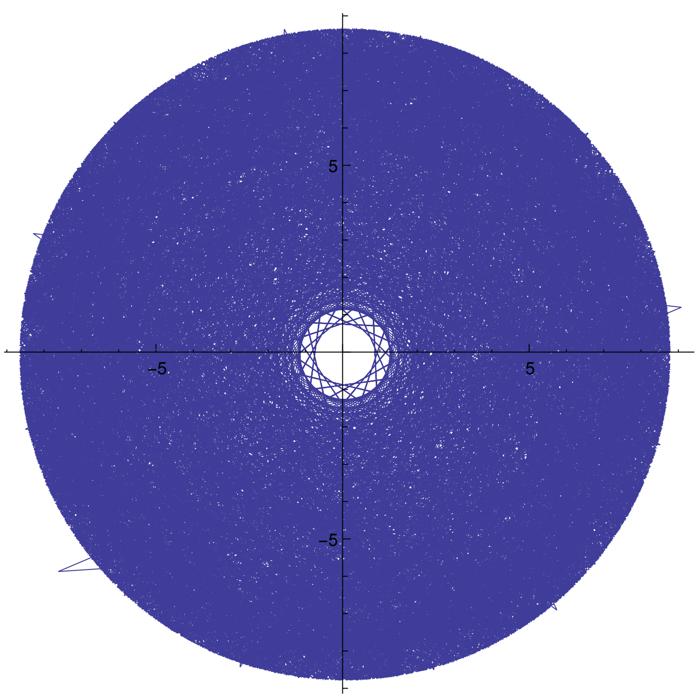
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -1300, 1300\}\right]$$



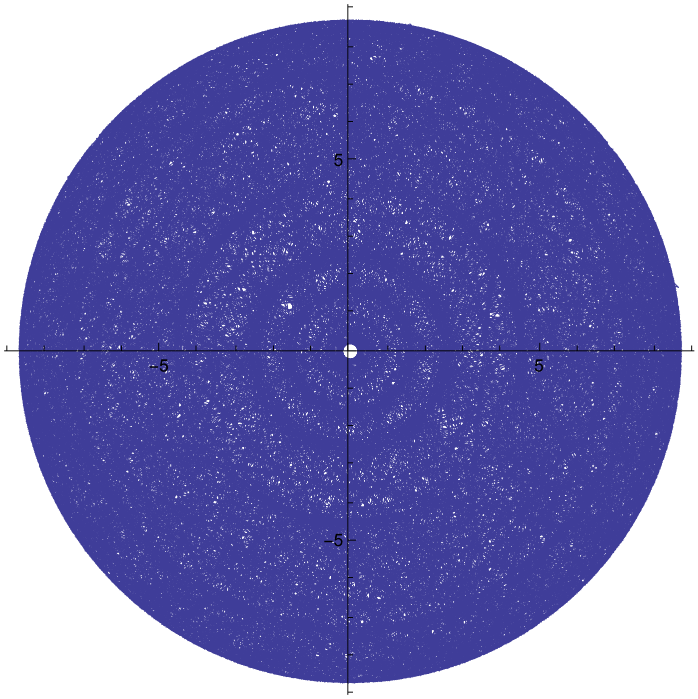
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\{\theta,-13000,13000\}\right]$$



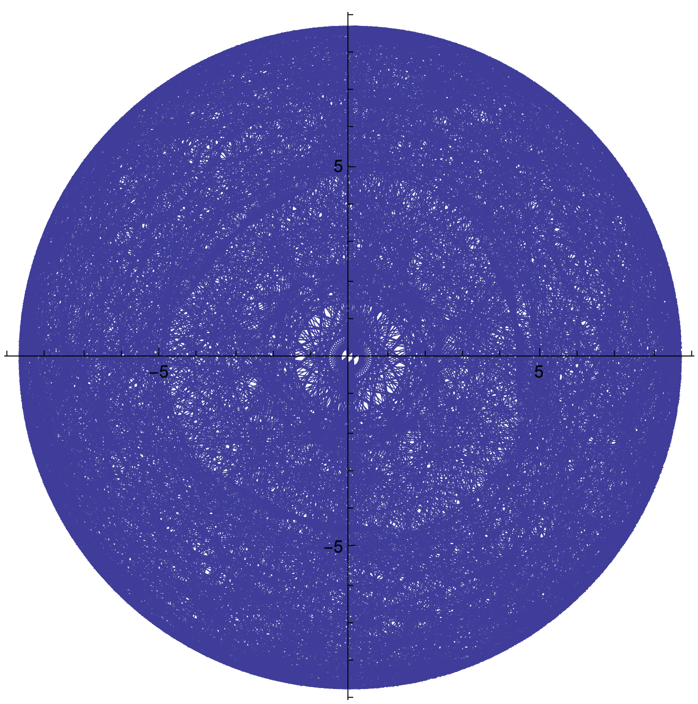
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\{\theta,-130000,130000\}\right]$$



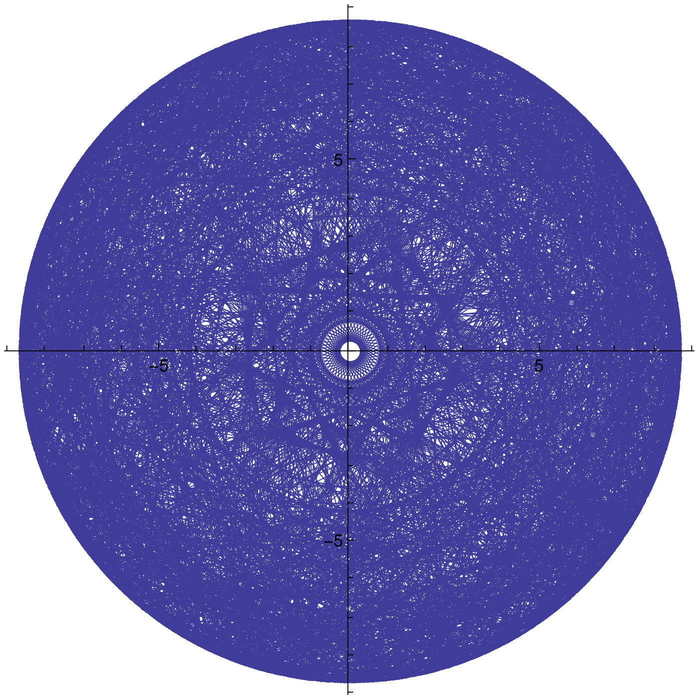
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -1\,300\,000, 1\,300\,000\}\right]$$



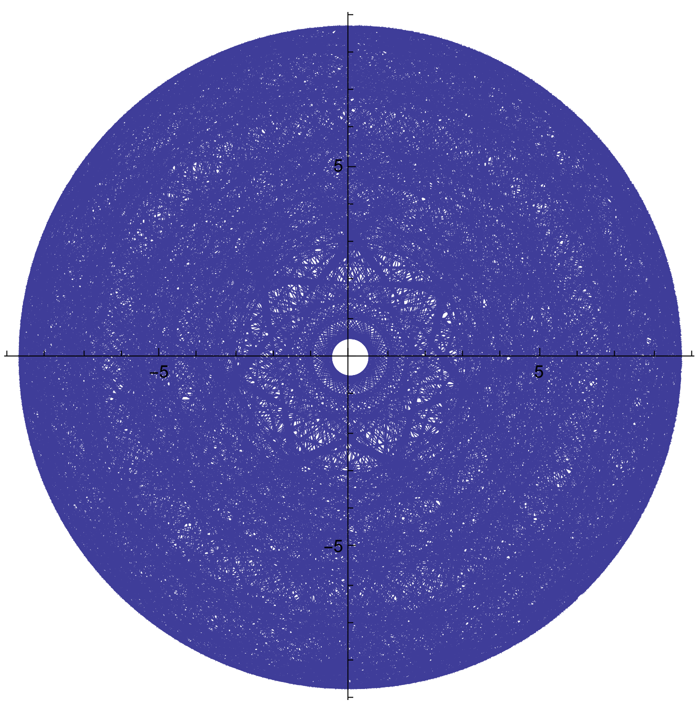
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -13\,000\,000, 13\,000\,000\}\right]$$



$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -130\,000\,000, 130\,000\,000\}\right]$$



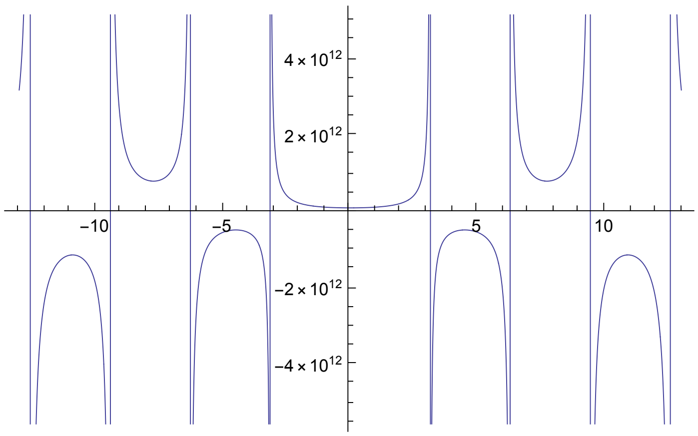
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -1\,300\,000\,000, 1\,300\,000\,000\}\right]$$



$$\text{Solve}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}==\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ r\right]$$

$$\left\{\left\{r\to\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}},\ \{\theta,-13,13\}\right]$$



Special Case 1, $\theta = \beta$

Some velocity, which is the first derivative of the equation for θ r, is the angular velocity, and is equal to a wavelength of frequency. Some velocity, which is the first derivative of r is the transitional velocity, and is equal to a the distance, r being a wavelength,

$$\left\{\left\{r\to-\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\},\left\{r\to\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}\right\}\right\}$$

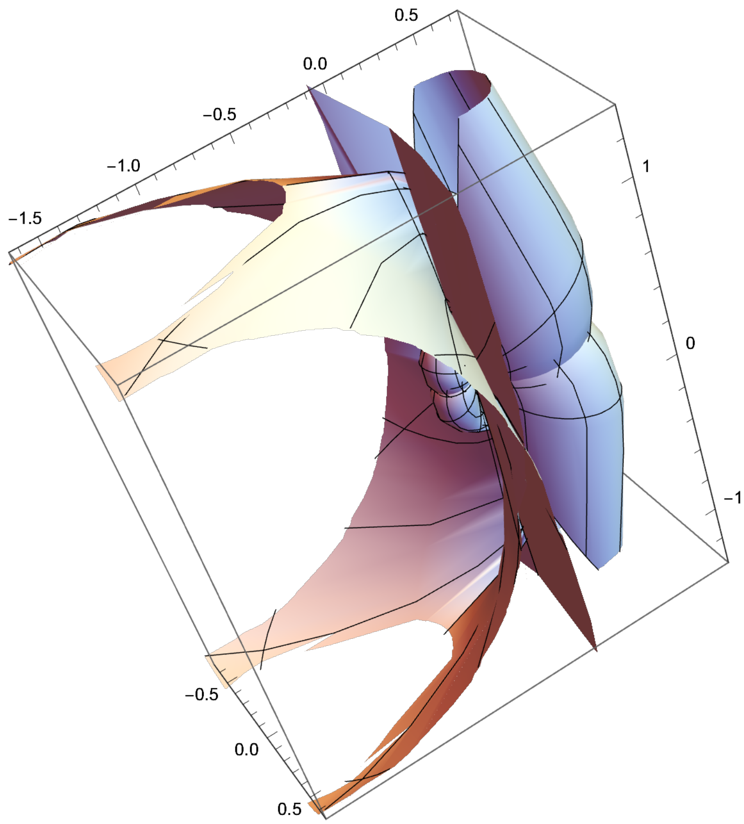
$\eta = r\ \text{Sin}[\beta]$

$$r\to\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=\frac{2\,\pi\,\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}$$

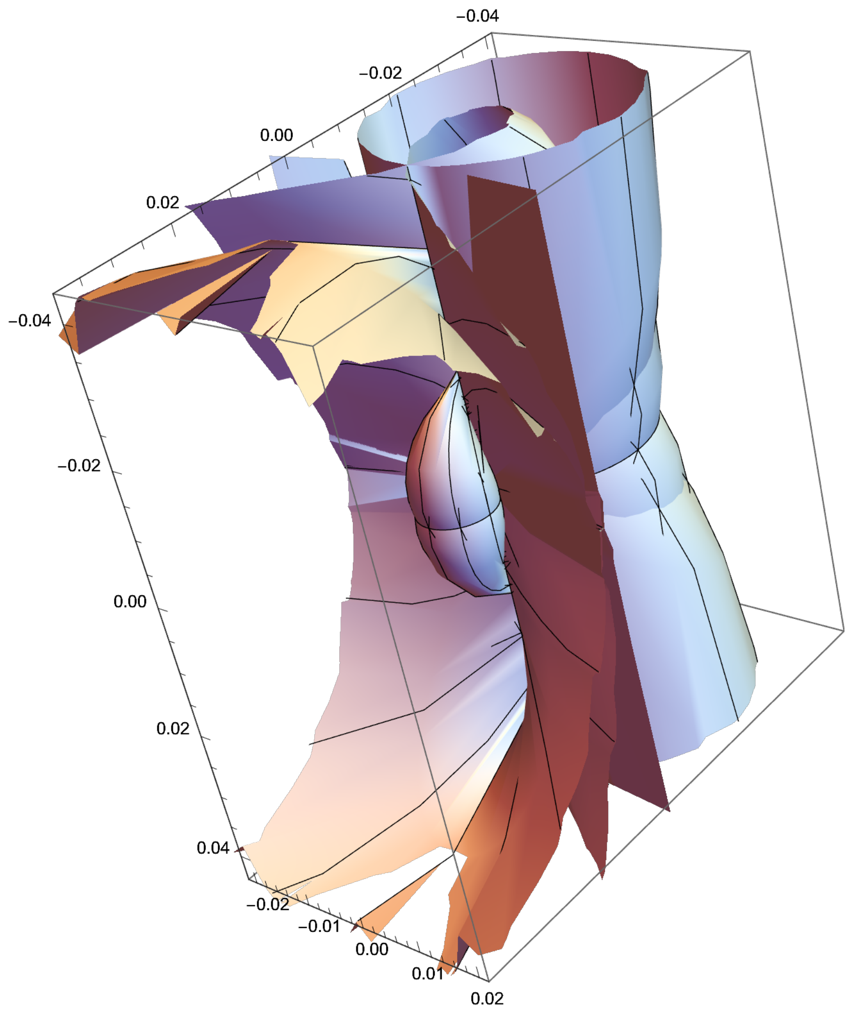
$$\left\{\left\{r\to-\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\},\left\{r\to\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\},\left\{r\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}\right\}$$

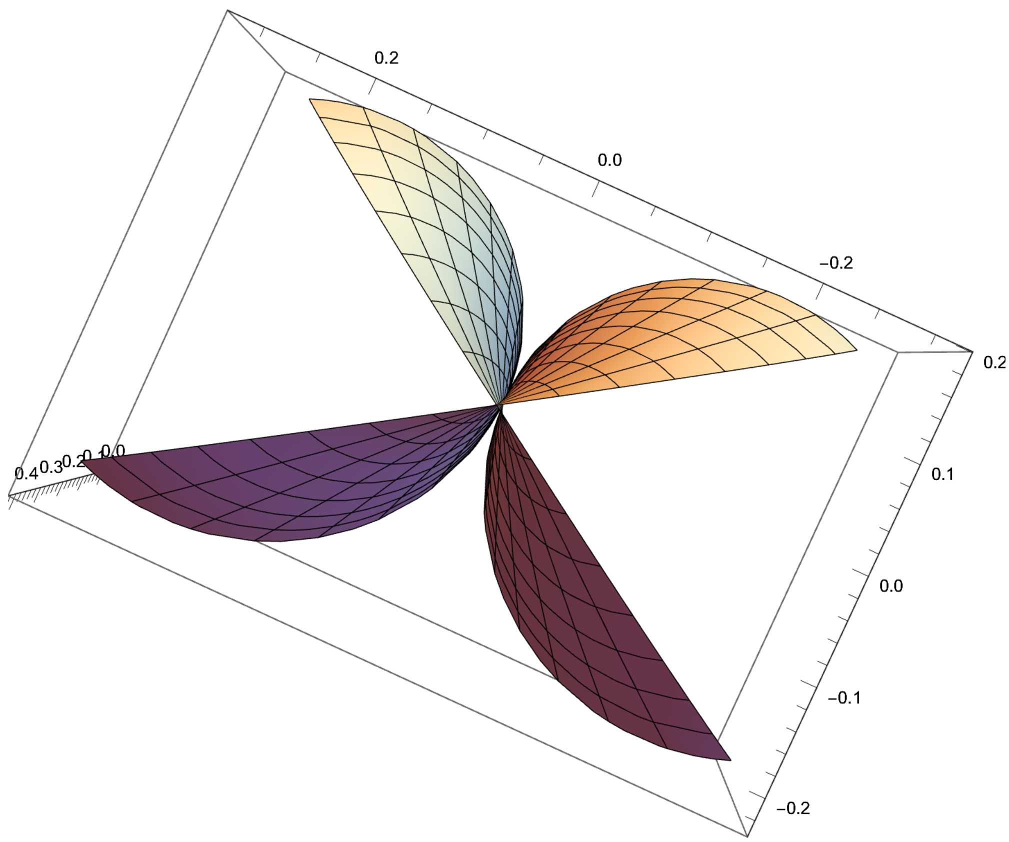
$$\texttt{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\;\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{\theta,\ -4\,\pi,\ 4\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{\theta,\ -4\,\pi,\ 4\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



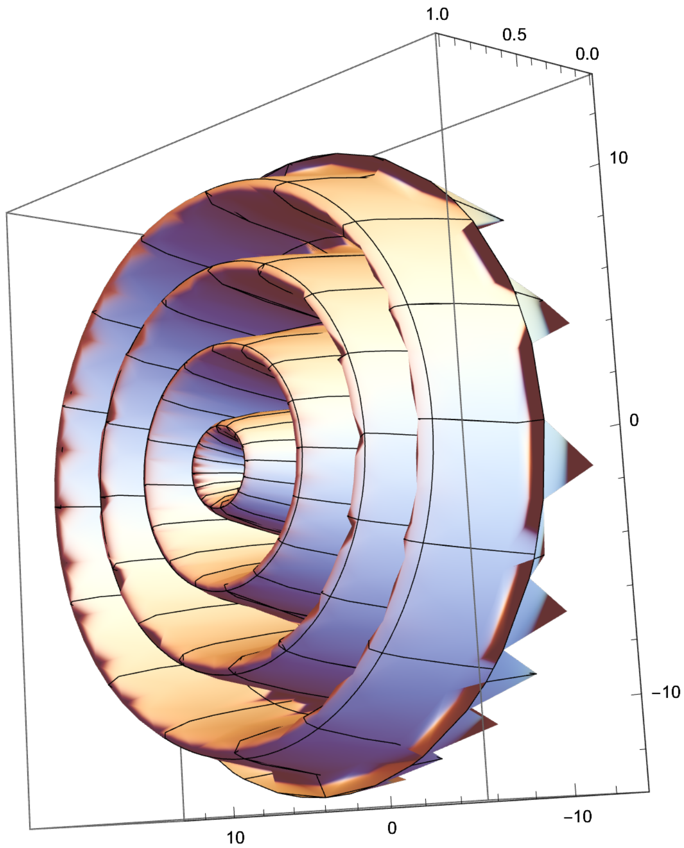
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\ \text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\ \text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi},\ \{\theta,\ -1,\ 1\},\ \{\beta,\ -1,\ 1\}\right]$$



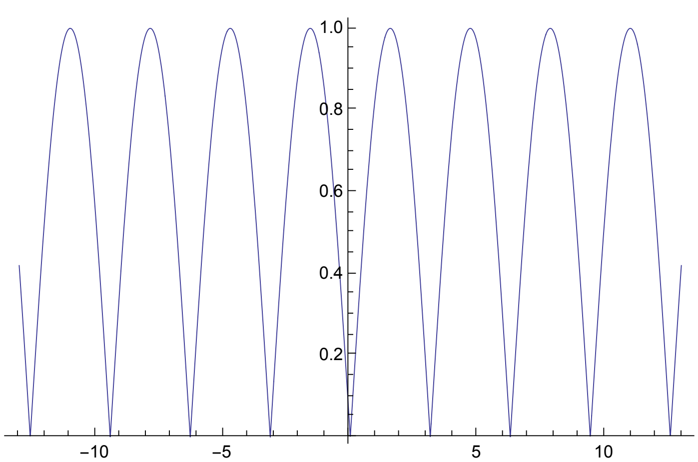
$$\frac{\sqrt{4\pi\left(\frac{2\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi}=$$

$$\frac{\sqrt{4\pi\left(\frac{2\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi}=\frac{\sqrt{4\pi\left(\frac{2\pi\,(r)\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\,(r)\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}} == \left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right), \theta\right]$$

$$\left\{\{\theta \to 2\pi\},\right.$$

$$\left\{\theta \to -\left(\frac{2}{1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}}\right)^{1/3} + \frac{\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}\right)\right)^{1/3}}{12\pi^2}\right\},$$

$$\left\{\theta \to -\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}\right)\right)^{1/3}}{24\pi^2} + \frac{1-i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}\right)^{1/3}}\right\},$$

$$\left.\left\{\theta \to -\frac{\left(1-i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}\right)\right)^{1/3}}{24\pi^2} + \frac{1+i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2\,985\,984\pi^{10}}\right)^{1/3}}\right\}\right\}$$

$$\frac{\sqrt{4\pi\left(\frac{2\pi\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi} =$$

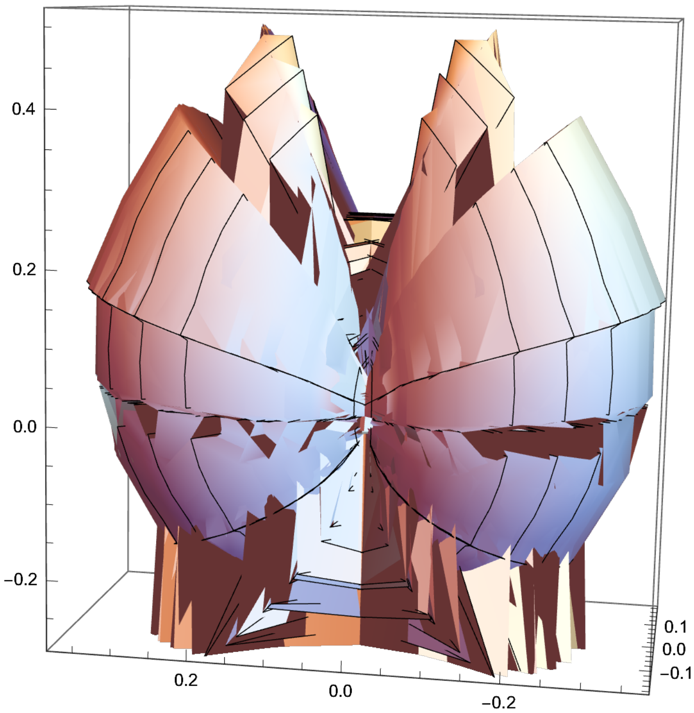
$$r = \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}$$

$$\left\{\left\{r \to -\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}, \left\{r \to \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

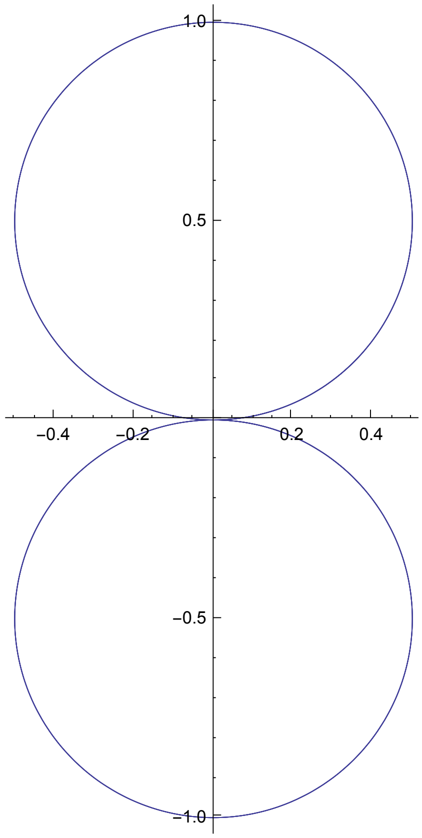
$$\left.\{\theta,-360,360\},\{\beta,-360,360\}\right]$$



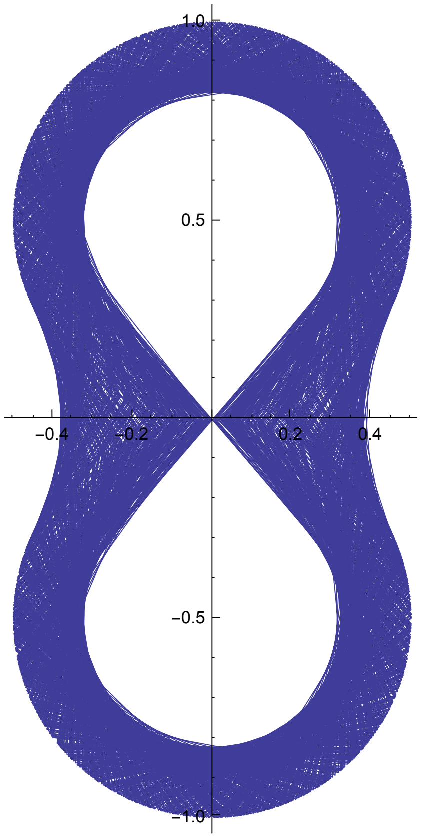
$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,-360,360\},\{\beta,-360,360\}\right]$$

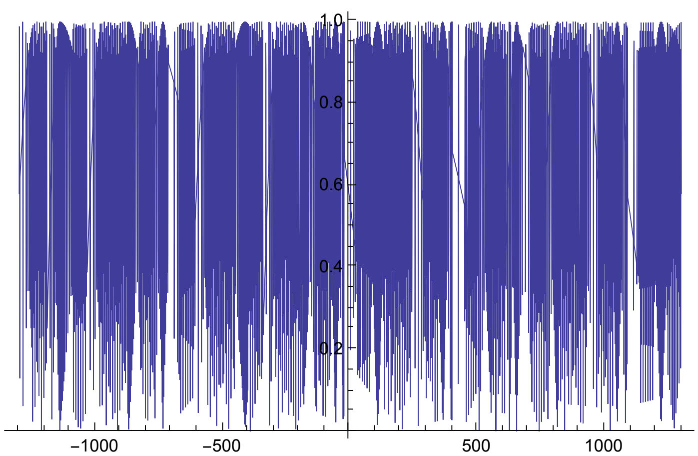
$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\,\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



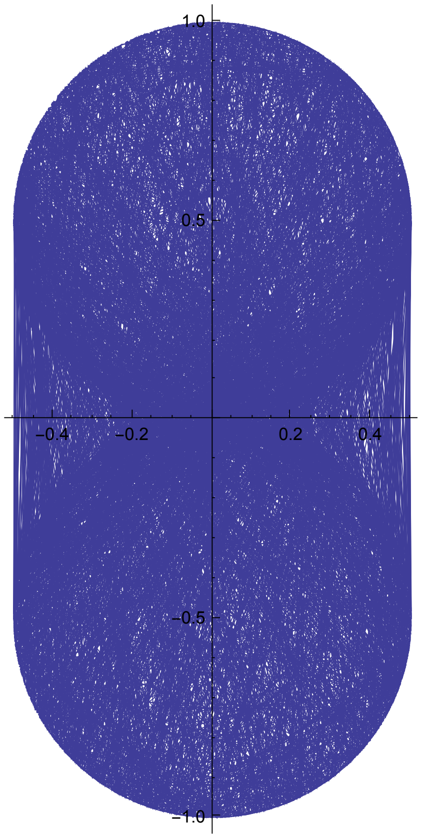
$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -1300,\ 1300\}\right]$$



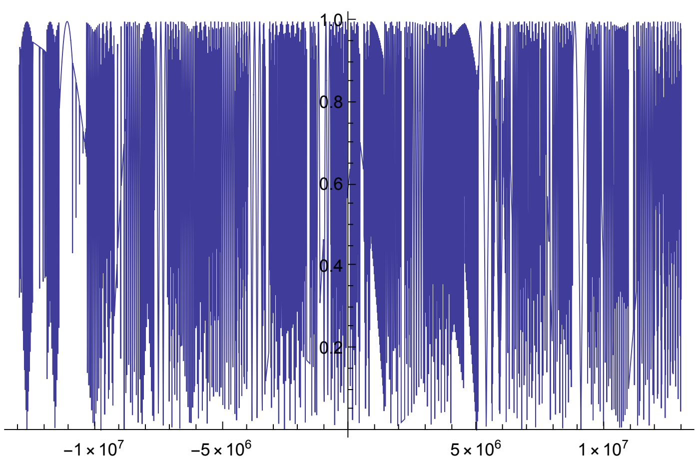
$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -1300,\ 1300\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13\,000\,000,\ 13\,000\,000\}\right]$$



$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13\,000\,000,\ 13\,000\,000\}\right]$$



Contour is said to be the experience of this kind of polar equation from information available in light. Light is interpreted in the polar coordinate system by a human being when perception occurs. How it is

interpreted depends partially on how you see something. For instance, I can see this graphed contour like a cylinder or two spheres. We call this a conisphilinder. It's holographic characteristic is the first special case.

```
c := (2.99792458 * 10 ^ 8)
```

Depending on the conversion I will decide to use for exchanging angle involved in folding up the circle into a cone and the time that has passed, I will find different solutions and options regarding the system.

First, we will use the following conversion

$$\eta := \text{rate} * \text{time} = c * \tau = \text{height of cone} \tag{122}$$

$\tau := 6\left(\Theta_{\text{degrees}}\right) = 6\,((180/\pi)\,\Theta)$, because if theta were in radians to begin with,
we would have to convert that number of radians to degrees. This way,
both our thetas are in radians,
but our result accounts for the constant of the degrees involved in measuring time.

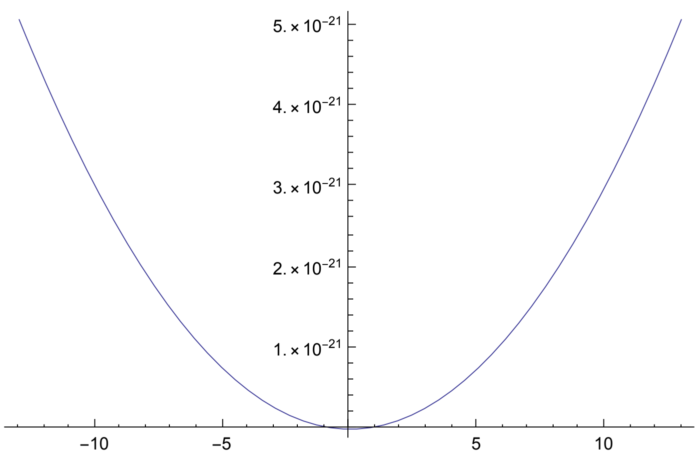
```
(180 / π)
```

$$r = \frac{2 * c * \tau * \pi}{\sqrt{4\,\pi\,\Theta - \Theta)^2}} = \frac{2 * c * 6\,((180/\pi)\,\Theta) * \pi}{\sqrt{4\,\pi\,\Theta - (\Theta)^2}}$$

$$\text{Solve}\left[r == \frac{2 * c * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\,\pi\,\theta - (\theta)^2}}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2}\right\}\right\}$$

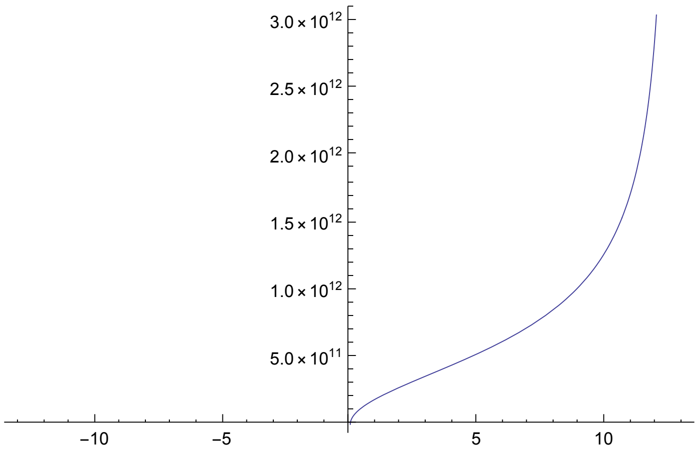
$$\text{Plot}\left[\frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2}, \{r, -13, 13\}\right]$$



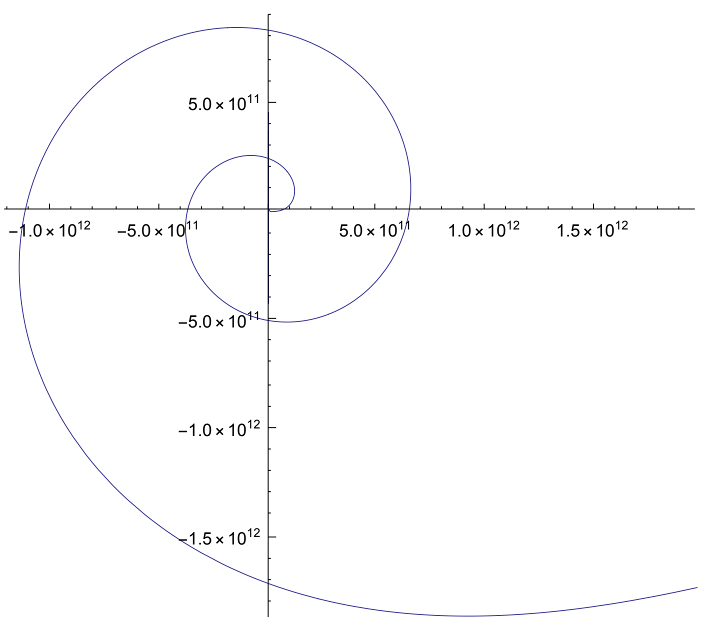
$$\text{Solve}\left[\theta == \frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2},\ r\right]$$

$$\left\{\left\{r \to -\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\},\ \left\{r \to \frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



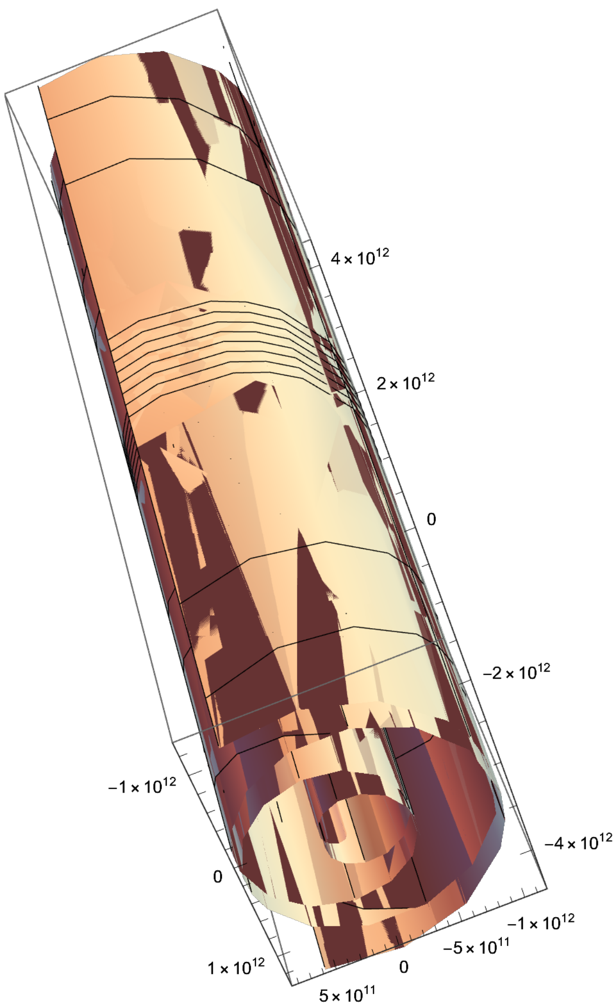
$$r := \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}};\ \eta = r\,\text{Sin}[\theta]$$

$$\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}} = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}} = \frac{2\,\pi\, r\, \text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Solve}\left[\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}} == \frac{2\,\pi\, r\, \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ r\right]$$

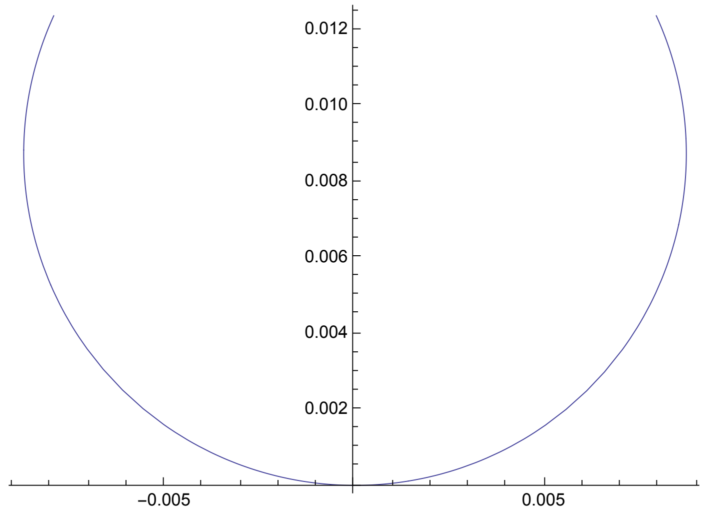
$$\left\{\left\{r \to \frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\,\pi - \theta)\,\theta}\ \text{Csc}[\beta]}{\pi\, \sqrt{4\,\pi - \theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\,\pi - \theta)\,\theta}\ \text{Csc}[\beta]}{\pi\, \sqrt{4\,\pi - \theta}},\ \{\beta, -13, 13\},\ \{\theta, -13, 13\}\right]$$

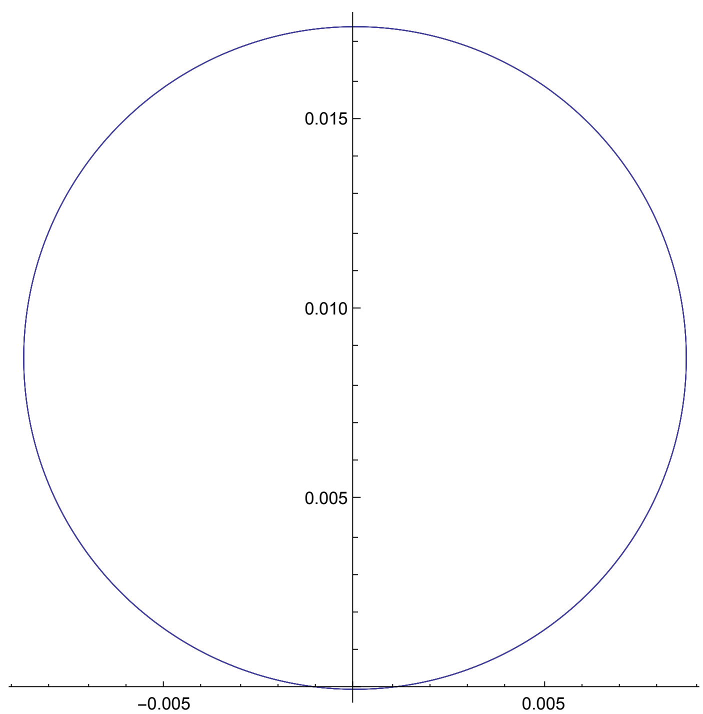


$$\left\{\left\{n \to \frac{\pi\, \sqrt{4\,\pi - \theta}\, \sqrt{\theta}\ \text{Sin}[\theta]}{180\, \sqrt{(4\,\pi - \theta)\,\theta}}\right\}\right\}$$

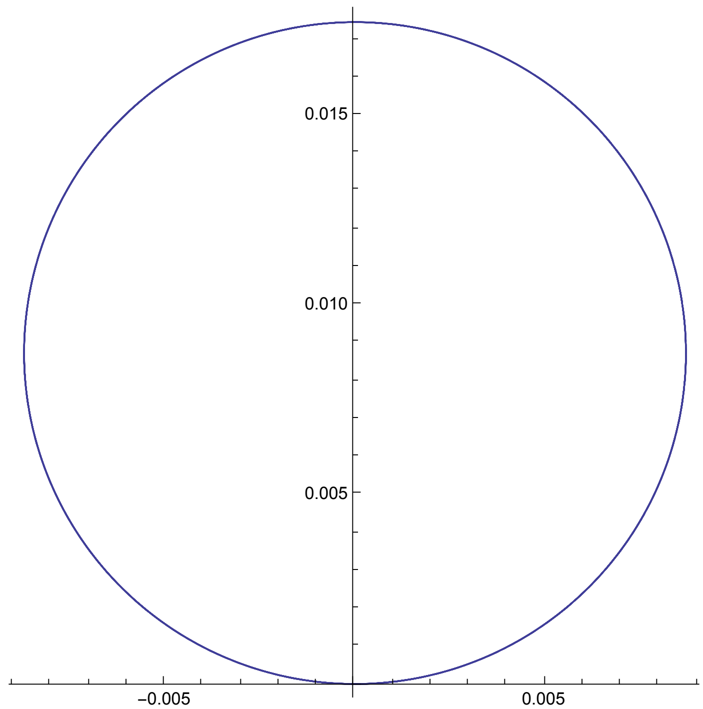
$$\text{PolarPlot}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\,\sqrt{\theta}\,\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\,\{\theta,\,-1,\,1\}\right]$$



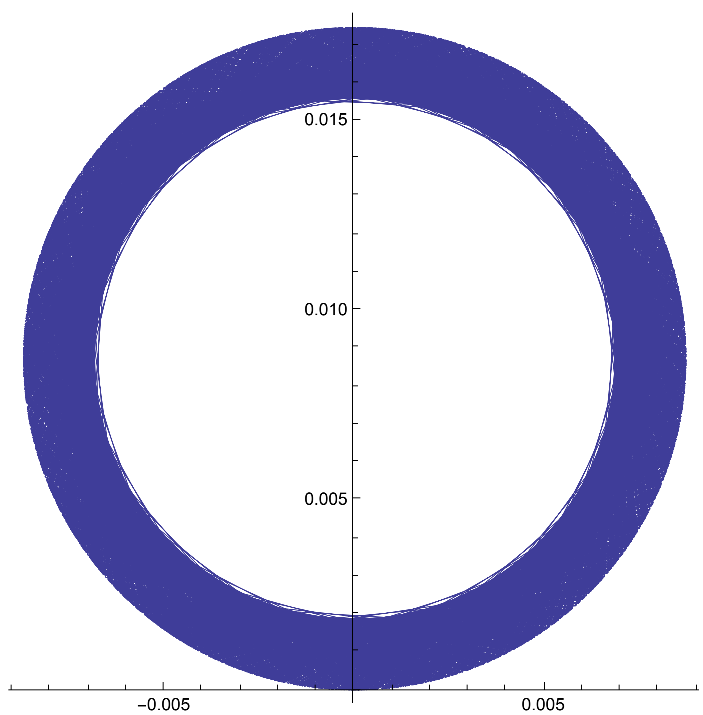
$$\text{PolarPlot}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\,\sqrt{\theta}\,\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\,\{\theta,\,-10,\,10\}\right]$$



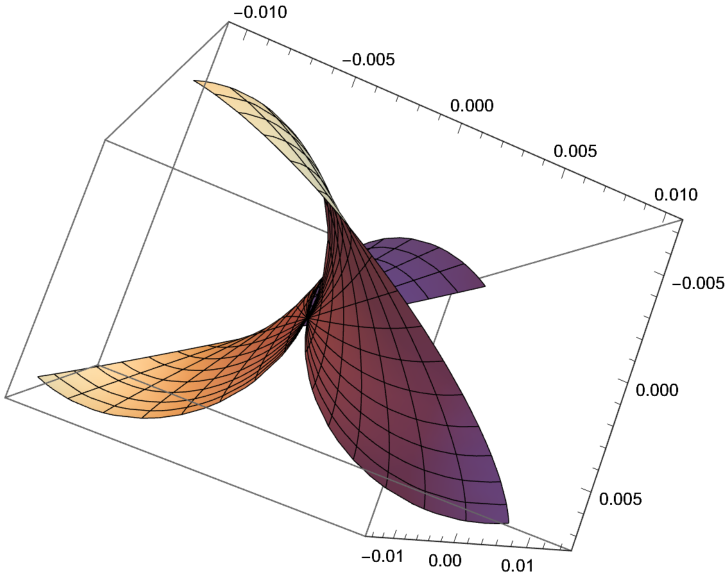
$$\text{PolarPlot}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -100, 100\}\right]$$



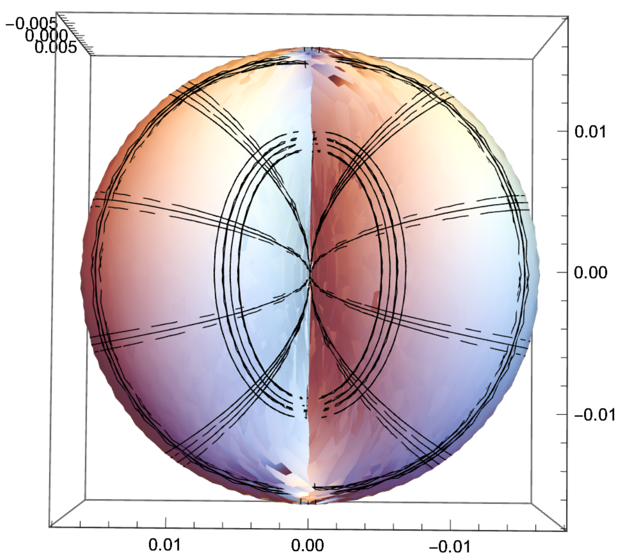
$$\text{PolarPlot}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -1000, 1000\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,-1,1\},\ \{\beta,-1,1\}\right]$$

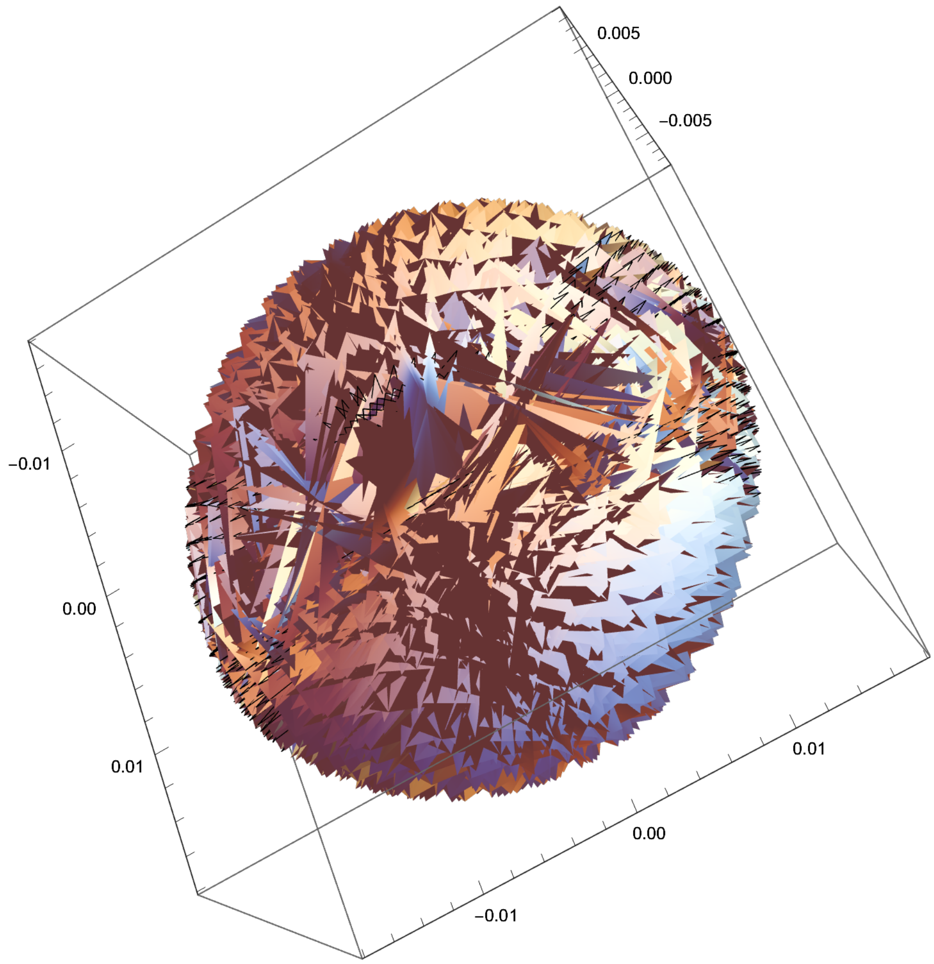


$$\text{SphericalPlot3D}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,-10,10\},\ \{\beta,-10,10\}\right]$$

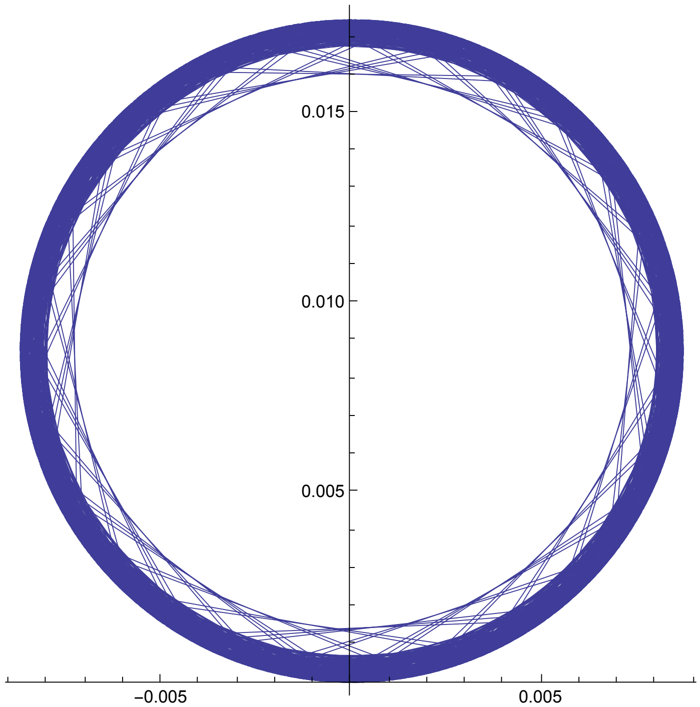


```
SphericalPlot3D[(π √(4 π - θ) √θ Sin[β])/(180 √((4 π - θ) θ)), {θ, -100, 100}, {β, -100, 100}]
```

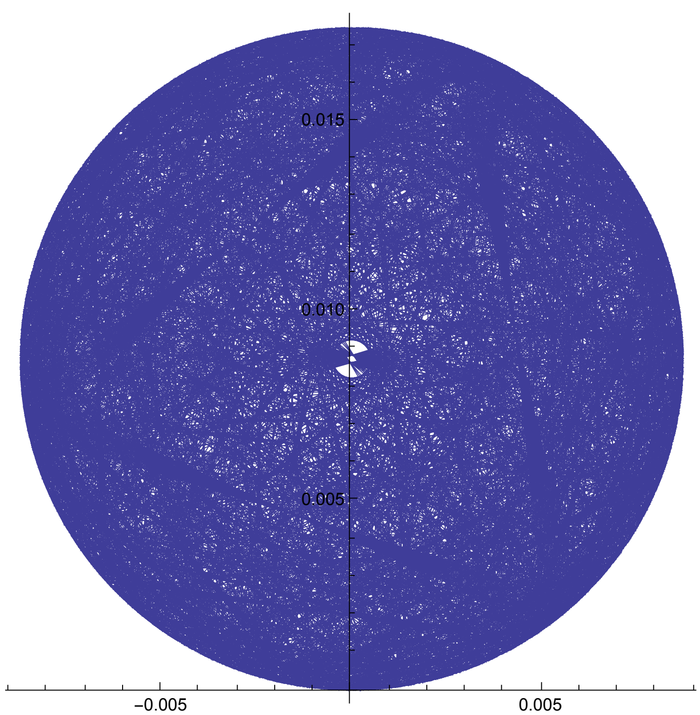
$$\text{SphericalPlot3D}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -100, 100\}, \{\beta, -100, 100\}\right]$$



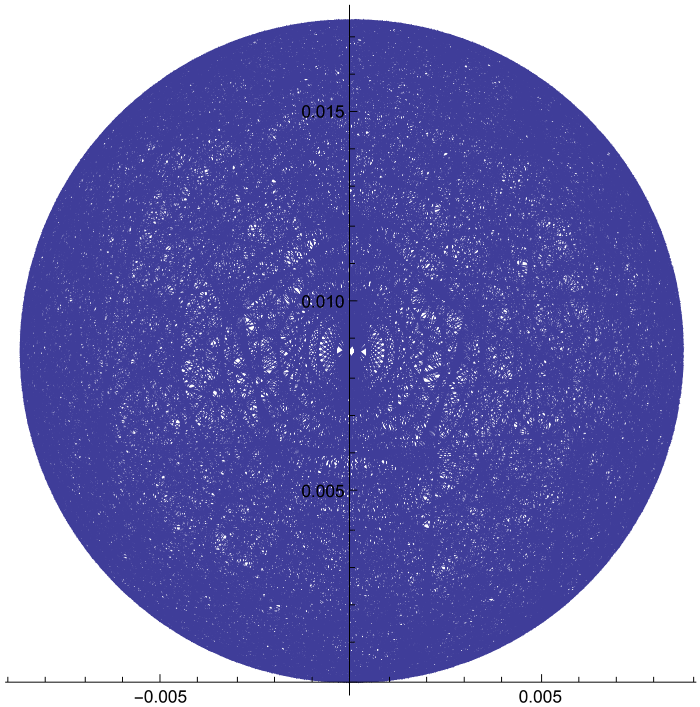
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,\ -10\,000,\ 10\,000\}\right]$$



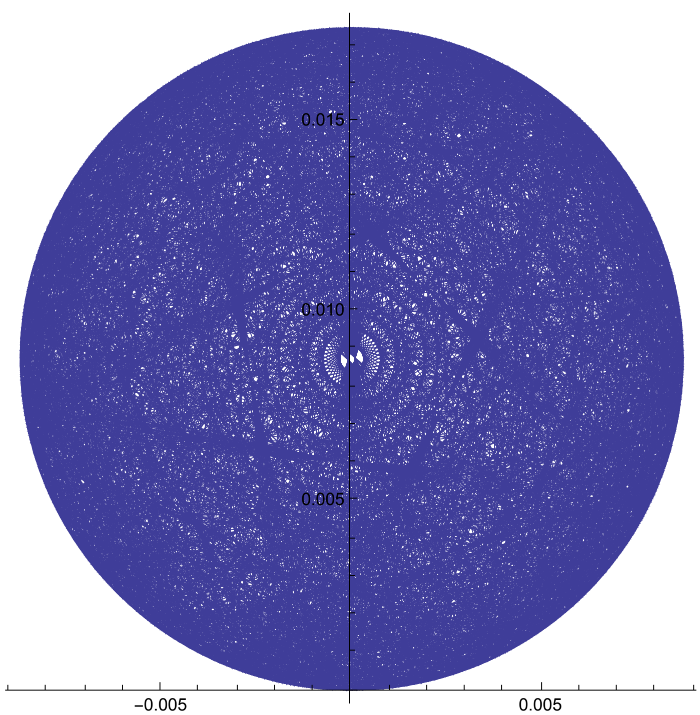
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,\ -100\,000,\ 100\,000\}\right]$$



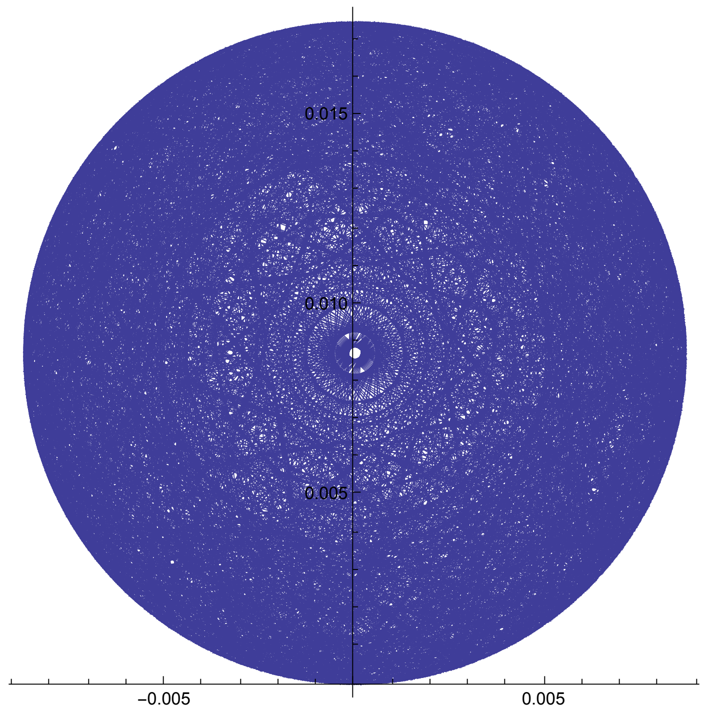
PolarPlot$\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \mathrm{Sin}[\theta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}}\right.$, {θ, -1 000 000, 1 000 000}]



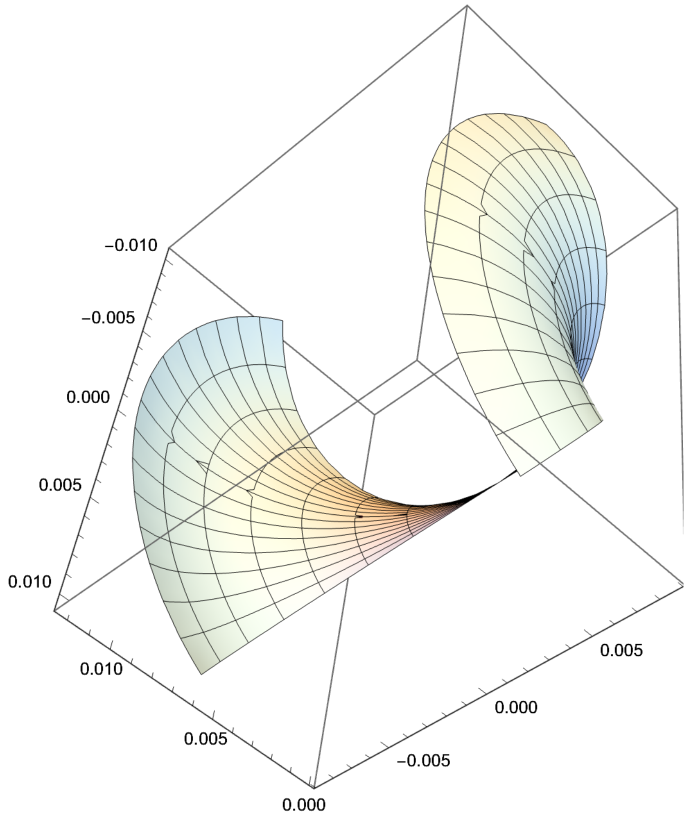
PolarPlot$\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \mathrm{Sin}[\theta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}}\right.$, {θ, -10 000 000, 10 000 000}]



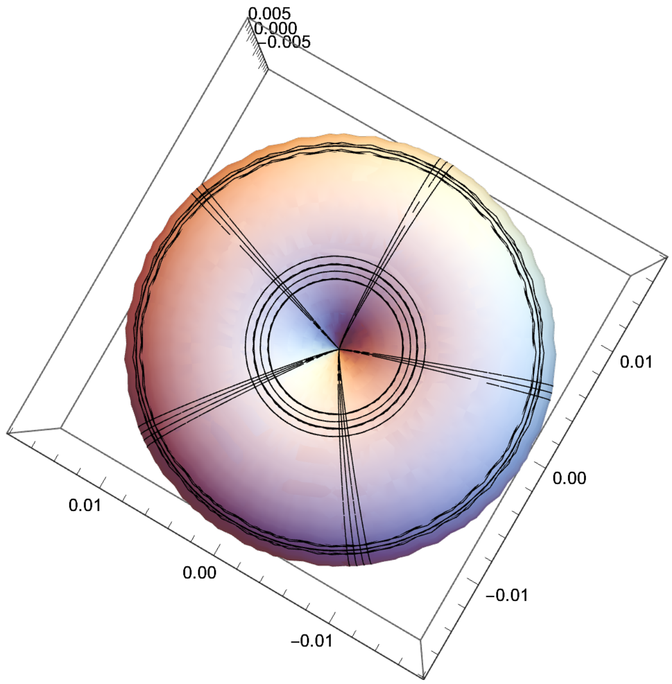
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\theta,\ -100\,000\,000,\ 100\,000\,000\}\right]$$



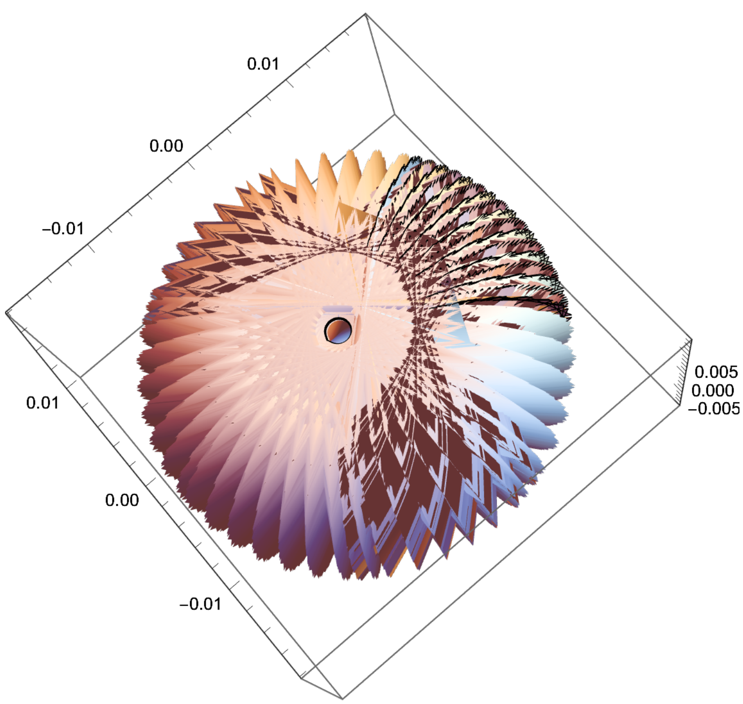
$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -1,\ 1\},\ \{\theta,\ -1,\ 1\}\right]$$



```
SphericalPlot3D[π √(4 π - θ) √θ Sin[β] / (180 √((4 π - θ) θ)), {β, -10, 10}, {θ, -10, 10}]
```

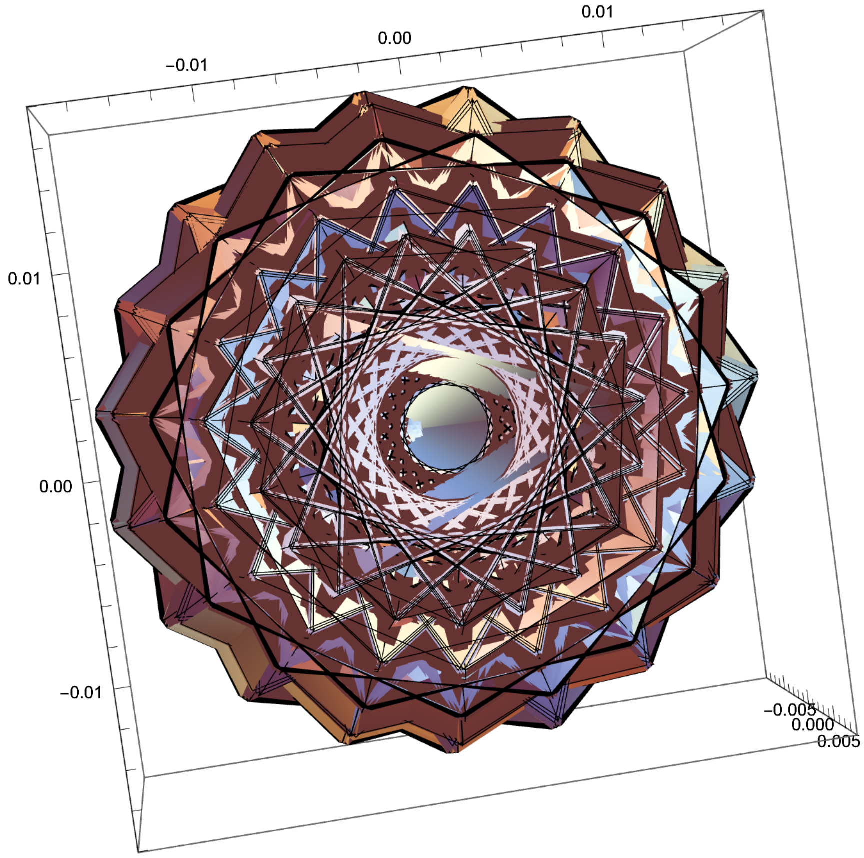



```
SphericalPlot3D[π √(4 π - θ) √θ Sin[β] / (180 √((4 π - θ) θ)), {β, -100, 100}, {θ, -100, 100}]
```

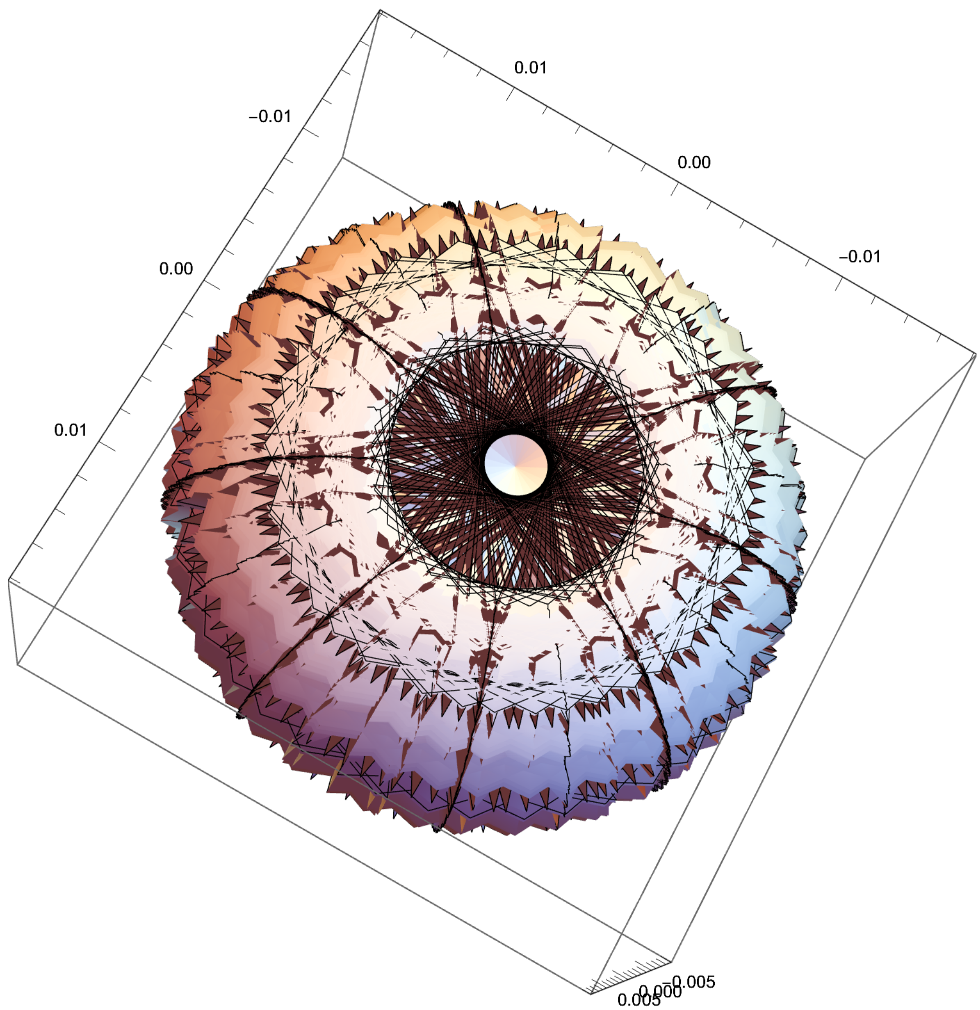


```
SphericalPlot3D[π √(4 π - θ) √θ Sin[β] / (180 √((4 π - θ) θ)), {β, -1000, 1000}, {θ, -1000, 1000}]
```

$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -1000,\ 1000\},\ \{\theta,\ -1000,\ 1000\}\right]$$

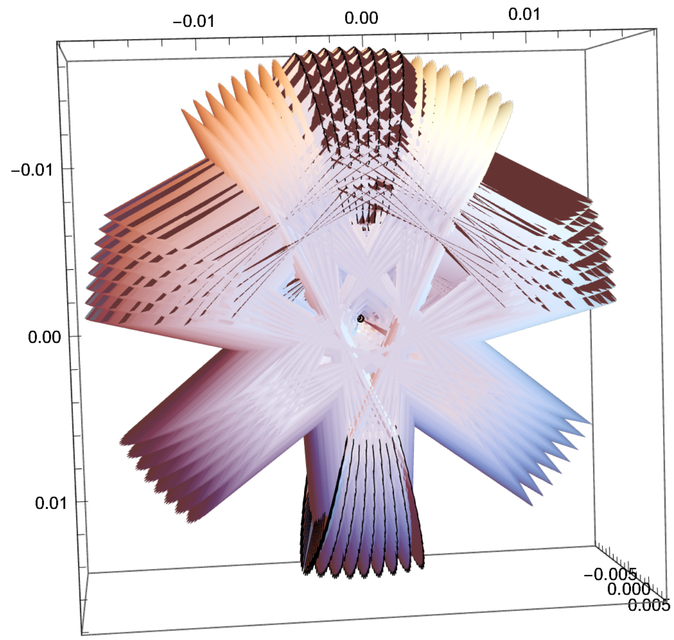


$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -10\,000,\ 10\,000\},\ \{\theta,\ -10\,000,\ 10\,000\}\right]$$



$$\texttt{SphericalPlot3D}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \texttt{Sin}[\beta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\right.$$

$$\left.\{\beta,-100\,000\,000,100\,000\,000\},\{\theta,-100\,000\,000,100\,000\,000\}\right]$$



$$\texttt{Solve}\Big[\Big(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\ \theta+8.987551787368176\grave{}*\hat{}16\ \theta^2+3.5481432270250993\grave{}*\hat{}18\ \texttt{Sin}[\beta]^2\right)}\Big)\Big/$$

$$\left(\sqrt{-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \texttt{Sin}[\beta]^2}\right)==$$

$$\sqrt{-\frac{4\,c^2\,\pi\left(\frac{c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2}{-4\pi r^2+r^2\theta}+\frac{c^2\,r^2\,\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\pi r^2+r^2\theta}},\ r\Big]$$

$$\Big\{\Big\{r\to-0.5$$

$$\sqrt{}\Big(-\big(2.\ \theta\ \big(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+5.37102\times10^{54}\,\theta^5-$$

$$1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+1.67419\times10^{58}\,\theta\,\texttt{Sin}[\beta]^2-3.55275\times10^{57}$$

$$\theta^2\,\texttt{Sin}[\beta]^2+2.82719\times10^{56}\,\theta^3\,\texttt{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\texttt{Sin}[\beta]^2+$$

$$2.23792\times10^{53}\,\theta^5\,\texttt{Sin}[\beta]^2-2.62982\times10^{58}\,\texttt{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\texttt{Sin}[\beta]^4-$$

$$1.66535\times10^{56}\,\theta^2\,\texttt{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\texttt{Sin}[\beta]^4\big)\big)\Big/$$

$$\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+$$

$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\texttt{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\texttt{Sin}[\beta]^2-$$

$$1.48236\times10^{40}\,\theta^3\,\texttt{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\texttt{Sin}[\beta]^2+1.22567\times10^{42}\,\texttt{Sin}[\beta]^4-$$

$$1.95071\times10^{41}\,\theta\,\texttt{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\texttt{Sin}[\beta]^4\big)-$$

$$2.\ \sqrt{}\Big(-\big(4.\ \theta^2\ \big(6.35238\times10^{72}\,\theta^2-1.01101\times10^{72}\,\theta^3+4.02269\times10^{70}\,\theta^4-3.99132\times10^{73}$$

$$\theta\,\texttt{Sin}[\beta]^2+3.17619\times10^{72}\,\theta^2\,\texttt{Sin}[\beta]^2+6.26955\times10^{73}\,\texttt{Sin}[\beta]^4\big)\big)\Big/$$

$$\left(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+\right.$$
$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2-$$
$$1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2+1.22567\times10^{42}$$
$$\left.\text{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\right)+$$
$$\left(\theta^2\left(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+\right.\right.$$
$$5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+$$
$$1.67419\times10^{58}\,\theta\,\text{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\text{Sin}[\beta]^2+$$
$$2.82719\times10^{56}\,\theta^3\,\text{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\text{Sin}[\beta]^2+2.23792\times10^{53}$$
$$\theta^5\,\text{Sin}[\beta]^2-2.62982\times10^{58}\,\text{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\text{Sin}[\beta]^4-$$
$$\left.\left.1.66535\times10^{56}\,\theta^2\,\text{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\text{Sin}[\beta]^4\right)^2\right)\Big/$$
$$\left(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+\right.$$
$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2-$$
$$1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2+1.22567\times10^{42}$$
$$\left.\text{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\right)^2\Big)\Big)\Big\},$$

$$\Big\{r\to0.5\sqrt{\Big(-\Big(2.\,\theta\,\Big(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+}$$
$$5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+$$
$$1.67419\times10^{58}\,\theta\,\text{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\text{Sin}[\beta]^2+$$
$$2.82719\times10^{56}\,\theta^3\,\text{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\text{Sin}[\beta]^2+$$
$$2.23792\times10^{53}\,\theta^5\,\text{Sin}[\beta]^2-2.62982\times10^{58}\,\text{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\text{Sin}[\beta]^4-$$
$$1.66535\times10^{56}\,\theta^2\,\text{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\text{Sin}[\beta]^4\Big)\Big)\Big/$$
$$\left(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+\right.$$
$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2-$$
$$1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2+1.22567\times10^{42}\,\text{Sin}[\beta]^4-$$
$$\left.1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\right)-$$
$$2.\sqrt{\Big(-\Big(4.\,\theta^2\,\Big(6.35238\times10^{72}\,\theta^2-1.01101\times10^{72}\,\theta^3+4.02269\times10^{70}\,\theta^4-3.99132\times10^{73}}$$
$$\theta\,\text{Sin}[\beta]^2+3.17619\times10^{72}\,\theta^2\,\text{Sin}[\beta]^2+6.26955\times10^{73}\,\text{Sin}[\beta]^4\Big)\Big)\Big/$$
$$\left(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+\right.$$
$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2-$$
$$1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2+1.22567\times10^{42}$$
$$\left.\text{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\right)+$$
$$\left(\theta^2\left(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+\right.\right.$$
$$5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+$$
$$1.67419\times10^{58}\,\theta\,\text{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\text{Sin}[\beta]^2+$$
$$2.82719\times10^{56}\,\theta^3\,\text{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\text{Sin}[\beta]^2+2.23792\times10^{53}$$
$$\theta^5\,\text{Sin}[\beta]^2-2.62982\times10^{58}\,\text{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\text{Sin}[\beta]^4-$$
$$\left.\left.1.66535\times10^{56}\,\theta^2\,\text{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\text{Sin}[\beta]^4\right)^2\right)\Big/$$
$$\left(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+\right.$$
$$4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2-$$
$$1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2+1.22567\times10^{42}$$
$$\left.\text{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\right)^2\Big)\Big)\Big\},$$

$$\Big\{r \to -0.5\sqrt{\Big(-\big(2.\,\theta\,\big(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+1.67419\times10^{58}\,\theta\,\mathrm{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\mathrm{Sin}[\beta]^2+2.82719\times10^{56}\,\theta^3\,\mathrm{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\mathrm{Sin}[\beta]^2+2.23792\times10^{53}\,\theta^5\,\mathrm{Sin}[\beta]^2-2.62982\times10^{58}\,\mathrm{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\mathrm{Sin}[\beta]^4-1.66535\times10^{56}\,\theta^2\,\mathrm{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\mathrm{Sin}[\beta]^4\big)\big)\Big/\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\mathrm{Sin}[\beta]^2-1.48236\times10^{40}\,\theta^3\,\mathrm{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\mathrm{Sin}[\beta]^2+1.22567\times10^{42}\,\mathrm{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\mathrm{Sin}[\beta]^4\big)+2.\sqrt{\Big(-\big(4.\,\theta^2\,\big(6.35238\times10^{72}\,\theta^2-1.01101\times10^{72}\,\theta^3+4.02269\times10^{70}\,\theta^4-3.99132\times10^{73}\,\theta\,\mathrm{Sin}[\beta]^2+3.17619\times10^{72}\,\theta^2\,\mathrm{Sin}[\beta]^2+6.26955\times10^{73}\,\mathrm{Sin}[\beta]^4\big)\big)\Big/\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\mathrm{Sin}[\beta]^2-1.48236\times10^{40}\,\theta^3\,\mathrm{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\mathrm{Sin}[\beta]^2+1.22567\times10^{42}\,\mathrm{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\mathrm{Sin}[\beta]^4\big)+\big(\theta^2\,\big(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+1.67419\times10^{58}\,\theta\,\mathrm{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\mathrm{Sin}[\beta]^2+2.82719\times10^{56}\,\theta^3\,\mathrm{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\mathrm{Sin}[\beta]^2+2.23792\times10^{53}\,\theta^5\,\mathrm{Sin}[\beta]^2-2.62982\times10^{58}\,\mathrm{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\mathrm{Sin}[\beta]^4-1.66535\times10^{56}\,\theta^2\,\mathrm{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\mathrm{Sin}[\beta]^4\big)^2\big)\Big/\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\mathrm{Sin}[\beta]^2-1.48236\times10^{40}\,\theta^3\,\mathrm{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\mathrm{Sin}[\beta]^2+1.22567\times10^{42}\,\mathrm{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\mathrm{Sin}[\beta]^4\big)^2\Big)}\Big)}\Big\},$$

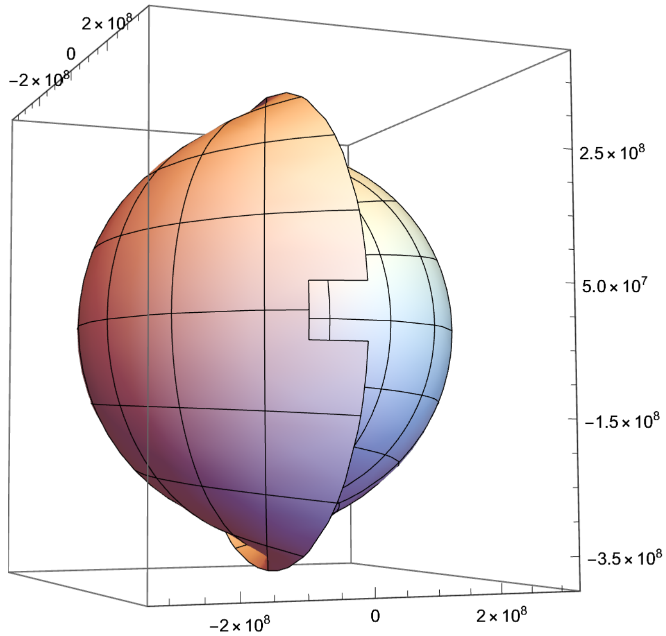
$$\Big\{r \to 0.5\sqrt{\Big(-\big(2.\,\theta\,\big(-2.66456\times10^{57}\,\theta^2+7.77477\times10^{56}\,\theta^3-8.99922\times10^{55}\,\theta^4+5.37102\times10^{54}\,\theta^5-1.78088\times10^{53}\,\theta^6+2.83436\times10^{51}\,\theta^7+1.67419\times10^{58}\,\theta\,\mathrm{Sin}[\beta]^2-3.55275\times10^{57}\,\theta^2\,\mathrm{Sin}[\beta]^2+2.82719\times10^{56}\,\theta^3\,\mathrm{Sin}[\beta]^2-1.1249\times10^{55}\,\theta^4\,\mathrm{Sin}[\beta]^2+2.23792\times10^{53}\,\theta^5\,\mathrm{Sin}[\beta]^2-2.62982\times10^{58}\,\mathrm{Sin}[\beta]^4+3.48791\times10^{57}\,\theta\,\mathrm{Sin}[\beta]^4-1.66535\times10^{56}\,\theta^2\,\mathrm{Sin}[\beta]^4+4.41748\times10^{54}\,\theta^3\,\mathrm{Sin}[\beta]^4\big)\big)\Big/\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+4.98005\times10^{36}\,\theta^6-7.80285\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^2+1.86279\times10^{41}\,\theta^2\,\mathrm{Sin}[\beta]^2-1.48236\times10^{40}\,\theta^3\,\mathrm{Sin}[\beta]^2+3.93209\times10^{38}\,\theta^4\,\mathrm{Sin}[\beta]^2+1.22567\times10^{42}\,\mathrm{Sin}[\beta]^4-1.95071\times10^{41}\,\theta\,\mathrm{Sin}[\beta]^4+7.76164\times10^{39}\,\theta^2\,\mathrm{Sin}[\beta]^4\big)+2.\sqrt{\Big(-\big(4.\,\theta^2\,\big(6.35238\times10^{72}\,\theta^2-1.01101\times10^{72}\,\theta^3+4.02269\times10^{70}\,\theta^4-3.99132\times10^{73}\,\theta\,\mathrm{Sin}[\beta]^2+3.17619\times10^{72}\,\theta^2\,\mathrm{Sin}[\beta]^2+6.26955\times10^{73}\,\mathrm{Sin}[\beta]^4\big)\big)\Big/\big(1.24186\times10^{41}\,\theta^2-3.95297\times10^{40}\,\theta^3+4.71851\times10^{39}\,\theta^4-2.50325\times10^{38}\,\theta^5+}$$

$$4.98005\times10^{36}\,\theta^6 - 7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2 + 1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2 - 1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2 + 3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2 + 1.22567\times10^{42}\,\text{Sin}[\beta]^4 - 1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4 + 7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\Big) +$$

$$\Big(\theta^2\,\big(-2.66456\times10^{57}\,\theta^2 + 7.77477\times10^{56}\,\theta^3 - 8.99922\times10^{55}\,\theta^4 + 5.37102\times10^{54}\,\theta^5 - 1.78088\times10^{53}\,\theta^6 + 2.83436\times10^{51}\,\theta^7 + 1.67419\times10^{58}\,\theta\,\text{Sin}[\beta]^2 - 3.55275\times10^{57}\,\theta^2\,\text{Sin}[\beta]^2 + 2.82719\times10^{56}\,\theta^3\,\text{Sin}[\beta]^2 - 1.1249\times10^{55}\,\theta^4\,\text{Sin}[\beta]^2 + 2.23792\times10^{53}\,\theta^5\,\text{Sin}[\beta]^2 - 2.62982\times10^{58}\,\text{Sin}[\beta]^4 + 3.48791\times10^{57}\,\theta\,\text{Sin}[\beta]^4 - 1.66535\times10^{56}\,\theta^2\,\text{Sin}[\beta]^4 + 4.41748\times10^{54}\,\theta^3\,\text{Sin}[\beta]^4\big)^2\Big) \Big/$$

$$\big(1.24186\times10^{41}\,\theta^2 - 3.95297\times10^{40}\,\theta^3 + 4.71851\times10^{39}\,\theta^4 - 2.50325\times10^{38}\,\theta^5 + 4.98005\times10^{36}\,\theta^6 - 7.80285\times10^{41}\,\theta\,\text{Sin}[\beta]^2 + 1.86279\times10^{41}\,\theta^2\,\text{Sin}[\beta]^2 - 1.48236\times10^{40}\,\theta^3\,\text{Sin}[\beta]^2 + 3.93209\times10^{38}\,\theta^4\,\text{Sin}[\beta]^2 + 1.22567\times10^{42}\,\text{Sin}[\beta]^4 - 1.95071\times10^{41}\,\theta\,\text{Sin}[\beta]^4 + 7.76164\times10^{39}\,\theta^2\,\text{Sin}[\beta]^4\big)^2\Big)\Big)\Big\}\Big\}$$

```
SphericalPlot3D[
 0.5` √(-(2.` θ (-2.6645634260764098`*^57 θ^2 + 7.774771408102173`*^56 θ^3 -
          8.999224007338156`*^55 θ^4 + 5.3710161928467094`*^54 θ^5 -
          1.78088286774618`*^53 θ^6 + 2.8343631146947462`*^51 θ^7 +
          1.67419457687714`*^58 θ Sin[β]^2 - 3.5527512347685464`*^57 θ^2 Sin[β]^2 +
          2.8271896029462448`*^56 θ^3 Sin[β]^2 - 1.1249030009172694`*^55 θ^4 Sin[β]^2 +
          2.2379234136861288`*^53 θ^5 Sin[β]^2 - 2.6298186916985475`*^58 Sin[β]^4 +
          3.4879053684940414`*^57 θ Sin[β]^4 - 1.6653521412977561`*^56 θ^2 Sin[β]^4 +
          4.4174837546035074`*^54 θ^3 Sin[β]^4)) /
      (1.2418617932046758`*^41 θ^2 - 3.9529688605097853`*^40 θ^3 +
       4.7185090052885197`*^39 θ^4 - 2.5032467740509667`*^38 θ^5 +
       4.9800512233631525`*^36 θ^6 - 7.802847772611313`*^41 θ Sin[β]^2 +
       1.8627926898070135`*^41 θ^2 Sin[β]^2 - 1.4823633226911695`*^40 θ^3 Sin[β]^2 +
       3.9320908377404326`*^38 θ^4 Sin[β]^2 + 1.2256684619757591`*^42 Sin[β]^4 -
       1.9507119431528282`*^41 θ Sin[β]^4 + 7.761636207529224`*^39 θ^2 Sin[β]^4) +
     2.` √(-(4.` θ^2 (6.3523782422970615`*^72 θ^2 - 1.0110123976509831`*^72
              θ^3 + 4.022690515333572`*^70 θ^4 - 3.991316963764819`*^73 θ Sin[β]^2 +
             3.176189121148531`*^72 θ^2 Sin[β]^2 + 6.269546025755937`*^73 Sin[β]^4)) /
        (1.2418617932046758`*^41 θ^2 - 3.9529688605097853`*^40 θ^3 +
         4.7185090052885197`*^39 θ^4 - 2.5032467740509667`*^38 θ^5 +
         4.9800512233631525`*^36 θ^6 - 7.802847772611313`*^41 θ Sin[β]^2 +
         1.8627926898070135`*^41 θ^2 Sin[β]^2 - 1.4823633226911695`*^40 θ^3 Sin[β]^2 +
         3.9320908377404326`*^38 θ^4 Sin[β]^2 + 1.2256684619757591`*^42 Sin[β]^4 -
         1.9507119431528282`*^41 θ Sin[β]^4 + 7.761636207529224`*^39 θ^2 Sin[β]^4) +
       (θ^2 (-2.6645634260764098`*^57 θ^2 + 7.774771408102173`*^56 θ^3 -
             8.999224007338156`*^55 θ^4 + 5.3710161928467094`*^54 θ^5 -
             1.78088286774618`*^53 θ^6 + 2.8343631146947462`*^51 θ^7 +
             1.67419457687714`*^58 θ Sin[β]^2 - 3.5527512347685464`*^57
              θ^2 Sin[β]^2 + 2.8271896029462448`*^56 θ^3 Sin[β]^2 -
             1.1249030009172694`*^55 θ^4 Sin[β]^2 + 2.2379234136861288`*^53
              θ^5 Sin[β]^2 - 2.6298186916985475`*^58 Sin[β]^4 +
             3.4879053684940414`*^57 θ Sin[β]^4 - 1.6653521412977561`*^56
              θ^2 Sin[β]^4 + 4.4174837546035074`*^54 θ^3 Sin[β]^4)^2) /
        (1.2418617932046758`*^41 θ^2 - 3.9529688605097853`*^40 θ^3 +
           4.7185090052885197`*^39 θ^4 - 2.5032467740509667`*^38 θ^5 +
           4.9800512233631525`*^36 θ^6 - 7.802847772611313`*^41 θ Sin[β]^2 +
           1.8627926898070135`*^41 θ^2 Sin[β]^2 - 1.4823633226911695`*^40
            θ^3 Sin[β]^2 + 3.9320908377404326`*^38 θ^4 Sin[β]^2 +
           1.2256684619757591`*^42 Sin[β]^4 - 1.9507119431528282`*^41 θ Sin[β]^4 +
           7.761636207529224`*^39 θ^2 Sin[β]^4)^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```



A Paper on Leonard Euler' s Formula in Natural Scientific Thought

To show that the ideas presented through the ontological cone (an analogy to the gestalt of perception through the sense of being), are applicable to the Euler equation is the purpose of this section.

```
ⅇ^(ⅈ β) = Cos[β] + ⅈ Sin[β]
```

```
ⅇ^(ⅈ θ) = Cos[θ] + ⅈ Sin[θ]
```

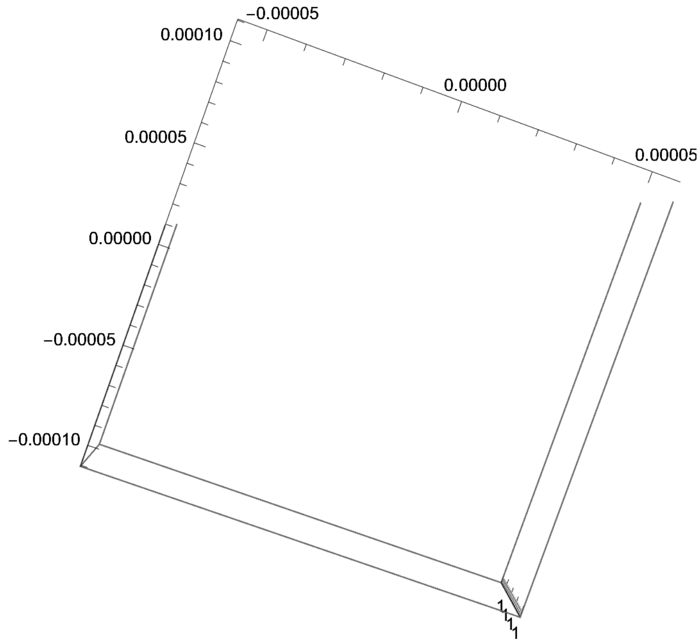
$$\text{RevolutionPlot3D}\left[e^{\wedge}\left(i\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right),\ \{\beta,-\pi,\pi\}\right]$$

```
ⅇ^(ⅈ θ) = Cos[θ] + ⅈ Sin[θ]
```

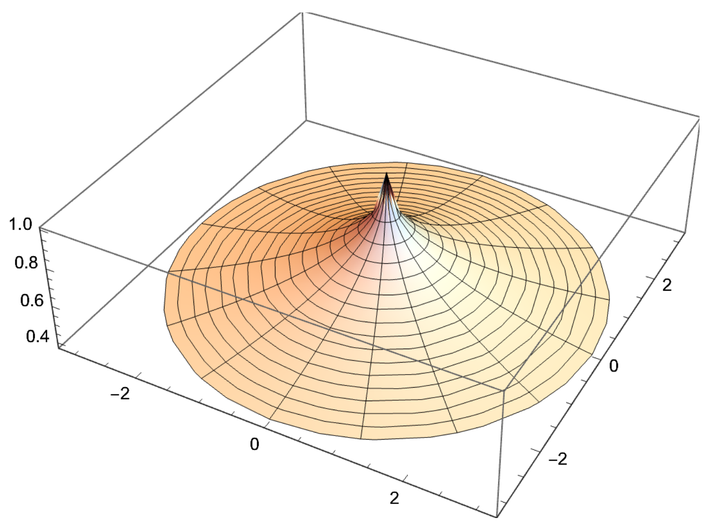
```
RevolutionPlot3D[Cos[θ] + ⅈ Sin[θ], {β, -π, π}]
```

$$\beta = \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

```
RevolutionPlot3D[Cos[β] + ⅈ Sin[β], {β, -π, π}]
```

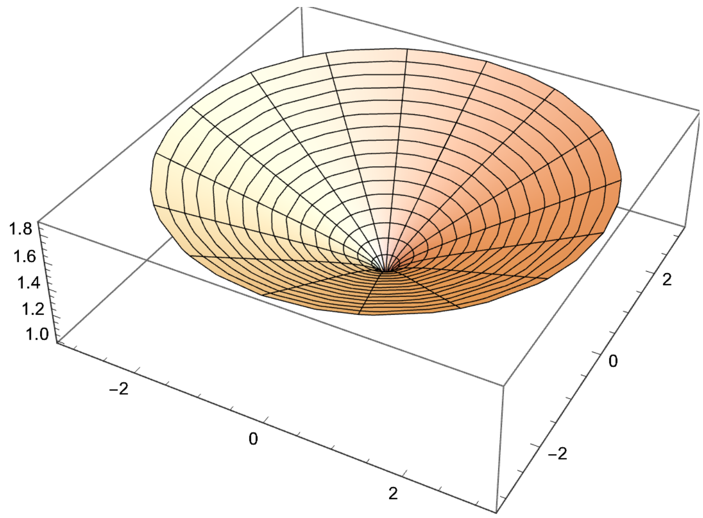


$$\text{RevolutionPlot3D}\left[\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]+ⅈ\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right],\{\theta,-\pi,\pi\}\right]$$

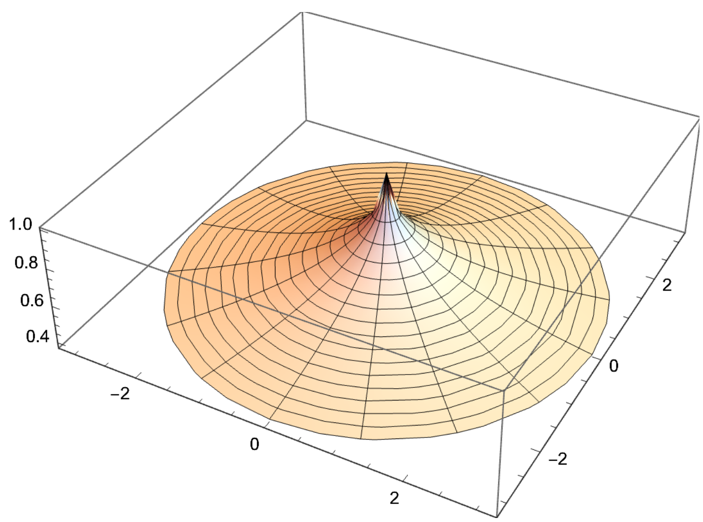


$$\text{SphericalPlot3D}\left[\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]+ⅈ\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right],\{\theta,-\pi,\pi\}\right]$$

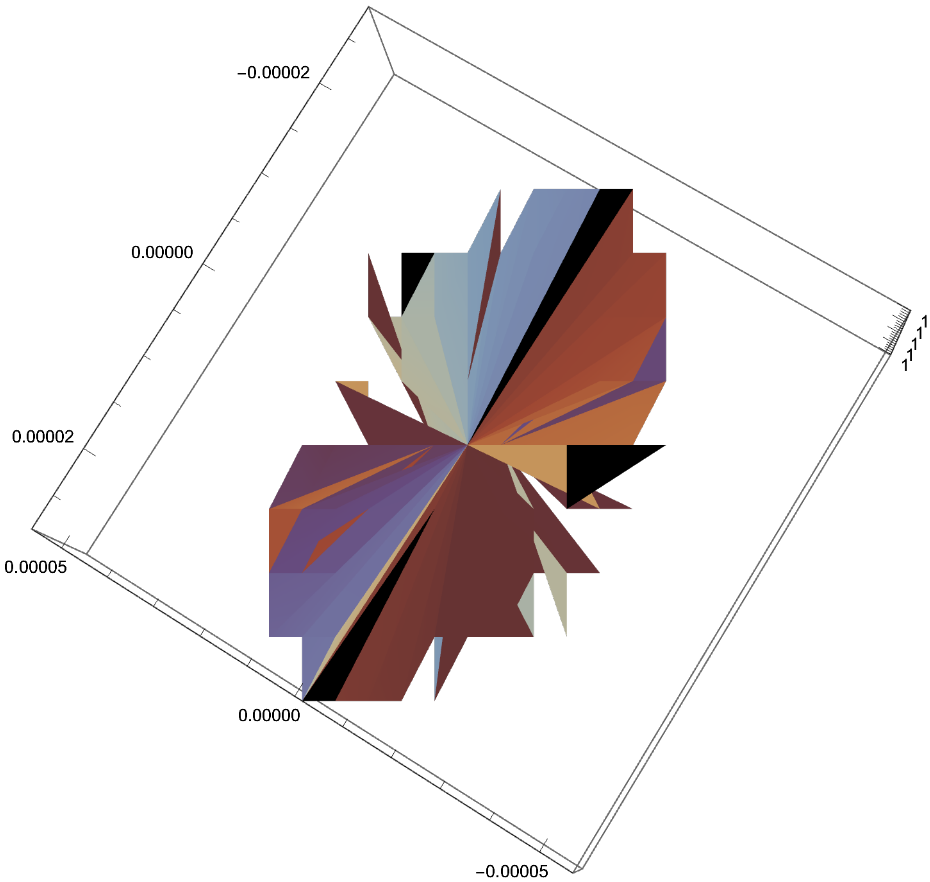
$$\text{RevolutionPlot3D}\left[e^{\wedge}\left(i\left(\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right)\right),\{\theta,-\pi,\pi\}\right]$$



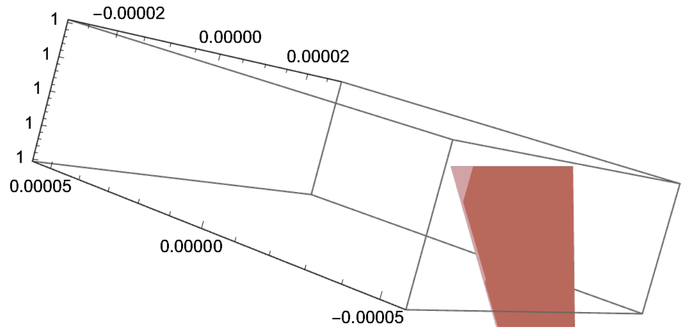
$$\text{RevolutionPlot3D}\left[e^{\wedge}\left(i\left(\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right),\{\theta,-\pi,\pi\}\right]$$



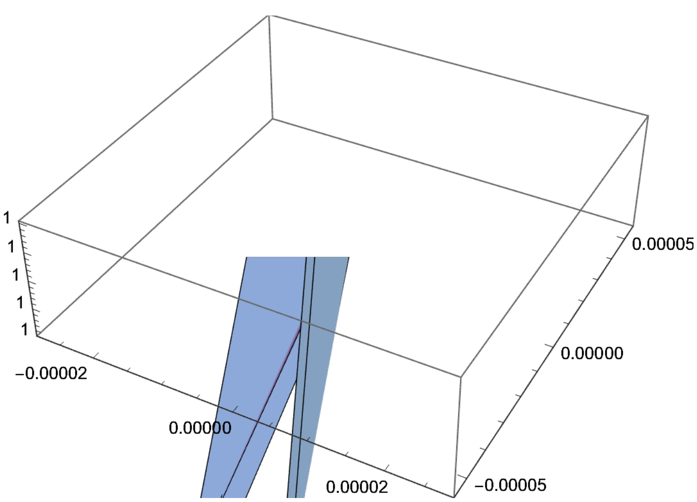
```
RevolutionPlot3D[ⅇ^(ⅈ (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
      (-π^3 + 18 π^3 Sin[β]^2 +
         3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))), {β, -π, π}]
```



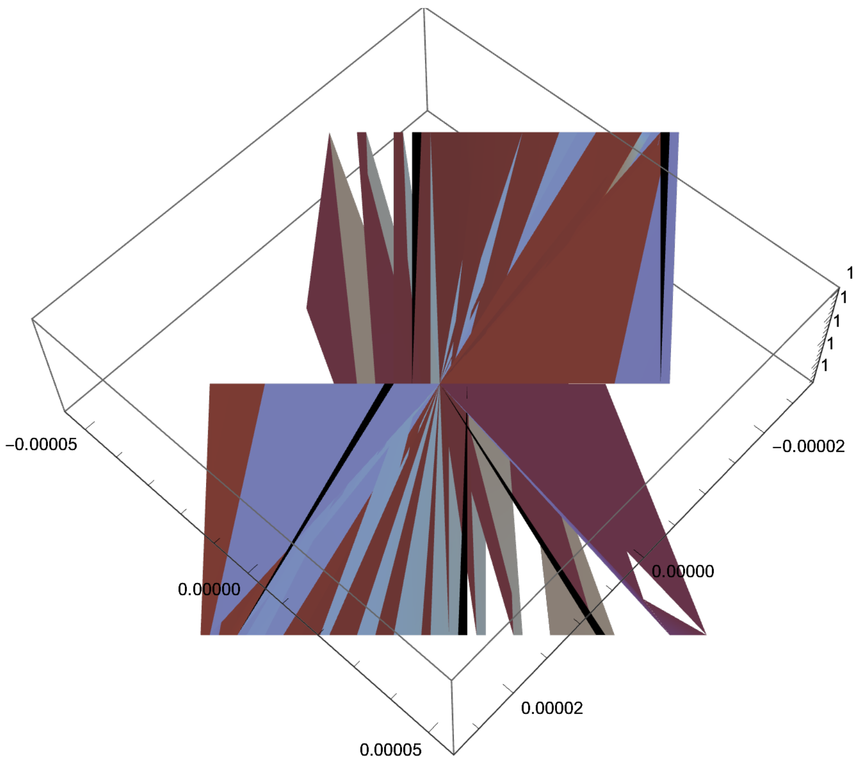
```
RevolutionPlot3D[ⅇ^(ⅈ (4 π/3 + ((1 - ⅈ Sqrt[3]) (-4 π^2 + 12 π^2 Sin[β]^2))/
      (12 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) -
    1/3 (1 + ⅈ Sqrt[3]) (-π^3 + 18 π^3 Sin[β]^2 +
        3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))), {β, -π, π}]
```




```
RevolutionPlot3D[ⅇ^(ⅈ (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) + 2/3
    (-π^3 + 18 π^3 Sin[β]^2 +
        3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))), {β, -π, π}]
```



$$\text{RevolutionPlot3D}\Big[e^\wedge \Big(i \Big(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big), \{\beta, -\pi, \pi\}\Big]$$



$$e^\wedge(i\,\beta) == (\text{Cos}[\beta] + i\,\text{Sin}[\beta])$$

$$e^{i\beta} == \text{Cos}[\beta] + i\,\text{Sin}[\beta]$$

If matter is composed of a geometric element in the shape of a cone, it may be purely geometrically stated that :

$$e^\wedge\left(i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right) == \left(\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right] + i\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]} == \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi} + \sqrt{1 - \frac{(4\pi-\theta)\,\theta}{4\pi^2}}$$

if it is within the region of $\theta = \pi$, $\beta = \frac{\pi}{2}$.

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]} == \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi} + \sqrt{1 - \frac{(4\pi-\theta)\,\theta}{4\pi^2}} = \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi} + \sqrt{1 - \frac{u^2}{c^2}}$$

$$\text{Solve}\left[\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}} == \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{u^2}{c^2}},\ u\right]$$

$$\left\{\left\{u\to -0.000494236\sqrt{\left(2.34235\times 10^{23}\,\theta-1.86399\times 10^{22}\,\theta^2+\left(0.+1.86399\times 10^{22}\,i\right)\sqrt{12.5664\,\theta-1.\,\theta^2}\,\sqrt{39.4784-12.5664\,\theta+1.\,\theta^2}\right)}\right\},\right.$$
$$\left.\left\{u\to 0.000494236\sqrt{\left(2.34235\times 10^{23}\,\theta-1.86399\times 10^{22}\,\theta^2+\left(0.+1.86399\times 10^{22}\,i\right)\sqrt{12.5664\,\theta-1.\,\theta^2}\,\sqrt{39.4784-12.5664\,\theta+1.\,\theta^2}\right)}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}} == \frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{u^2}{c^2}},\ \theta\right]$$

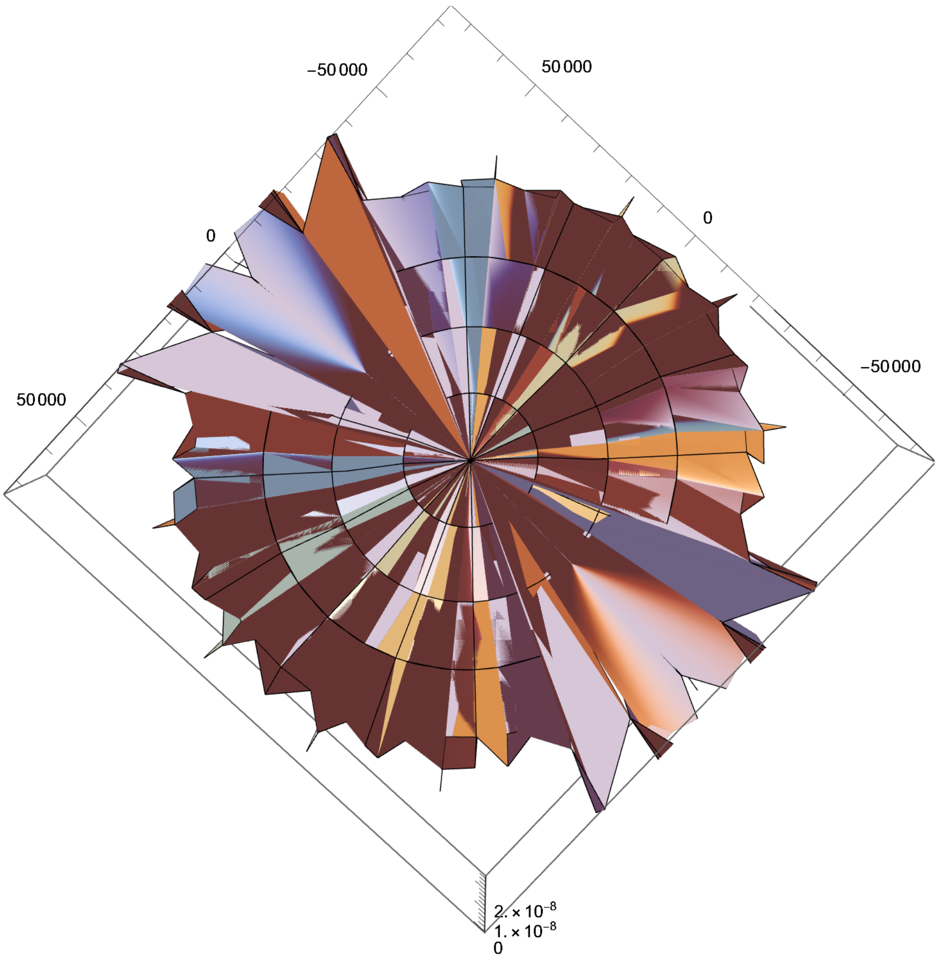
$$\left\{\left\{\theta\to \frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}\right\},\right.$$
$$\left.\left\{\theta\to \frac{\pi\left(2\,c^4-2\,c^2\,u^2+\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ \beta\right]$$

$$\Big\{\Big\{\beta\to-1.\ \text{ArcSin}\Big[0.31831\sqrt{\Big(-\frac{1.28794\times10^{69}}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{2.86605\times10^{52}\,u^2}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}-\frac{1.79376\times10^{35}\,u^4}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{2.21759\times10^{17}\,u^6}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{1.59446\times10^{35}}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}-\frac{1.77407\times10^{18}\,u^2}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}+\left(2.39003\times10^{43}\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2-\left(2.65927\times10^{26}\,u^2\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2-\left(2.95883\times10^{9}\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)\Big)}\Big]\Big\},$$

$$\Big\{\beta\to\text{ArcSin}\Big[0.31831\sqrt{\Big(-\frac{1.28794\times10^{69}}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{2.86605\times10^{52}\,u^2}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}-\frac{1.79376\times10^{35}\,u^4}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{2.21759\times10^{17}\,u^6}{\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2}+\frac{1.59446\times10^{35}}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}-\frac{1.77407\times10^{18}\,u^2}{8.07761\times10^{33}-8.98755\times10^{16}\,u^2}+\left(2.39003\times10^{43}\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2-\left(2.65927\times10^{26}\,u^2\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)^2-\left(2.95883\times10^{9}\sqrt{\left(2.90392\times10^{51}+2.47588\times10^{27}\,u-6.46209\times10^{34}\,u^2+1.71799\times10^{10}\,u^3+4.49378\times10^{17}\,u^4-1.\,u^6\right)}\right)\Big/\left(8.07761\times10^{33}-8.98755\times10^{16}\,u^2\right)\Big)}\Big]\Big\}\Big\}$$

```
RevolutionPlot3D[ArcSin[
  0.3183098861837907` Sqrt[(-1.2879392082837613`*^69/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
      2.86605126458116`*^52 u^2/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
      1.793763056356184`*^35 u^4/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
      2.217589516890687`*^17 u^6/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 +
      1.594456050094386`*^35/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2) -
      1.7740716135125496`*^18 u^2/(8.07760871306249`*^33 - 8.987551787368176`*^16 u^2) +
      (2.3900294921538355`*^43 Sqrt[(2.903917065069822`*^51 +
            2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
            1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)])/
       (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
      (2.6592664484147662`*^26 u^2 Sqrt[(2.903917065069822`*^51 +
            2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
            1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)])/
       (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2)^2 -
      (2.958832962890196`*^9 Sqrt[(2.903917065069822`*^51 +
            2.4758800785707605`*^27 u - 6.462086970449991`*^34 u^2 +
            1.7179869184`*^10 u^3 + 4.493775893684088`*^17 u^4 - 1.` u^6)])/
       (8.07760871306249`*^33 - 8.987551787368176`*^16 u^2))]], {u, -c, c}]
```



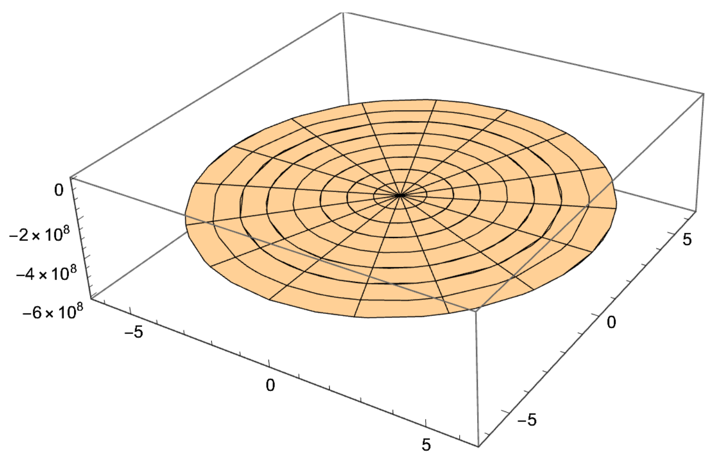
$$\text{Solve}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2}==2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\,u\right]$$

$$\begin{aligned}
&\{\{u\to\text{Root}[4.0532258104836432542368746274352\times10^{67}-\\
&\quad 1.7079612615978583669368862294392\times10^{83}\,\text{Sin}[\beta]^2+\\
&\quad 1.4562080003683044018041706105627\times10^{59}\,\#1+\\
&\quad (-5.4111401881449464088210664670613\times10^{50}+\\
&\qquad 3.8007263869085317046852183304742\times10^{66}\,\text{Sin}[\beta]^2)\,\#1^2-\\
&\quad 2.0208945633153124779637513510659\times10^{42}\,\#1^3+\\
&\quad (-5.2860980342978121431211906423698\times10^{48}-\\
&\qquad 2.1144392137191221020101719542600\times10^{49}\,\text{Sin}[\beta]^2)\,\#1^4-\\
&\quad 3.5056932414569705289890250000000\times10^{24}\,\#1^5+\\
&\quad 5.8815772741663749270483134054400\times10^{31}\,\#1^6\,\&,\,1]\},\\
&\{u\to\text{Root}[4.0532258104836432542368746274352\times10^{67}-\\
&\quad 1.7079612615978583669368862294392\times10^{83}\,\text{Sin}[\beta]^2+\\
&\quad 1.4562080003683044018041706105627\times10^{59}\,\#1+\\
&\quad (-5.4111401881449464088210664670613\times10^{50}+\\
&\qquad 3.8007263869085317046852183304742\times10^{66}\,\text{Sin}[\beta]^2)\,\#1^2-
\end{aligned}$$

$2.02089456331531247796375135106590 \times 10^{42}$ #1^3 +
$(-5.28609803429781214312119064236980 \times 10^{48}$ -
$2.11443921371912210201017195426000 \times 10^{49}$ Sin[β]^2) #1^4 -
$3.50569324145697052898902500000000 \times 10^{24}$ #1^5 +
$5.88157727416637492704831340544000 \times 10^{31}$ #1^6 &, 2]},
{u → Root[$4.05322581048364325423687462743520 \times 10^{67}$ -
$1.70796126159785836693688622943920 \times 10^{83}$ Sin[β]^2 +
$1.45620800036830440180417061056270 \times 10^{59}$ #1 +
$(-5.41114018814494640882106646706130 \times 10^{50}$ +
$3.80072638690853170468521833047420 \times 10^{66}$ Sin[β]^2) #1^2 -
$2.02089456331531247796375135106590 \times 10^{42}$ #1^3 +
$(-5.28609803429781214312119064236980 \times 10^{48}$ -
$2.11443921371912210201017195426000 \times 10^{49}$ Sin[β]^2) #1^4 -
$3.50569324145697052898902500000000 \times 10^{24}$ #1^5 +
$5.88157727416637492704831340544000 \times 10^{31}$ #1^6 &, 3]},
{u → Root[$4.05322581048364325423687462743520 \times 10^{67}$ -
$1.70796126159785836693688622943920 \times 10^{83}$ Sin[β]^2 +
$1.45620800036830440180417061056270 \times 10^{59}$ #1 +
$(-5.41114018814494640882106646706130 \times 10^{50}$ +
$3.80072638690853170468521833047420 \times 10^{66}$ Sin[β]^2) #1^2 -
$2.02089456331531247796375135106590 \times 10^{42}$ #1^3 +
$(-5.28609803429781214312119064236980 \times 10^{48}$ -
$2.11443921371912210201017195426000 \times 10^{49}$ Sin[β]^2) #1^4 -
$3.50569324145697052898902500000000 \times 10^{24}$ #1^5 +
$5.88157727416637492704831340544000 \times 10^{31}$ #1^6 &, 4]},
{u → Root[$4.05322581048364325423687462743520 \times 10^{67}$ -
$1.70796126159785836693688622943920 \times 10^{83}$ Sin[β]^2 +
$1.45620800036830440180417061056270 \times 10^{59}$ #1 +
$(-5.41114018814494640882106646706130 \times 10^{50}$ +
$3.80072638690853170468521833047420 \times 10^{66}$ Sin[β]^2) #1^2 -
$2.02089456331531247796375135106590 \times 10^{42}$ #1^3 +
$(-5.28609803429781214312119064236980 \times 10^{48}$ -
$2.11443921371912210201017195426000 \times 10^{49}$ Sin[β]^2) #1^4 -
$3.50569324145697052898902500000000 \times 10^{24}$ #1^5 +
$5.88157727416637492704831340544000 \times 10^{31}$ #1^6 &, 5]},
{u → Root[$4.05322581048364325423687462743520 \times 10^{67}$ -
$1.70796126159785836693688622943920 \times 10^{83}$ Sin[β]^2 +
$1.45620800036830440180417061056270 \times 10^{59}$ #1 +
$(-5.41114018814494640882106646706130 \times 10^{50}$ +
$3.80072638690853170468521833047420 \times 10^{66}$ Sin[β]^2) #1^2 -
$2.02089456331531247796375135106590 \times 10^{42}$ #1^3 +

```
(-5.28609803429781214312119064236980 × 10^48 -
    2.11443921371912210201017195426000 × 10^49 Sin[β]^2) #1^4 -
3.50569324145697052898902500000000 × 10^24 #1^5 +
5.88157727416637492704831340544000 × 10^31 #1^6 &, 6]}}
```

```
RevolutionPlot3D[Root[
  4.05322581048364325423687462743520493848299965498688735009410761359 36`31.909179540382016*^67 -
   1.70796126159785836693688622943918677198203093873521607568176709 17`31.90917954038201*^83 Sin[β]^2 +
   1.45620800036830440180417061056265424124354233834700747571 2`31.90917954038201*^59 #1 +
   (-5.41114018814494640882106646706128560033702885720064`31.90917954038201*^50 +
      3.80072638690853170468521833047421011941570039548412374873209726566 4`31.90917954038201*^66 Sin[β]^2) #1^2 -
   2.02089456331531247796375135106585507921 92`31.909179540382*^42 #1^3 +
   (-5.28609803429781214312119064236975938831438682521 6`31.90917954038201*^48 -
      2.11443921371912210201017195425997575678077005987 84`31.90917954038201*^49
       Sin[β]^2) #1^4 - 3.50569324145697052898902 5`31.90917954038201*^24 #1^5 +
   5.88157727416637492704831340544`31.90917954038201*^31 #1^6 &, 1], {β, -2 π, 2 π}]
```



$$\frac{\pi \left(2\,c^4 - 2\,c^2\,u^2 - \sqrt{4\,c^8 - 8\,c^6\,u^2 + 5\,c^4\,u^4 - c^2\,u^6}\right)}{c^4 - c^2\,u^2} ==$$

$$\Big\{\Big\{\theta \to \frac{4\,\pi}{3} + \frac{-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2 \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} - \frac{2\,\pi \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} - \frac{\left(1 + i\,\sqrt{3}\right)\left(-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2\right)}{12\,\pi\,r^2 \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} + \frac{\left(1 - i\,\sqrt{3}\right)\pi \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} - \frac{\left(1 - i\,\sqrt{3}\right)\left(-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2\right)}{12\,\pi\,r^2 \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} + \frac{\left(1 + i\,\sqrt{3}\right)\pi \left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\Big\}\Big\}$$

$$\Big\{\Big\{\theta \to \frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6 \left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} + \left(\left(1 + i\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2\right)\right) \Big/ \left(12 \left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}\left(1 - i\,\sqrt{3}\right)\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} + \left(\left(1 - i\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2\right)\right) \Big/ \left(12 \left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}\left(1 + i\,\sqrt{3}\right)\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big\}\Big\}$$

θ = **Those other three long ones (1 real 2 imaginary)**

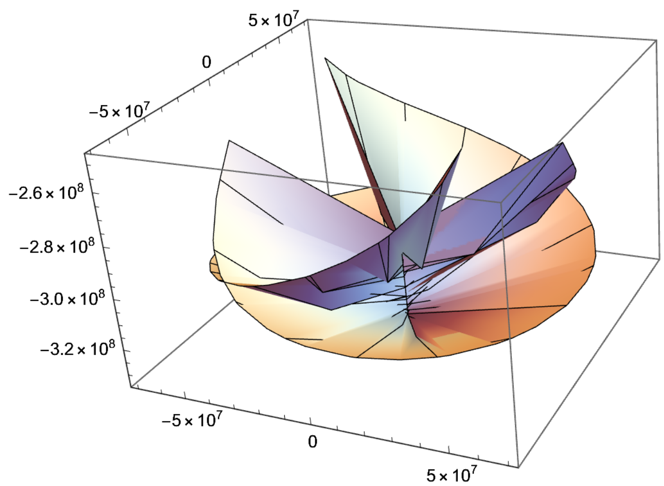
$$\text{from Solve}\Big[\frac{1}{2\pi}\left(\sqrt{\left(4\pi r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}\right)-r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\text{Sin}[\beta]^2+11\pi^6\text{Sin}[\beta]^4+\pi^6\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\right)}\right) ==$$

$$r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right], \theta\Big]$$

c := (2.99792458 * 10 ^ 8)

θ = **A set of three potential threes of solutions solvable with ease.**

```
SphericalPlot3D[Root[
  4.053225810483643254236874627435204938482999654986887350094107613593б`31.909179⋱
     540382016*^67 -
    1.707961261597858366936886229439186771982030938735216075681767091 7`31.9091795⋱
      4038201*^83 Sin[ArcSin[ Sqrt[-4 π^2 θ + 4 π θ^2 - θ^3] / (2 π Sqrt[-4 π + θ]) ]]^2 +
    1.456208000368304401804170610562654241243542338347007475712`31.90917954038201⋱
      *^59 #1 +
    (-5.411140188144946408821066467061285600337028857200б4`31.90917954038201*^50 +
       3.800726386908531704685218330474210119415700395484123748732097265664`31.9⋱
         0917954038201*^66 Sin[β]^2) #1^2 -
    2.020894563315312477963751351065855079219 2`31.909179540382*^42 #1^3 +
    (-5.286098034297812143121190642369759388314386825216`31.90917954038201*^48 -
       2.114439213719122102010171954259975756780770059878 4`31.90917954038201*^49
       Sin[β]^2) #1^4 - 3.505693241456970528989025`31.90917954038201*^24 #1^5 +
    5.88157727416637492704831340544`31.90917954038201*^31 #1^6 &,
  1], {β, -2 π, 2 π}, {θ, -2 π, 2 π}]
```



$$\beta = \text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta + 4\pi\theta^2 - \theta^3}}{2\pi\sqrt{-4\pi + \theta}}\right]$$

v = u = Relativistic sorts

$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{\left(3.5481432270250993\grave{}*\hat{}18\ \eta^2 - 1.1294090667581471\grave{}*\hat{}18\ r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\ r^2\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\grave{}\ \eta^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2}\right)\right\},\right.$$

$$\left.\left\{v \to \left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18\ \eta^2 - 1.1294090667581471\grave{}*\hat{}18\ r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\ r^2\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\grave{}\ \eta^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2}\right)\right\}\right\}$$

$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2 + 3.5481432270250993\grave{}*\hat{}18\ \mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right)\right\},\right.$$

$$\left.\left\{v \to \left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2 + 3.5481432270250993\grave{}*\hat{}18\ \mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\left\{\left\{v \to -\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},\right.$$

$$\left\{v \to \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},$$

$$\left\{v \to -\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta - c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\},$$

$$\left.\left\{v \to \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta - c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2 + r^2\,\theta}}\right\}\right\}$$

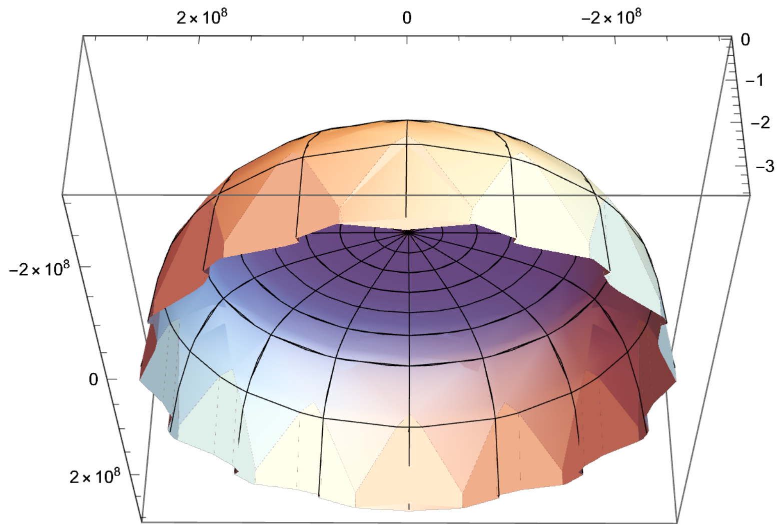
$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\right)\right\},\right.$$

$$\left.\left\{v \to \left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\right)\right\}\right\}$$

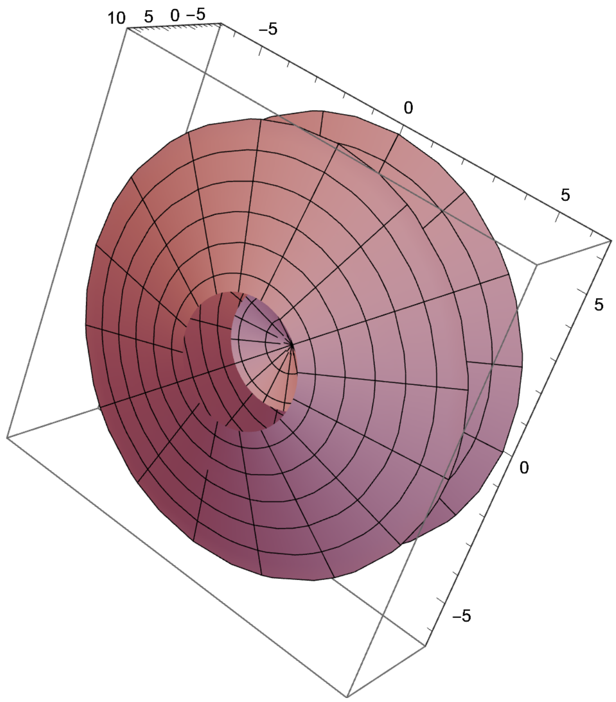
```
u = v = 0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22 θ^2 +
    (0.`+1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
    √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2))
```

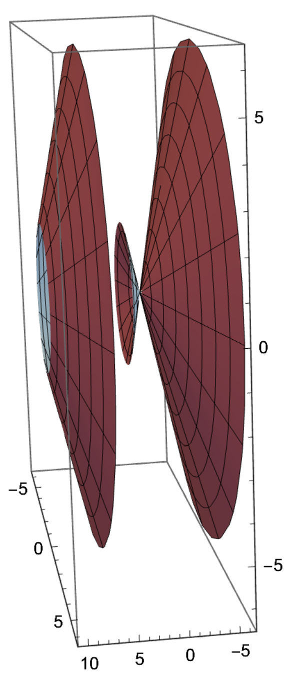
$$\text{RevolutionPlot3D}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2},\right.$$

```
{u, -2.99792458*10^8, (2.99792458*10^8)}]
```



```
RevolutionPlot3D[1/ (c^4 - c^2
    (-0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22
          θ^2 + (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
          √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)))^2)
  π (2 c^4 - 2 c^2 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
            1.863986866980889`*^22 θ^2 +
            (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
            √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)))^2 -
      √(4 c^8 - 8 c^6 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                1.863986866980889`*^22 θ^2 +
                (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)))^2 +
          5 c^4 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                1.863986866980889`*^22 θ^2 +
                (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)))^4 -
          c^2 (0.000494236036686326` √(2.3423549790780066`*^23 θ -
                1.863986866980889`*^22 θ^2 +
                (0.`+ 1.863986866980889`*^22 ⅈ) √(12.566370614359172` θ - 1.` θ^2)
                √(39.47841760435743`- 12.566370614359172` θ + 1.` θ^2)))^6)),
 {θ, -2 π, 2 π}]
```

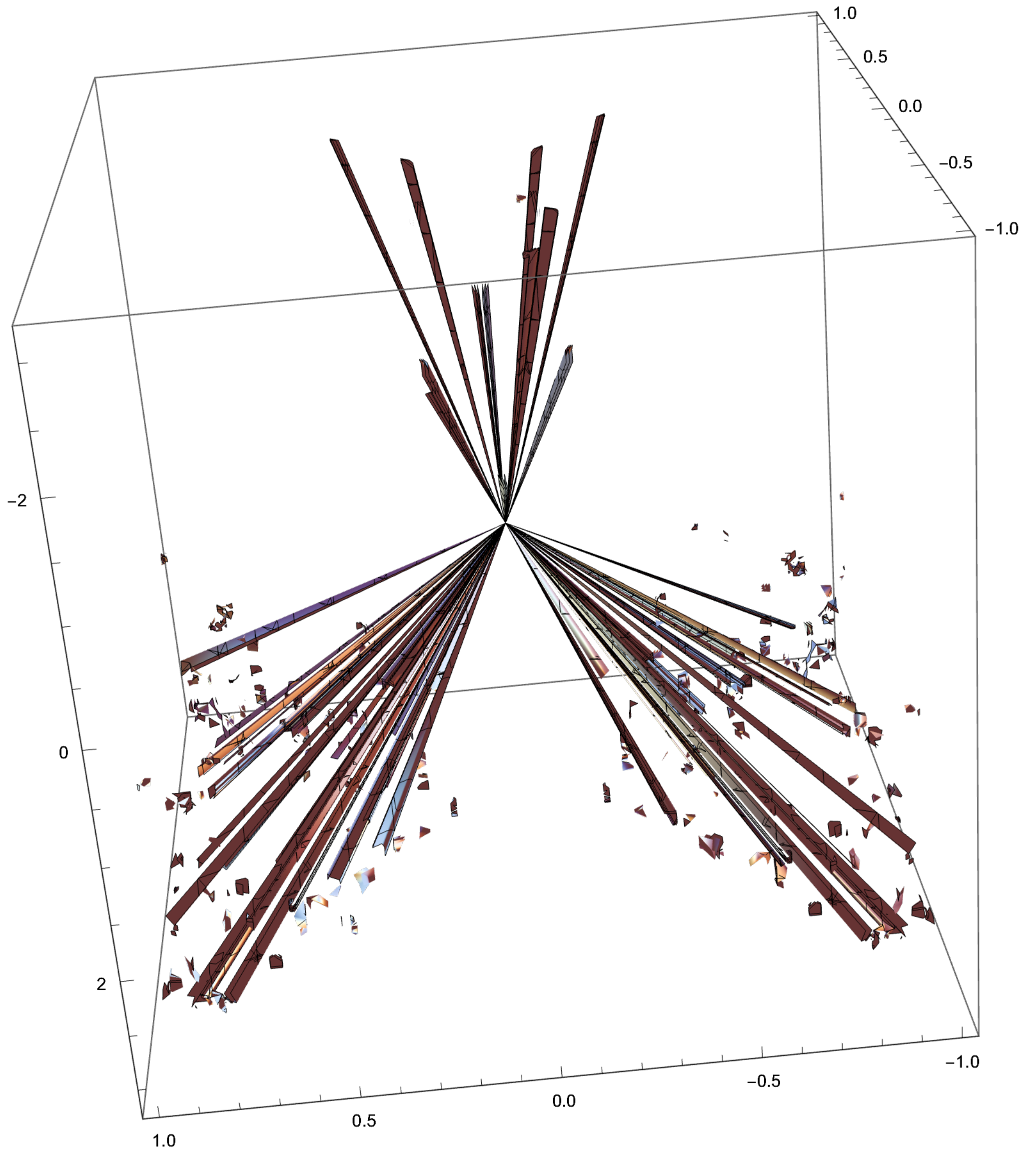




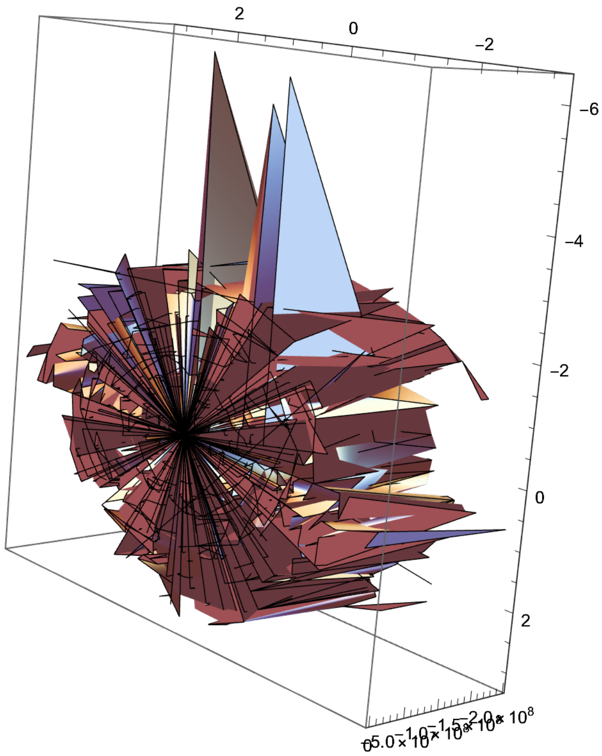
$$\texttt{RevolutionPlot3D}\left[\frac{\pi\left(2\,c^4-2\,c^2\,u^2-\sqrt{4\,c^8-8\,c^6\,u^2+5\,c^4\,u^4-c^2\,u^6}\right)}{c^4-c^2\,u^2},\right.$$

```
{u, -2.99792458 * 10^8, (2.99792458 * 10^8)}]
```

```
ContourPlot3D[
 1/ (c^4 - c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
          8.987551787368176`*^16 r^2 θ^2)) /
       (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2) π
   (2 c^4 - 2 c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
             r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
        (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2 -
     √(4 c^8 - 8 c^6 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
                r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
           (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^2 +
       5 c^4 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
                r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
           (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^4 -
       c^2 (-(1.` √(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18
                r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
          (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ +
               r^2 θ^2)))^6)), {r, -1, 1}, {η, -1, 1}, {θ, -π, π}]
```


1.0
0.5
0.0
−0.5
−1.0
−2
0
2
1.0
0.5
0.0
−0.5
−1.0

```
RevolutionPlot3D[
 1/ (c^4 - c^2 ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
         (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
  π (2 c^4 - 2 c^2 ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
         (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2 -
     √ (4 c^8 - 8 c^6 ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
           (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2 +
        5 c^4 ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
           (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^4 -
        c^2 ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
           (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^6)),
 {β, -π, π}, {θ, -2 π, 2 π}]
```


2
0
−2
−6
−4
−2
0
2
0
5.0×10
1.0×10
1.5×10
2.0×10^8

$$\text{RevolutionPlot3D}\Bigg[\frac{1}{c^4-c^2\left(\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right)^2}$$

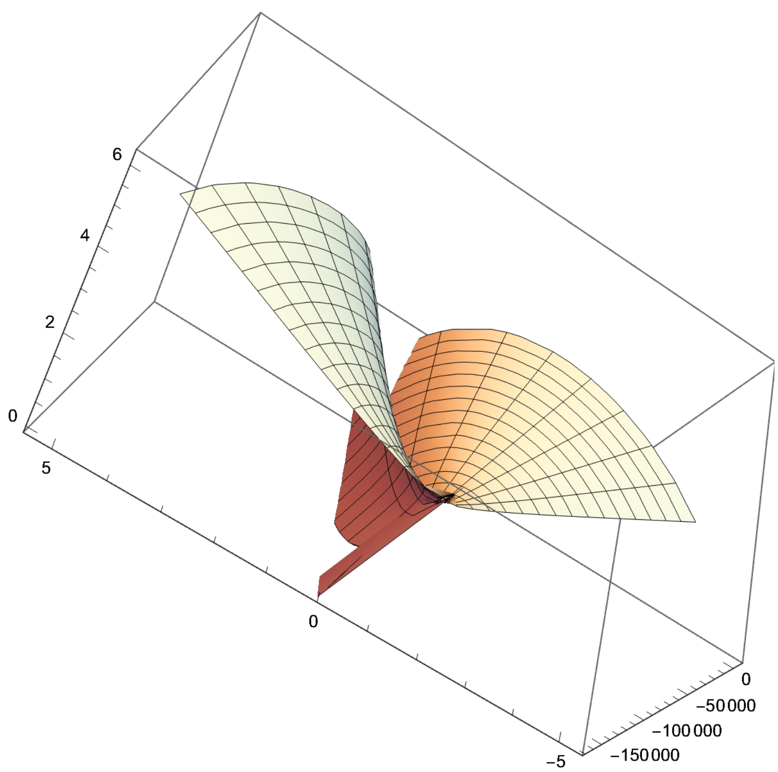
$$\pi\left(2c^4-2c^2\left(\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right)^2-\right.$$

$$\sqrt{\left(4c^8-8c^6\left(\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right)^2+\right.}$$

$$5c^4\left(\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right)^4-$$

$$\left.\left.c^2\left(\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right)^6\right)\right),$$

$$\{\theta, -2\pi, 2\pi\}, \{r, -1, 1\}\Bigg]$$



$\Big\{\Big\{u \to$

$$-0.000494236036686326`\sqrt{\Big(2.3423549790780066`{*}\hat{}23\,\theta - 1.863986866980889`{*}\hat{}22\,\theta^2 +}$$

$$(0.`+1.863986866980889`*\hat{}22\,\mathbb{i})\ \sqrt{12.566370614359172`\,\theta-1.`\,\theta^2}$$
$$\sqrt{39.47841760435743`-12.566370614359172`\,\theta+1.`\,\theta^2}\Big)\Big\},$$
$$\Big\{u\to 0.000494236036686326`\ \sqrt{}\Big(2.3423549790780066`*\hat{}23\,\theta-1.863986866980889`*\hat{}22$$
$$\theta^2+(0.`+1.863986866980889`*\hat{}22\,\mathbb{i})\ \sqrt{12.566370614359172`\,\theta-1.`\,\theta^2}$$
$$\sqrt{39.47841760435743`-12.566370614359172`\,\theta+1.`\,\theta^2}\Big)\Big\}\Big\}==$$
$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\Big(3.5481432270250993`*\hat{}18\,\eta^2-1.1294090667581471`*\hat{}18\,r^2\,\theta+$$
$$8.987551787368176`*\hat{}16\,r^2\,\theta^2\Big)\Big)\Big/$$
$$\Big(\sqrt{39.47841760435743`\,\eta^2-12.566370614359172`\,r^2\,\theta+r^2\,\theta^2}\Big)\Big\},$$
$$\Big\{v\to\Big(\sqrt{}\Big(3.5481432270250993`*\hat{}18\,\eta^2-1.1294090667581471`*\hat{}18\,r^2\,\theta+$$
$$8.987551787368176`*\hat{}16\,r^2\,\theta^2\Big)\Big)\Big/$$
$$\Big(\sqrt{39.47841760435743`\,\eta^2-12.566370614359172`\,r^2\,\theta+r^2\,\theta^2}\Big)\Big\}\Big\}$$
$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\Big(-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+$$
$$3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/$$
$$\Big(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\Big)\Big\},$$
$$\Big\{v\to\Big(\sqrt{}\Big(-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+$$
$$3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/$$
$$\Big(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\Big)\Big\}\Big\}$$
$$\Big\{\Big\{v\to-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},$$
$$\Big\{v\to\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}+\frac{\sqrt{4\,c^6\,\pi\,r^2\,\theta-c^6\,r^2\,\theta^2}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\}\Big\}$$
$$\Big\{\Big\{v\to-\Big(1.`\ \sqrt{}\Big(3.5481432270250993`*\hat{}18-$$
$$1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2\Big)\Big)\Big/$$
$$\Big(\sqrt{39.47841760435743`-12.566370614359172`\,\theta+\theta^2}\Big)\Big\},$$

$$\left\{v \to \left(\sqrt{\left(3.5481432270250993`*^{\wedge}18 - 1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + \theta^2}\right)\right\}\}$$

$$\text{Solve}\Big[0.000494236036686326`\,\sqrt{\Big(2.3423549790780066`*^{\wedge}23\,\theta - 1.863986866980889`*^{\wedge}22\,\theta^2 + (0.` + 1.863986866980889`*^{\wedge}22\,\mathbb{i})\,\sqrt{12.566370614359172`\,\theta - 1.`\,\theta^2}\,\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + 1.`\,\theta^2}\Big)} == \left(\sqrt{\left(3.5481432270250993`*^{\wedge}18\,\eta^2 - 1.1294090667581471`*^{\wedge}18\,r^2\,\theta + 8.987551787368176`*^{\wedge}16\,r^2\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743`\,\eta^2 - 12.566370614359172`\,r^2\,\theta + r^2\,\theta^2}\right), r\Big]$$

$$\{\{\text{Solve`Auxiliary}[\theta][\theta] \to -376\,964. - 652\,931.\,\mathbb{i}\}, \{\text{Solve`Auxiliary}[\theta][\theta] \to -376\,964. + 652\,931.\,\mathbb{i}\}, \{\text{Solve`Auxiliary}[\theta][\theta] \to 753\,946.\}\}$$

$$\text{Solve}\Big[0.000494236036686326`\,\sqrt{\Big(2.3423549790780066`*^{\wedge}23\,\theta - 1.863986866980889`*^{\wedge}22\,\theta^2 + (0.` + 1.863986866980889`*^{\wedge}22\,\mathbb{i})\,\sqrt{12.566370614359172`\,\theta - 1.`\,\theta^2}\,\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + 1.`\,\theta^2}\Big)} == \left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2}\right), \beta\Big]$$

$$\{\{\text{Solve`Auxiliary}[\theta][\theta] \to -376\,964. - 652\,931.\,\mathbb{i}\}, \{\text{Solve`Auxiliary}[\theta][\theta] \to -376\,964. + 652\,931.\,\mathbb{i}\}, \{\text{Solve`Auxiliary}[\theta][\theta] \to 753\,946.\}\}$$

$$\text{Solve}\Big[0.000494236036686326`\,\sqrt{\Big(2.3423549790780066`*^{\wedge}23\,\theta - 1.863986866980889`*^{\wedge}22\,\theta^2 + (0.` + 1.863986866980889`*^{\wedge}22\,\mathbb{i})\,\sqrt{12.566370614359172`\,\theta - 1.`\,\theta^2}\,\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + 1.`\,\theta^2}\Big)} == \left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2}\right), \theta\Big]$$

$$\{\{\theta \to -245\,215. - 424\,732.\,\mathbb{i}\}, \{\theta \to -245\,215. + 424\,732.\,\mathbb{i}\}, \{\theta \to 490\,443.\}\}$$

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{\big(2.3423549790780066\grave{}*\text{^}23\,\theta - 1.863986866980889\grave{}*\text{^}22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\text{^}22\,i)\sqrt{12.566370614359172\grave{}\,\theta - 1.\grave{}\,\theta^2}\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + 1.\grave{}\,\theta^2}\big)} == \sqrt{-\frac{4 c^2 \pi r^2}{-4\pi r^2 + r^2\theta} + \frac{c^2 r^2 \theta}{-4\pi r^2 + r^2\theta} - \frac{\sqrt{c^6 r^2 (4\pi - \theta)\theta}}{-4\pi r^2 + r^2\theta}}, \theta\Big]$$

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{\big(2.3423549790780066\grave{}*\text{^}23\,\theta - 1.863986866980889\grave{}*\text{^}22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\text{^}22\,i)\sqrt{12.566370614359172\grave{}\,\theta - 1.\grave{}\,\theta^2}\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + 1.\grave{}\,\theta^2}\big)} == \sqrt{-\frac{4 c^2 \pi r^2}{-4\pi r^2 + r^2\theta} + \frac{c^2 r^2 \theta}{-4\pi r^2 + r^2\theta} - \frac{\sqrt{c^6 r^2 (4\pi - \theta)\theta}}{-4\pi r^2 + r^2\theta}}, r\Big]$$

$$\text{Solve}\Big[0.000494236036686326\grave{}\ \sqrt{\big(2.3423549790780066\grave{}*\text{^}23\,\theta - 1.863986866980889\grave{}*\text{^}22\,\theta^2 + (0.\grave{} + 1.863986866980889\grave{}*\text{^}22\,i)\sqrt{12.566370614359172\grave{}\,\theta - 1.\grave{}\,\theta^2}\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + 1.\grave{}\,\theta^2}\big)} == \Big(\sqrt{\big(3.5481432270250993\grave{}*\text{^}18 - 1.1294090667581471\grave{}*\text{^}18\,\theta + 8.987551787368176\grave{}*\text{^}16\,\theta^2\big)}\Big) \Big/ \Big(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}\Big), \theta\Big]$$

$\{\{\theta \to -245\,215. - 424\,732.\,i\}\}$

```
c := (2.99792458 * 10^8)
```

$e\text{^}(i\,\beta) = \text{Cos}[\beta] + i\,\text{Sin}[\beta]$

$$\beta = \text{ArcSin}\Big[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\Big]$$

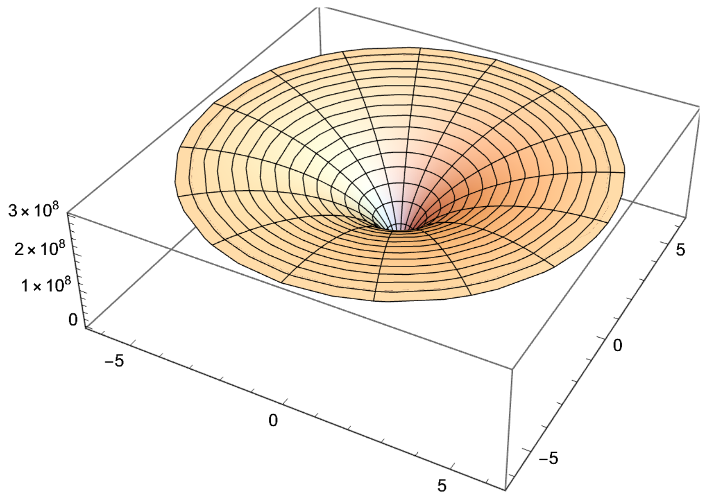
$$e\text{^}\Big(i\,\text{ArcSin}\Big[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\Big]\Big) == \Big(\text{Cos}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\Big]\Big] + i\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\Big]\Big]\Big)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]} == \frac{i\,\sqrt{(4\pi - \theta)\,\theta}}{2\pi} + \sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}}$$

$$\text{Solve}\Big[\sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}} == \sqrt{1 - \frac{u\text{^}2}{c\text{^}2}}, u\Big]$$

$$\Big\{\Big\{u \to -\frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2\pi}\Big\}, \Big\{u \to \frac{\sqrt{4 c^2 \pi \theta - c^2 \theta^2}}{2\pi}\Big\}\Big\}$$

$$\texttt{RevolutionPlot3D}\left[\frac{\sqrt{4\ (2.99792458 * 10\,^\wedge 8)^2\ \pi\ \theta - (2.99792458 * 10\,^\wedge 8)^2\ \theta^2}}{2\ \pi},\ \{\theta,\ -2\ \pi,\ 2\ \pi\}\right]$$



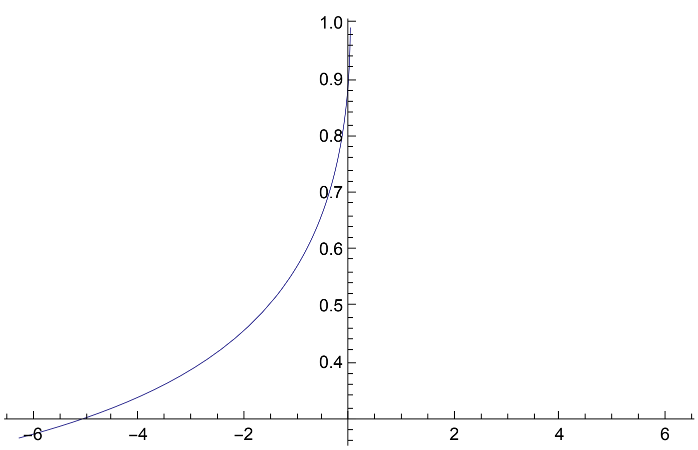
$$\texttt{Solve}\left[\frac{\sqrt{4\ c^2\ \pi\ \theta - c^2\ \theta^2}}{2\ \pi} == \frac{\sqrt{4\ \pi\ r^2\ \theta - r^2\ \theta^2}}{2\ \pi},\ r\right]$$

$\{\{r \to -c\},\ \{r \to c\}\}$

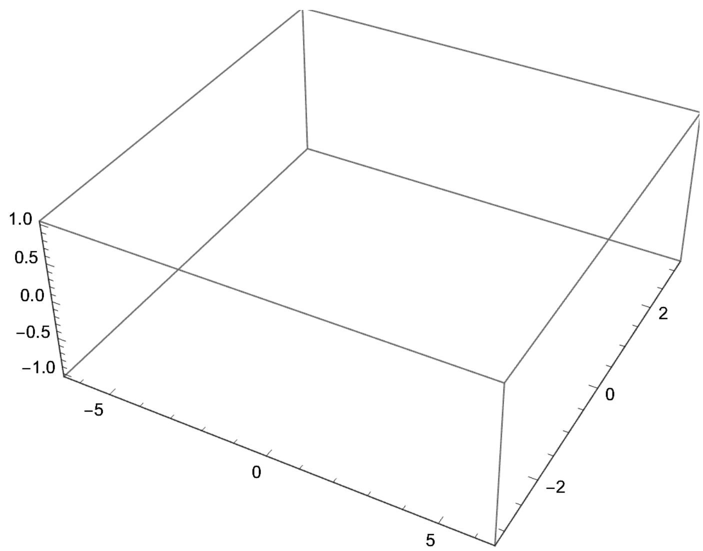
$$e\,^\wedge\left(i\ \texttt{ArcSin}\left[\frac{\sqrt{(4\ \pi - \theta)\ \theta}}{2\ \pi}\right]\right) == \left(\texttt{Cos}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\ \pi - \theta)\ \theta}}{2\ \pi}\right]\right] + i\ \texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\ \pi - \theta)\ \theta}}{2\ \pi}\right]\right]\right)$$

$$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2\ \texttt{Sin}[\beta]^2}\right)$$

$$\texttt{Plot}\left[e^{i\ \texttt{ArcSin}\left[\frac{\sqrt{(4\ \pi - \theta)\ \theta}}{2\ \pi}\right]},\ \{\theta,\ -2\ \pi,\ 2\ \pi\}\right]$$

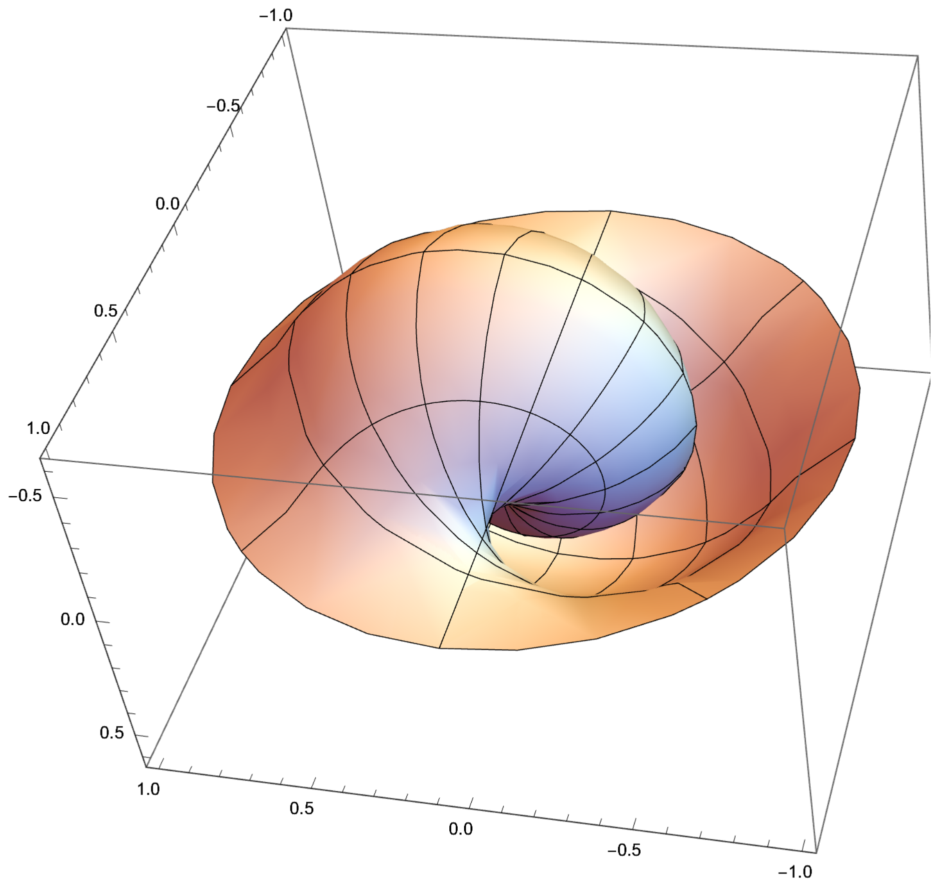


$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{2\pi}\right]},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$

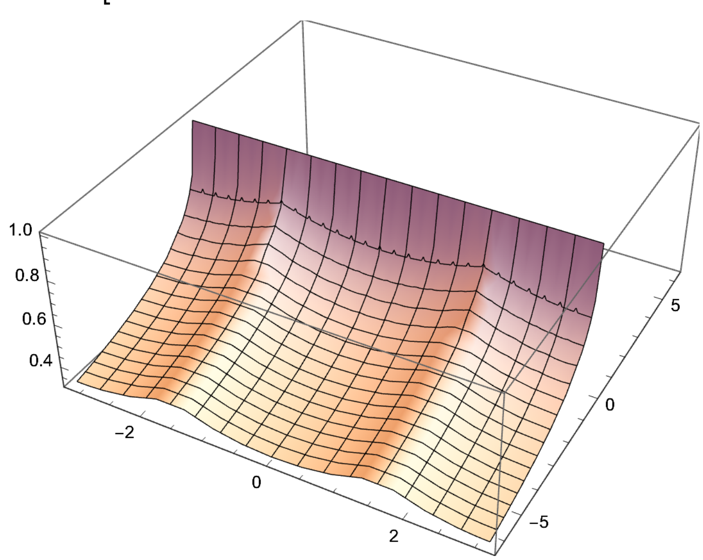


$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]}=e^{i\beta}$$

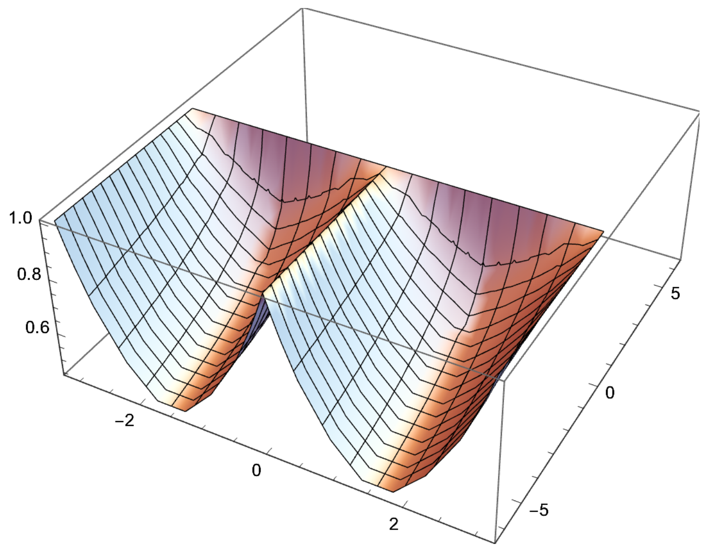
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,\ -(2)\,\pi,\ (2)\,\pi\},\ \{\theta,\ -(2)\,\pi,\ (2)\,\pi\}\right]$$



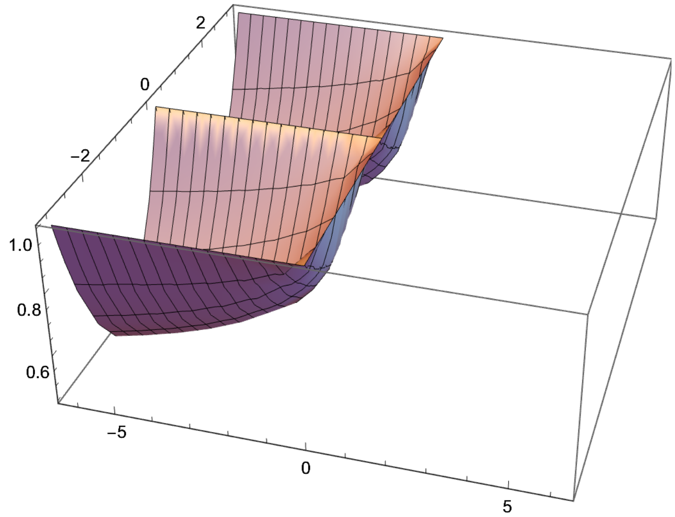
$$\texttt{Plot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



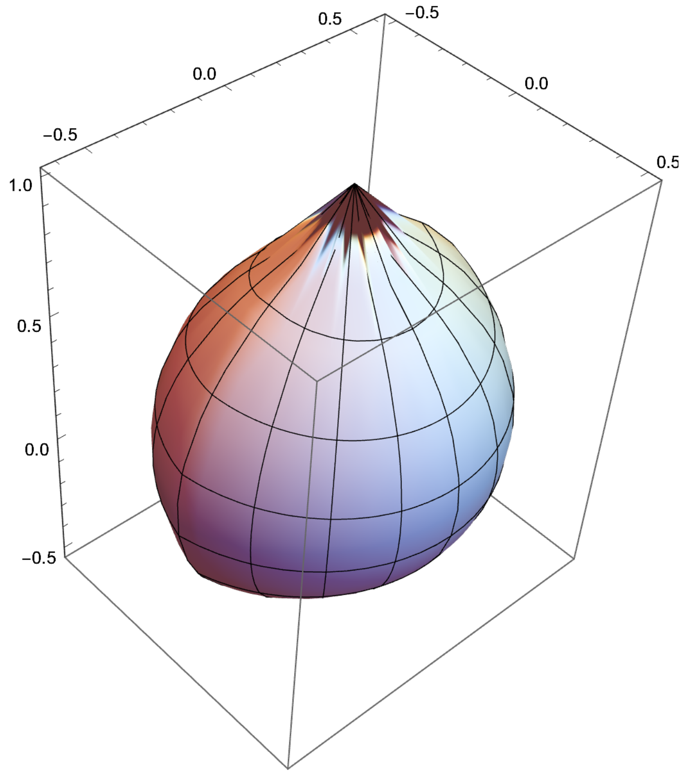
$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



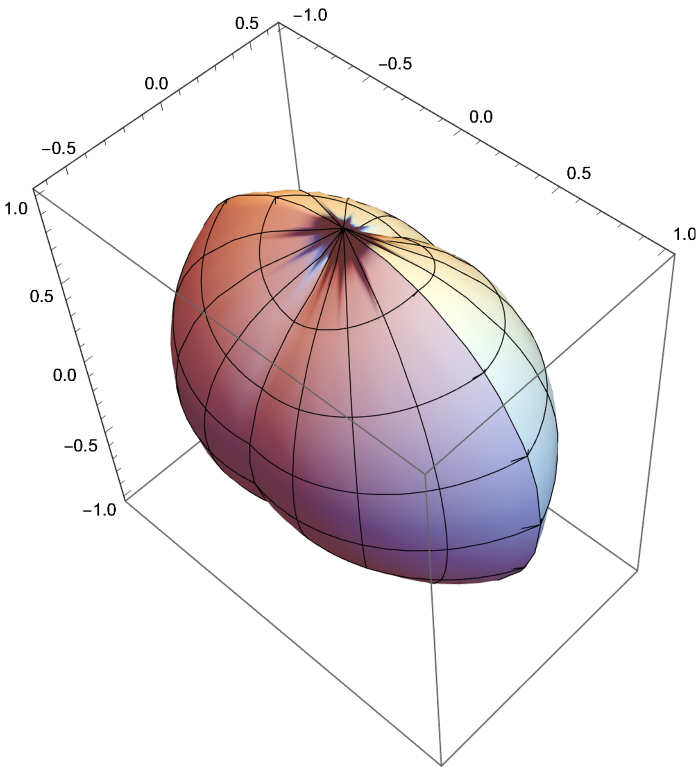
$$\text{Plot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$



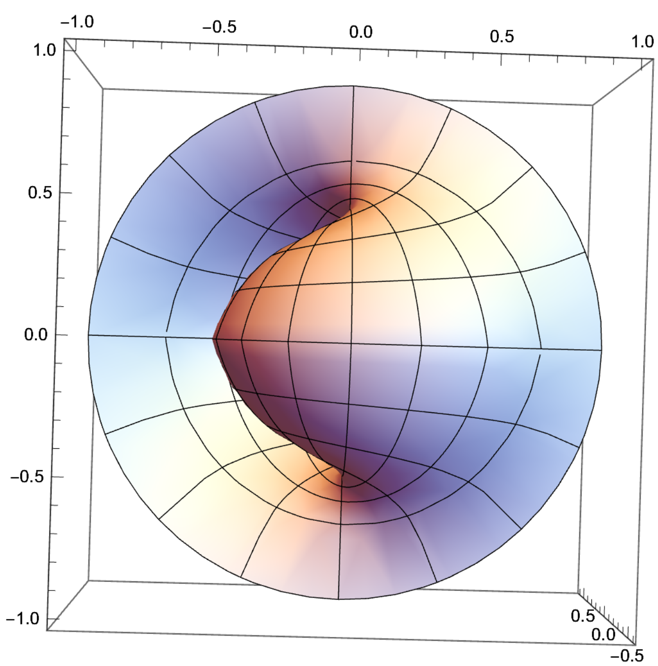
$$\texttt{SphericalPlot3D}\left[e^{i\,\texttt{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



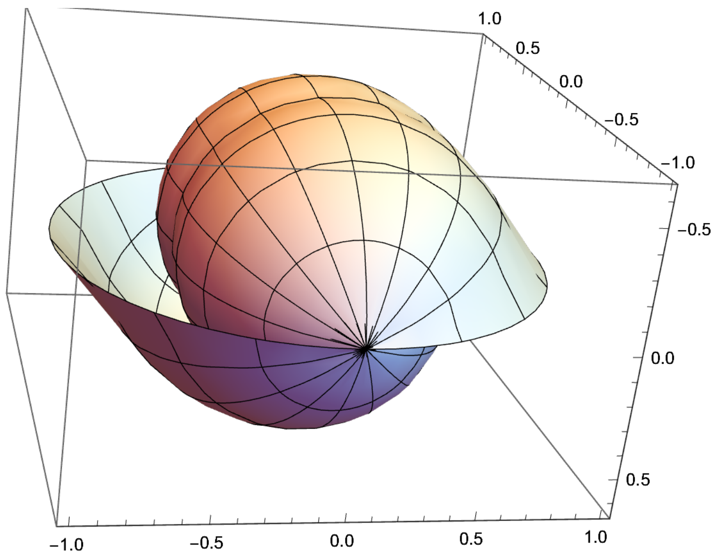
$$\texttt{SphericalPlot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\,\pi}\right]},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



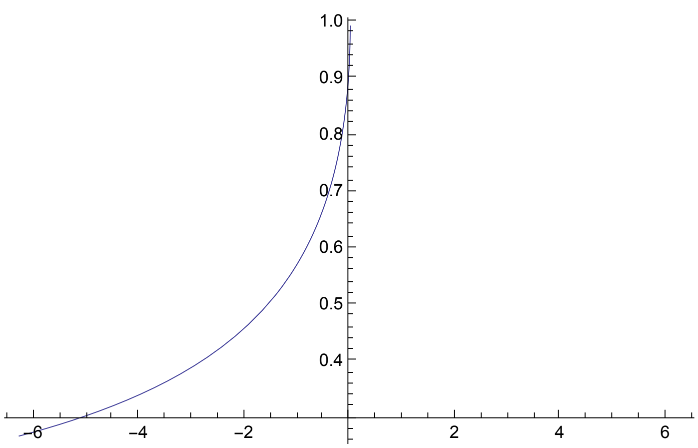
$$\texttt{SphericalPlot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\,\pi-2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\,\pi}\right]},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



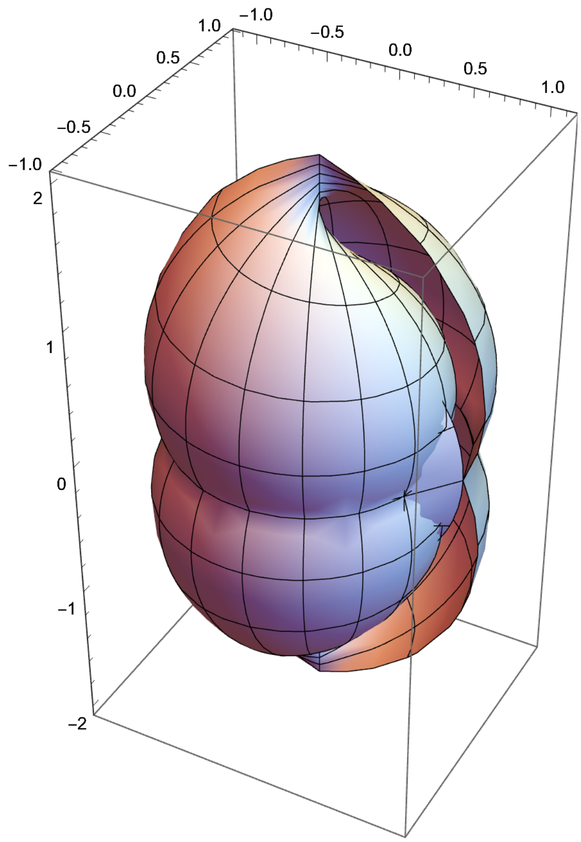
$$\text{SphericalPlot3D}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



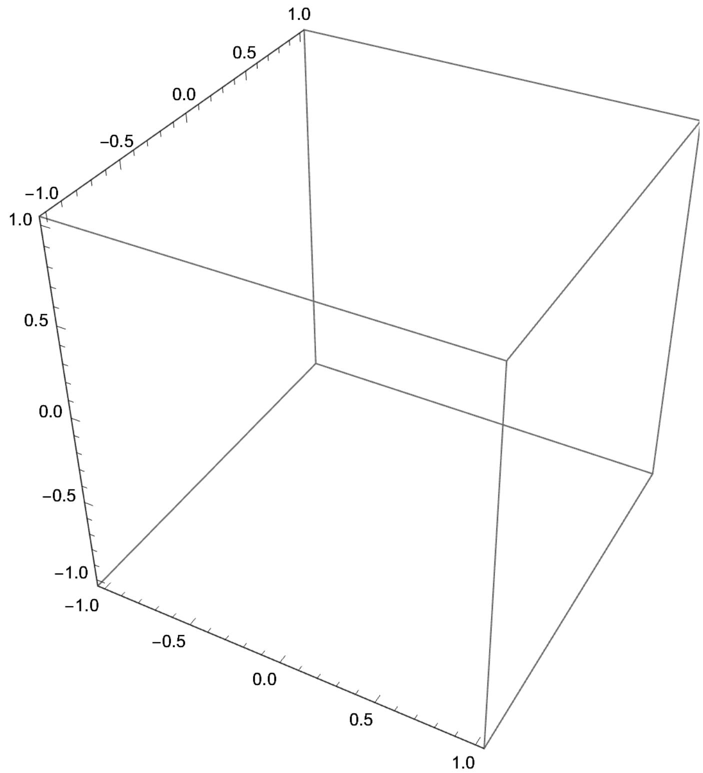
$$\text{Plot}\left[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\texttt{SphericalPlot3D}\left[\frac{i\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\right.$$
$$\left.\{\beta,-\pi,\pi\},\{\theta,-2\pi,2\pi\}\right]$$



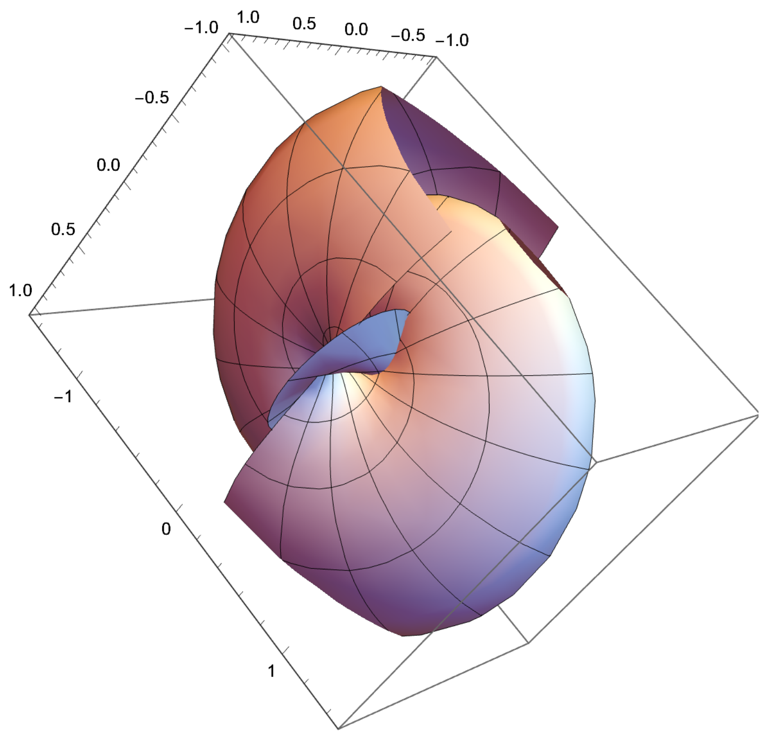
$$\texttt{SphericalPlot3D}\left[\frac{\mathbb{i}\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$



```
SphericalPlot3D[
```

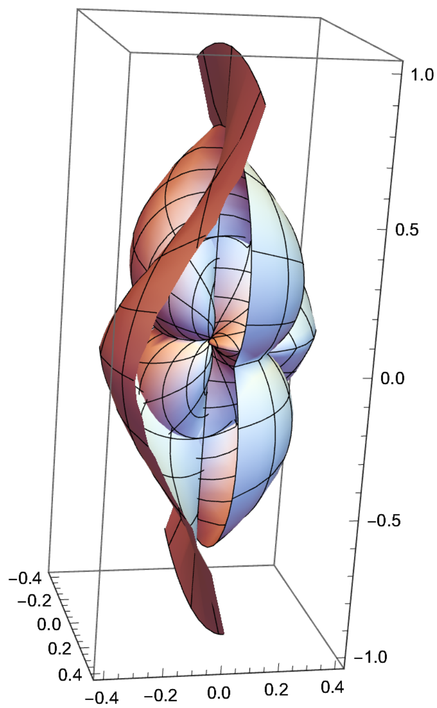
$$\frac{\mathrm{i}\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}{4\pi^2}},$$

$\{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}]$

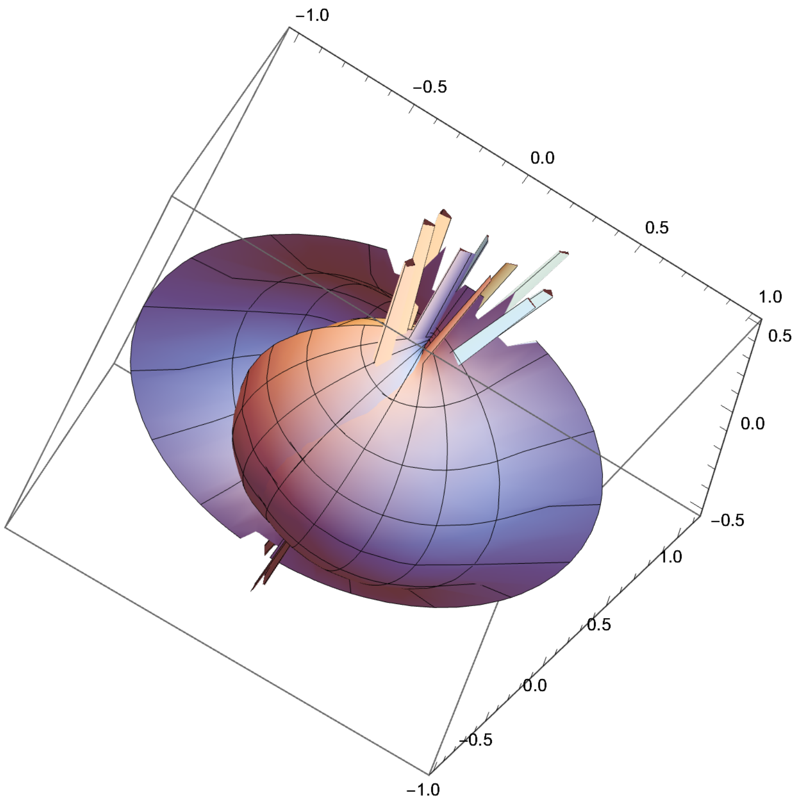


```
SphericalPlot3D[
```

$$\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}]$$



$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\,\mathrm{i}\sqrt{\Big(\Big(4\pi-\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)\theta\Big)}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Big]$$



$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\,\mathrm{i}\sqrt{\Big(\Big(4\pi-\frac{4\pi}{3}-\big(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\big)\Big/\Big(6\,\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)+\frac{2}{3}\big(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\big)^{1/3}\Big)\theta\Big)}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Big]$$

$$\text{SphericalPlot3D}\left[\frac{i\sqrt{(4\pi-\theta)\,\theta}}{2\pi}+\sqrt{1-\frac{(4\pi-\theta)\,\theta}{4\pi^2}},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\right]$$

$$\beta=\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]$$

$$e\,\hat{}\left(i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right)==$$

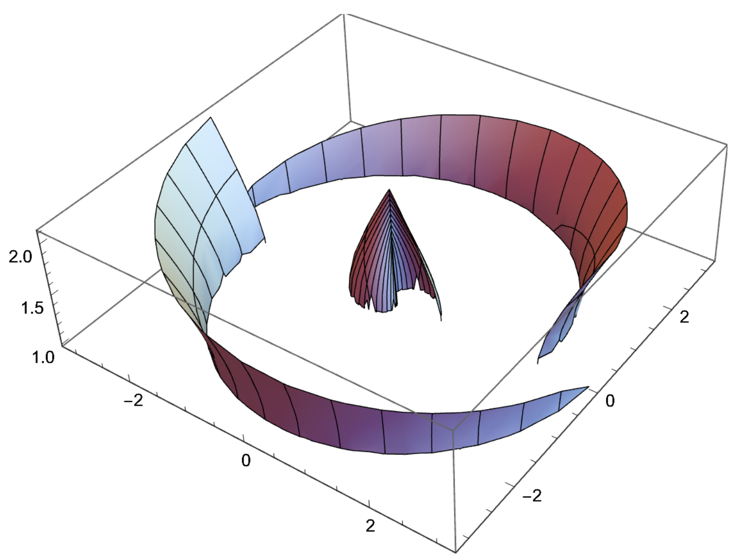
$$\left(\text{Cos}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right]+i\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right]\right)$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]}==\frac{i\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}+\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2\,(-4\pi+\theta)}}$$

$$\text{RevolutionPlot3D}\Big[$$

$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^3}}{2\pi\sqrt{-4\pi+\theta}}\right]},$$

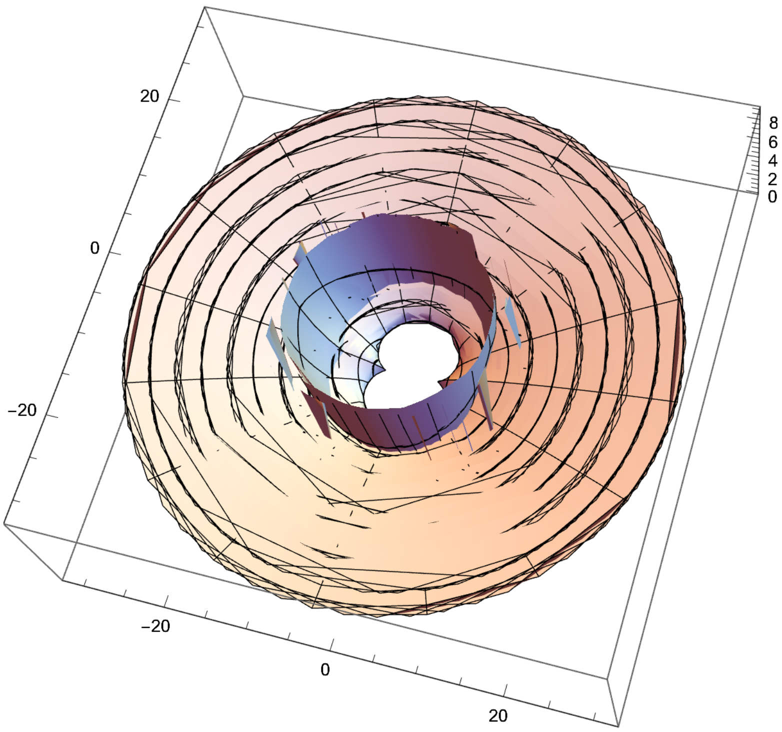
$$\{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Big]$$



RevolutionPlot3D[

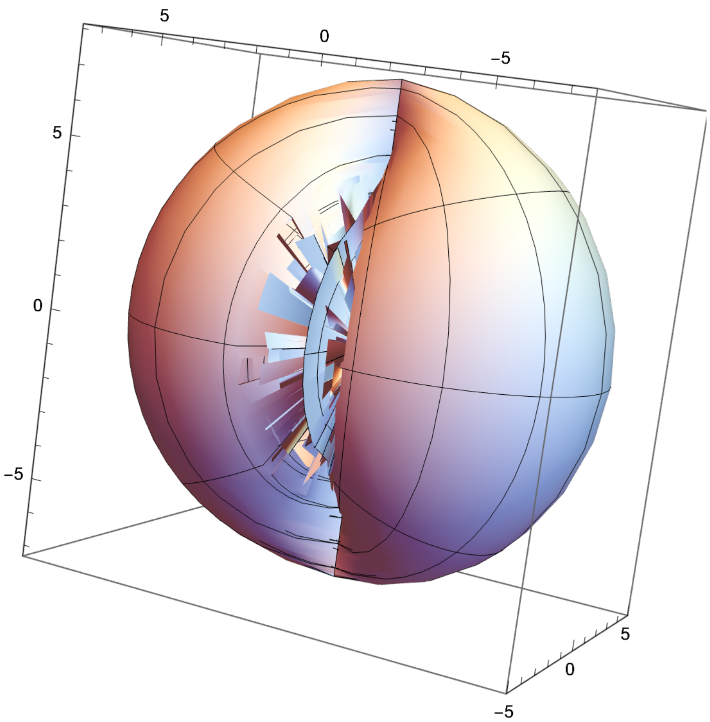
$$e^{i\,\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^3}}{2\pi\sqrt{-4\pi+\theta}}\right]},$$

{θ, -10 π, 10 π}, {β, -5 π, 5 π}]



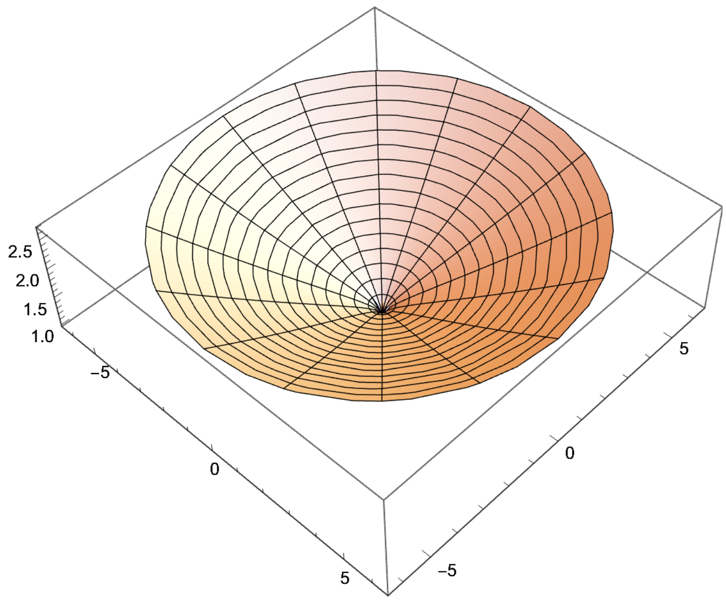
$$\text{SphericalPlot3D}\Big[e^{\text{i}\,\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)}}\right]},$$

$$\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi,\pi\}\Big]$$

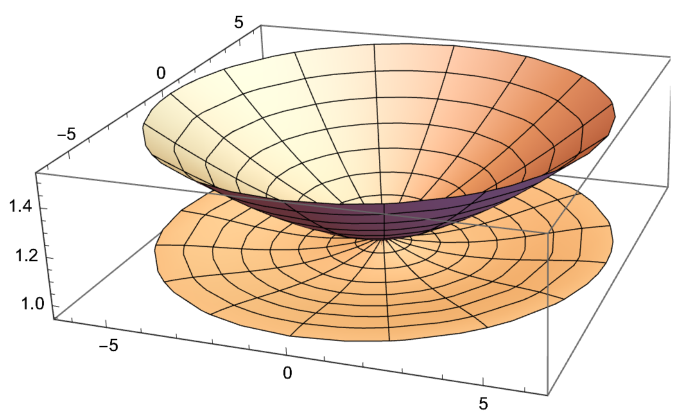


$$\text{RevolutionPlot3D}\left[\frac{\text{i}\,\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}+\sqrt{1-\frac{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}{4\,\pi^2\,(-4\,\pi+\theta)}},\{\theta,-2\,\pi,2\,\pi\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{i\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}+\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\sqrt{1-\frac{-4\pi^2\theta+4\pi\theta^2-\theta^3}{4\pi^2(-4\pi+\theta)}},\{\theta,-2\pi,2\pi\}\right]$$

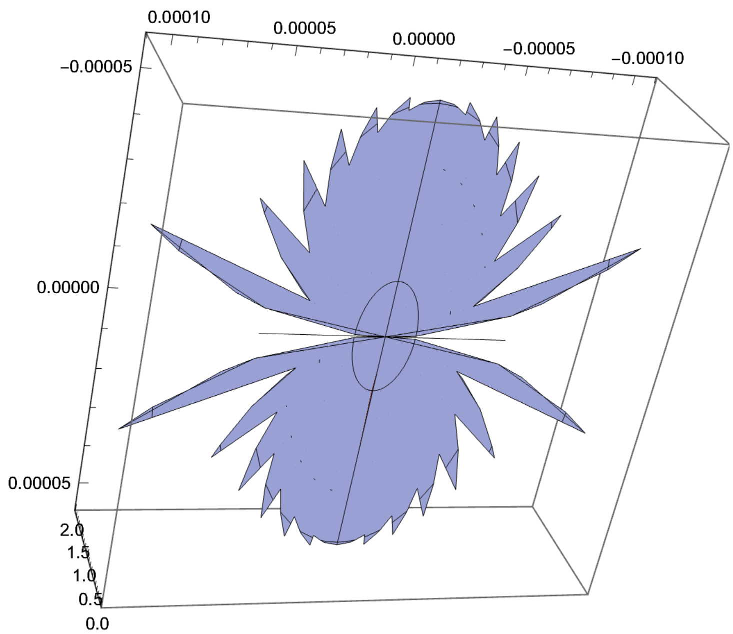


$$e\text{^}(i\,\theta)=\text{Cos}[\theta]+i\,\text{Sin}[\theta]$$

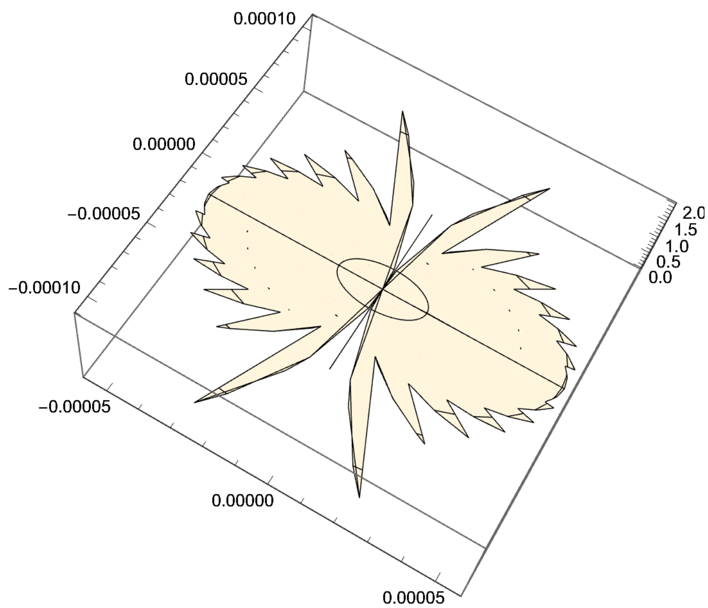
$$\theta\to\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\theta=2\left(\pi\pm\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

```
RevolutionPlot3D[ⅇ^(ⅈ (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))), {β, -π, π}]
```




```
RevolutionPlot3D[ⅇ^(ⅈ (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))), {β, -π, π}]
```



$$\text{Solve}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]} == \frac{i\sqrt{(4\pi-\theta)\theta}}{2\pi} + \sqrt{1-\frac{(4\pi-\theta)\theta}{4\pi^2}},\ \theta\right]$$

$$\text{Solve}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]} == \frac{i\sqrt{(4\pi-\theta)\theta}}{2\pi} + \sqrt{1-\frac{u\wedge 2}{c\wedge 2}},\ \theta\right]$$

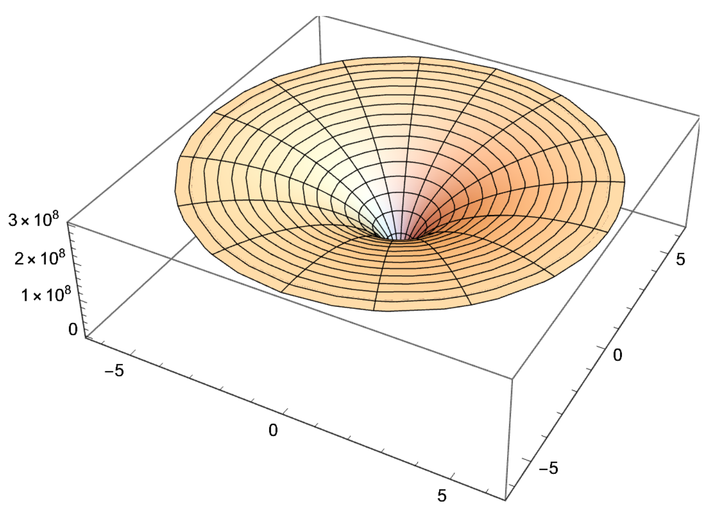
$$\text{Solve}\left[e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]} == \sqrt{1-\frac{u^2}{c^2}} + \frac{i\,\sqrt{(4\pi-\theta)\,\theta}}{2\pi},\ u\right]$$

$$\left\{\left\{u \to -\frac{1}{2\pi}\left(\sqrt{\left(4\,c^2\,\pi^2 - 4\,c^2\,e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,c^2\,\pi\,\theta - c^2\,\theta^2 + 4\,i\,c^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right)\right\},\right.$$
$$\left.\left\{u \to \frac{1}{2\pi}\left(\sqrt{\left(4\,c^2\,\pi^2 - 4\,c^2\,e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,c^2\,\pi\,\theta - c^2\,\theta^2 + 4\,i\,c^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right)\right\}\right\}$$

$$\text{Solve}\left[(4\pi-\theta)\,\theta == -\frac{1}{2\pi}\left(\sqrt{\left(4\,c^2\,\pi^2 - 4\,c^2\,e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,c^2\,\pi\,\theta - c^2\,\theta^2 + 4\,i\,c^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right),\ \theta\right]$$

$$\text{Solve}\left[(4\pi-\theta)\,\theta == -\frac{1}{2\pi}\left(\sqrt{\left(4\,c^2\,\pi^2 - 4\,c^2\,e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,c^2\,\pi\,\theta - c^2\,\theta^2 + 4\,i\,c^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right),\ \theta\right]$$

$$\text{RevolutionPlot3D}\left[\frac{1}{2\pi}\left(\sqrt{\left(4\,(2.99792458*10\,\hat{}\,8)^2\,\pi^2 - 4\,(2.99792458*10\,\hat{}\,8)^2\,e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,(2.99792458*10\,\hat{}\,8)^2\,\pi\,\theta - (2.99792458*10\,\hat{}\,8)^2\,\theta^2 + 4\,i\,(2.99792458*10\,\hat{}\,8)^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right),\ \{\theta,\ -2\pi,\ 2\pi\}\right]$$

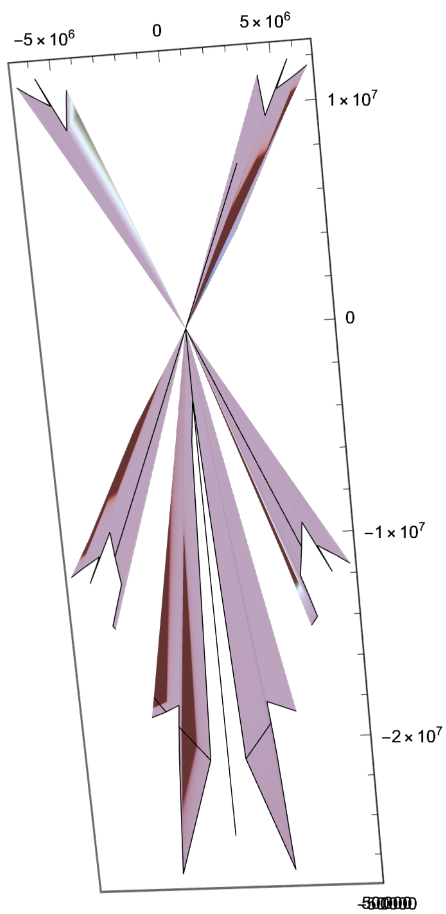


$$\theta = \left\{\left\{\theta \to \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\},$$

$$\left\{\theta \to \frac{4\pi}{3} + \left(\left(1 + i\sqrt{3}\right)\left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right)\right) \Big/ \left(12\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}\left(1 - i\sqrt{3}\right)\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\},$$

$$\left\{\theta \to \frac{4\pi}{3} + \left(\left(1 - i\sqrt{3}\right)\left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right)\right) \Big/ \left(12\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right\}\right\}$$

$$\text{SphericalPlot3D}\Big[\frac{1}{2\,\pi}\left(\sqrt{\left(4\,(2.99792458*10\,\hat{}\,8)^2\,\pi^2-4\,(2.99792458*10\,\hat{}\,8)^2\, e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\,\pi-\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\theta}}{2\,\pi}\right]}\,\pi^2+4\,(2.99792458*10\,\hat{}\,8)^2\,\pi\,\theta-(2.99792458*10\,\hat{}\,8)^2\,\theta^2+4\,i\,(2.99792458*10\,\hat{}\,8)^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]}\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)}\right),\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\Big]$$

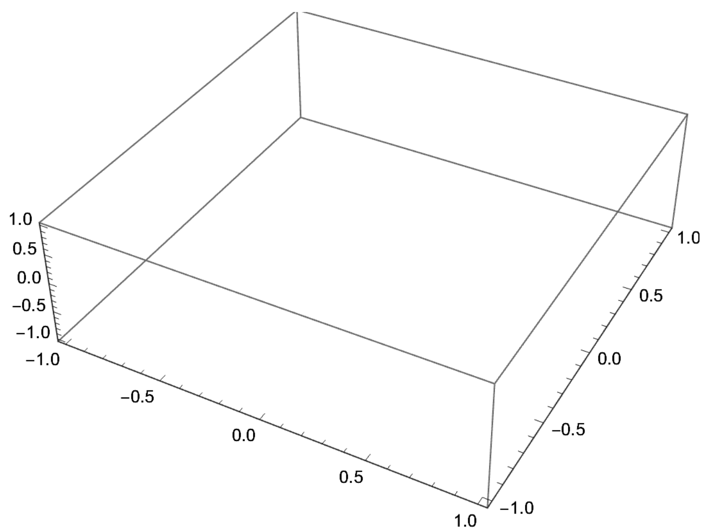


$$\text{RevolutionPlot3D}\Big[\frac{1}{2\,\pi}\Bigg(\sqrt{\Bigg(4\,(2.99792458*10\wedge 8)^2\,\pi^2-4\,(2.99792458*10\wedge 8)^2}$$

$$e^{2\,i\,\text{ArcSin}\left[\frac{\sqrt{\left(4\,\pi-\frac{4\,\pi}{3}+\frac{\left(1+i\,\sqrt{3}\right)\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)}{12\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}-\frac{1}{3}\left(1-i\,\sqrt{3}\right)\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta}}{2\,\pi}}$$

$$\pi^2+4\,(2.99792458*10\wedge 8)^2\,\pi\,\theta-(2.99792458*10\wedge 8)^2\,\theta^2+$$

$$4\,i\,(2.99792458*10\wedge 8)^2\,e^{i\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]}\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\Bigg)\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$



$$\theta = \left\{\left\{\theta \to \frac{4\pi}{3} + \frac{-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2}{6\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} - \frac{2\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},\right.$$

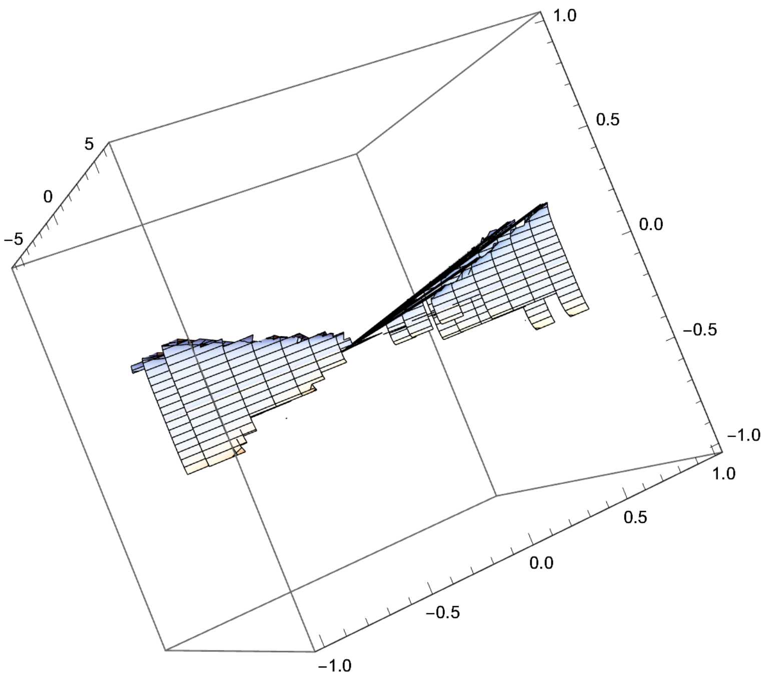
$$\left\{\theta \to \frac{4\pi}{3} - \frac{\left(1 + i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 - i\sqrt{3}\right)\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},$$

$$\left.\left\{\theta \to \frac{4\pi}{3} - \frac{\left(1 - i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 + i\sqrt{3}\right)\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\}\right\}$$

ContourPlot3D[

$$\frac{1}{2\pi}\left(\sqrt{\left(4\,(2.99792458*10^{\wedge}8)^2\,\pi^2 - 4\,(2.99792458*10^{\wedge}8)^2\,e^{2\,i\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi^2 + 4\,(2.99792458*10^{\wedge}8)^2\,\pi\,\theta - (2.99792458*10^{\wedge}8)^2\left(\frac{4\pi}{3} + \frac{-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} - \frac{2\,\pi\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\right)^2 + 4\,i\,(2.99792458*10^{\wedge}8)^2\,e^{i\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\right)}\right),$$

{θ, -2 π, 2 π}, {r, -1, 1}, {η, -1, 1}]



$$2\pi\left(-\frac{256\,\pi^7\,\eta^2\,\theta^2}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{320\,\pi^6\,\eta^2\,\theta^3}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-\frac{128\,\pi^5\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{16\,\pi^4\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\left(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\right)\Big/\left(-1024\,\pi^7\,\theta^4+1280\,\pi^6\,\theta^5-512\,\pi^5\,\theta^6+80\,\pi^4\,\theta^7-32\,\pi^3\,\theta^8+24\,\pi^2\,\theta^9-8\,\pi\,\theta^{10}+\theta^{11}\right)\right) ==$$

$$\frac{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,{}^\wedge 2\right)}{\frac{\theta}{2\,\pi}} == \frac{\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}}{\frac{\theta}{2\,\pi}}$$

$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{Solve}\left[\frac{\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}}{\frac{\theta}{2\pi}} ==\right.$$

$$2\pi\left(-\frac{256\pi^7\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\right.$$

$$\frac{320\pi^6\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$

$$\frac{128\pi^5\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\frac{16\pi^4\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\left(128\pi^6\sqrt{\left(256\pi^5\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^3-448\pi^4\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^4+\right.}\right.$$

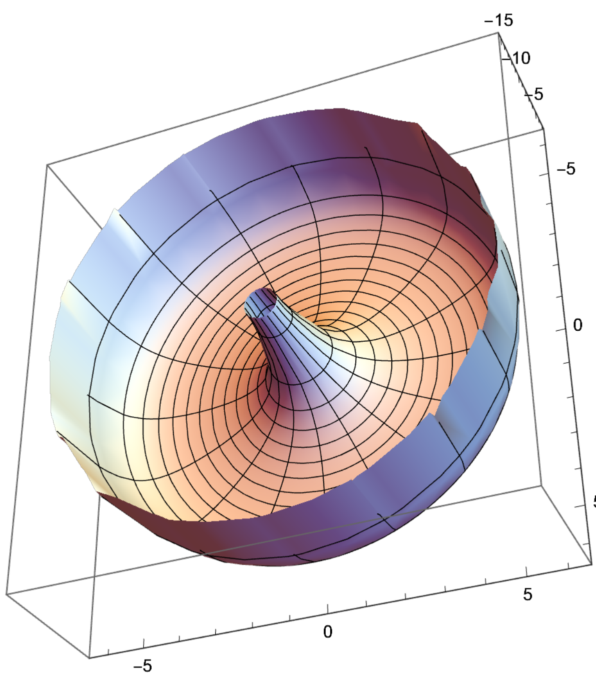
$$304\pi^3\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^5-100\pi^2\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^6+$$

$$\left.\left.16\pi\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^7-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^8\right)\right)\Big/$$

$$\left.\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\right),\ \eta\Big]$$

$$
\begin{aligned}
&\Bigg\{\Bigg\{\eta \to \frac{1}{2\,\pi}\,\theta\,\sqrt{4\,\pi\,\theta-\theta^2}\\
&\quad\Bigg(-\frac{64\,\pi^5\,\theta^2\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\\
&\quad\frac{80\,\pi^4\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-\\
&\quad\frac{32\,\pi^3\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\\
&\quad\frac{4\,\pi^2\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\\
&\quad\Bigg(128\,\pi^6\,\sqrt{\Bigg(16\,\pi\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2-28\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2+\frac{19\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi}-}\\
&\qquad\overline{\frac{25\,\theta^6\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{4\,\pi^2}+\frac{\theta^7\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi^3}-\frac{\theta^8\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{16\,\pi^4}\Bigg)}\Bigg)\Big/\\
&\quad\left(-1024\,\pi^7\,\theta^4+1280\,\pi^6\,\theta^5-512\,\pi^5\,\theta^6+80\,\pi^4\,\theta^7-32\,\pi^3\,\theta^8+24\,\pi^2\,\theta^9-8\,\pi\,\theta^{10}+\theta^{11}\right)\Bigg)\Bigg\}\Bigg\}
\end{aligned}
$$

$$\text{RevolutionPlot3D}\Big[\frac{1}{2\,\pi}\,\theta\,\sqrt{4\,\pi\,\theta-\theta^2}\,\Bigg(-\frac{64\,\pi^5\,\theta^2\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{80\,\pi^4\,\theta^3\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-\frac{32\,\pi^3\,\theta^4\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{4\,\pi^2\,\theta^5\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\left(128\,\pi^6\sqrt{\left(16\,\pi\,\theta^3\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2-28\,\theta^4\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2+\frac{19\,\theta^5\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi}-\frac{25\,\theta^6\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{4\,\pi^2}+\frac{\theta^7\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi^3}-\frac{\theta^8\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{16\,\pi^4}\right)}\right)\Big/\left(-1024\,\pi^7\,\theta^4+1280\,\pi^6\,\theta^5-512\,\pi^5\,\theta^6+80\,\pi^4\,\theta^7-32\,\pi^3\,\theta^8+24\,\pi^2\,\theta^9-8\,\pi\,\theta^{10}+\theta^{11}\right)\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$



$$\text{Solve}\Big[\frac{\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}}{\frac{\theta}{2\pi}} ==$$

$$2\pi\left(-\frac{256\pi^7\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\right.$$

$$\frac{320\pi^6\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$

$$\frac{128\pi^5\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\frac{16\pi^4\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\Bigg(128\pi^6\sqrt{\Bigg(256\pi^5\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^3-448\pi^4\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^4+}$$

$$304\pi^3\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^5-100\pi^2\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^6+$$

$$16\pi\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^7-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^4\theta^8\Bigg)\Bigg)\Big/$$

$$\left.\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\right),\ \eta\Big]$$

$$\Big\{\Big\{\eta \to \frac{1}{2\pi}\theta\sqrt{4\pi\theta-\theta^2}\Bigg(-\frac{64\pi^5\theta^2\left(4\pi r^2\theta-r^2\theta^2\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\frac{80\pi^4\theta^3\left(4\pi r^2\theta-r^2\theta^2\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$

$$\frac{32\pi^3\theta^4\left(4\pi r^2\theta-r^2\theta^2\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\frac{4\pi^2\theta^5\left(4\pi r^2\theta-r^2\theta^2\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\Bigg(128\pi^6\sqrt{\Bigg(16\pi\theta^3\left(4\pi r^2\theta-r^2\theta^2\right)^2-28\theta^4\left(4\pi r^2\theta-r^2\theta^2\right)^2+\frac{19\theta^5\left(4\pi r^2\theta-r^2\theta^2\right)^2}{\pi}-}$$

$$\overline{\frac{25\theta^6\left(4\pi r^2\theta-r^2\theta^2\right)^2}{4\pi^2}+\frac{\theta^7\left(4\pi r^2\theta-r^2\theta^2\right)^2}{\pi^3}-\frac{\theta^8\left(4\pi r^2\theta-r^2\theta^2\right)^2}{16\pi^4}\Bigg)}\Bigg)\Big/$$

$$\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\Bigg)\Big\}\Big\}$$

$$\text{RevolutionPlot3D}\Big[\frac{1}{2\pi}\theta\sqrt{4\pi\theta-\theta^2}$$

$$\Bigg(-\frac{64\pi^5\theta^2(4\pi r^2\theta-r^2\theta^2)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\frac{80\pi^4\theta^3(4\pi r^2\theta-r^2\theta^2)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$

$$\frac{32\pi^3\theta^4(4\pi r^2\theta-r^2\theta^2)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

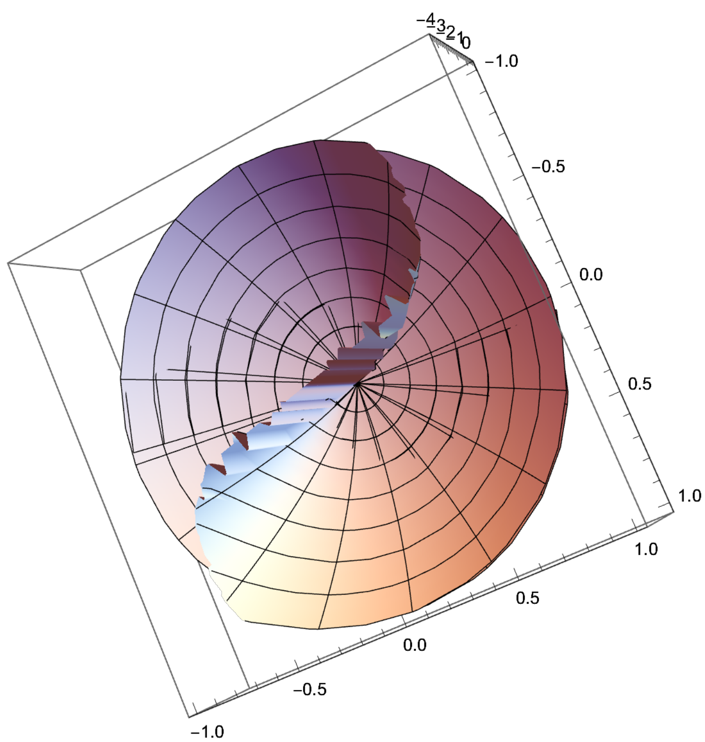
$$\frac{4\pi^2\theta^5(4\pi r^2\theta-r^2\theta^2)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+$$

$$\Bigg(128\pi^6\sqrt{\Bigg(16\pi\theta^3(4\pi r^2\theta-r^2\theta^2)^2-28\theta^4(4\pi r^2\theta-r^2\theta^2)^2+\frac{19\theta^5(4\pi r^2\theta-r^2\theta^2)^2}{\pi}-}$$

$$\frac{25\theta^6(4\pi r^2\theta-r^2\theta^2)^2}{4\pi^2}+\frac{\theta^7(4\pi r^2\theta-r^2\theta^2)^2}{\pi^3}-\frac{\theta^8(4\pi r^2\theta-r^2\theta^2)^2}{16\pi^4}\Bigg)\Bigg)\Bigg/$$

$$(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11})\Bigg),$$

$$\{r,-1,1\},\{\theta,-2\pi,2\pi\}\Big]$$



$$\frac{1}{\frac{\theta}{2\pi}}\left(\left(\sqrt{\left(-\left(256\pi^7\eta^2\theta^3\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^4\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-\left(128\pi^5\eta^2\theta^5\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^6\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(128\pi^6\sqrt{\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)}\right)/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)}\right)\right)\text{^}2$$

$$2\pi\left(-\frac{1}{\theta}\frac{256\pi^7\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\frac{320\pi^6\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{1}{\theta}\frac{128\pi^5\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\frac{16\pi^4\eta^2\theta^6}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\right)$$

$$2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}}{\theta\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)}\right)$$

$$2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta\,\theta^3+1280\pi^6\theta\,\theta^4-512\pi^5\theta\,\theta^5+80\pi^4\theta\,\theta^6-32\pi^3\theta\,\theta^7+24\pi^2\theta\,\theta^8-8\pi\theta\,\theta^9+\theta\,\theta^{10}\right)\right)$$

$$\text{Solve}\left[2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+x\right)\right)==\frac{r^2}{\frac{\theta}{2\pi}},x\right]$$

$$\Big\{\Big\{x\to\Big(-262144\pi^{12}r^2\theta^4+65536\pi^{12}\eta^2\theta^4+393216\pi^{11}r^2\theta^5-98304\pi^{11}\eta^2\theta^5-212992\pi^{10}r^2\theta^6+53248\pi^{10}\eta^2\theta^6+57344\pi^9r^2\theta^7-13312\pi^9\eta^2\theta^7-22528\pi^8r^2\theta^8+3328\pi^8\eta^2\theta^8+16384\pi^7r^2\theta^9-2048\pi^7\eta^2\theta^9-7232\pi^6r^2\theta^{10}+896\pi^6\eta^2\theta^{10}+1472\pi^5r^2\theta^{11}-128\pi^5\eta^2\theta^{11}-304\pi^4r^2\theta^{12}+160\pi^3r^2\theta^{13}-56\pi^2r^2\theta^{14}+8\pi r^2\theta^{15}-32768\pi^{11}\theta\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+8192\pi^{10}\theta^2\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+512\pi^8\theta^4\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}-512\pi^7\theta^5\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}+128\pi^6\theta^6\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}\Big)\Big/\left(-256\pi^5r^2+64\pi^5\eta^2+64\pi^4r^2\theta-16\pi^4\eta^2\theta+4\pi^2r^2\theta^3-4\pi r^2\theta^4+r^2\theta^5\right)\Big\}\Big\}$$

```
Solve[
 x == (-262144 π^12 r^2 θ^4 + 65536 π^12 η^2 θ^4 + 393216 π^11 r^2 θ^5 - 98304 π^11 η^2 θ^5 - 212992 π^10 r^2 θ^6 +
     53248 π^10 η^2 θ^6 + 57344 π^9 r^2 θ^7 - 13312 π^9 η^2 θ^7 - 22528 π^8 r^2 θ^8 +
     3328 π^8 η^2 θ^8 + 16384 π^7 r^2 θ^9 - 2048 π^7 η^2 θ^9 - 7232 π^6 r^2 θ^10 +
     896 π^6 η^2 θ^10 + 1472 π^5 r^2 x - 128 π^5 η^2 x - 304 π^4 r^2 θ^12 + 160 π^3 r^2 θ^13 -
     56 π^2 r^2 θ^14 + 8 π r^2 θ^15 - 32768 π^11 θ Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] +
     8192 π^10 θ^2 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] + 512 π^8 θ^4 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] -
     512 π^7 θ^5 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3] + 128 π^6 θ^6 Sqrt[η^4 (2 π - θ)^2 (4 π - θ)^3 θ^3]) /
   (-256 π^5 r^2 + 64 π^5 η^2 + 64 π^4 r^2 θ - 16 π^4 η^2 θ + 4 π^2 r^2 θ^3 - 4 π r^2 θ^4 + r^2 θ^5), x]
```

$$\left\{\left\{x \to \left(-\frac{262144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.\right.\right.$$

$$\frac{65536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{393216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{98304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57344\,\pi^{9}\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13312\,\pi^{9}\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22528\,\pi^{8}\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^{8}\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16384\,\pi^{7}\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^{7}\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$
$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$
$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\}\}$$

ContourPlot3D$\Big[\Big(-\dfrac{262\,144\,\pi^{12}\,r^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$

$$\frac{65\,536\,\pi^{12}\,\eta^2\,\theta^4}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$
$$\frac{393\,216\,\pi^{11}\,r^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$
$$\frac{98\,304\,\pi^{11}\,\eta^2\,\theta^5}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{212\,992\,\pi^{10}\,r^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{53\,248\,\pi^{10}\,\eta^2\,\theta^6}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{57\,344\,\pi^9\,r^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{13\,312\,\pi^9\,\eta^2\,\theta^7}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{22\,528\,\pi^8\,r^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{3328\,\pi^8\,\eta^2\,\theta^8}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{16\,384\,\pi^7\,r^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{2048\,\pi^7\,\eta^2\,\theta^9}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{7232\,\pi^6\,r^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{896\,\pi^6\,\eta^2\,\theta^{10}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{304\,\pi^4\,r^2\,\theta^{12}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{160\,\pi^3\,r^2\,\theta^{13}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{56\,\pi^2\,r^2\,\theta^{14}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8\,\pi\,r^2\,\theta^{15}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

$$\frac{32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\frac{512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}-$$

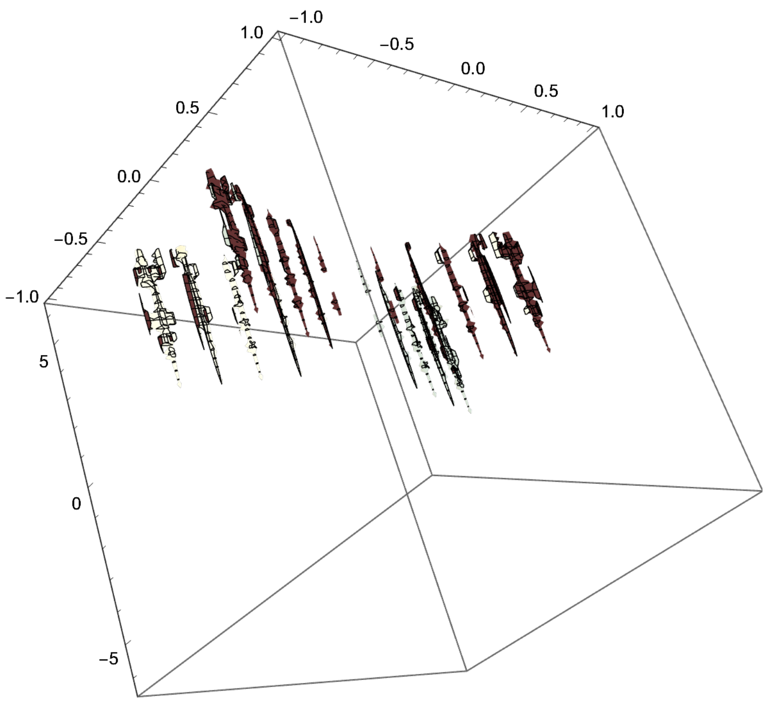
$$\frac{512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+$$

$$\left.\frac{128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right)\Big/$$

$$\left(1-\frac{1472\,\pi^5\,r^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}+\right.$$

$$\left.\frac{128\,\pi^5\,\eta^2}{-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5}\right),$$

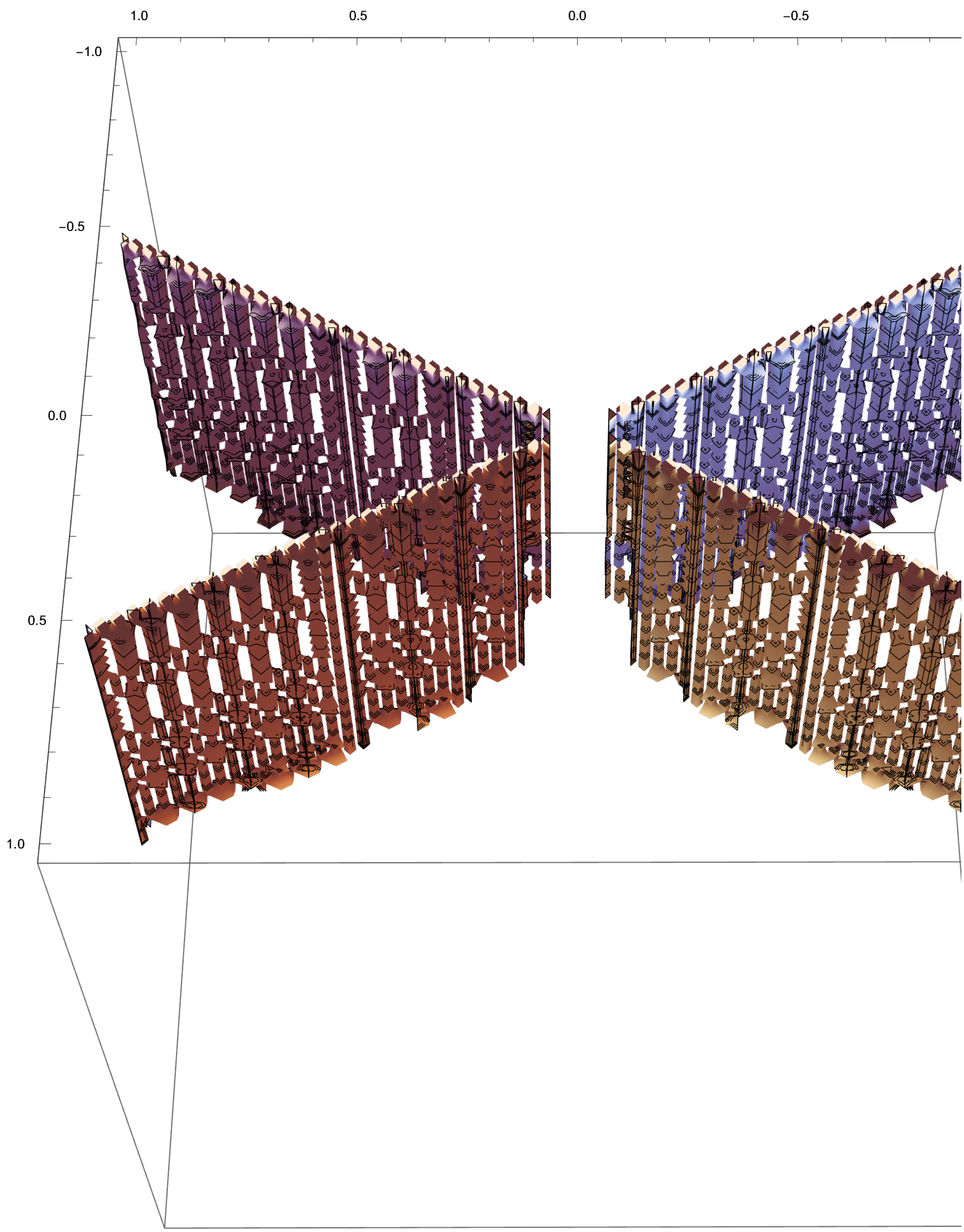
$$\{r,-1,1\},\{\eta,-1,1\},\{\theta,-2\,\pi,2\,\pi\}]$$



ContourPlot3D[

$$\Big(-262\,144\,\pi^{12}\,r^2\,\theta^4+65\,536\,\pi^{12}\,\eta^2\,\theta^4+393\,216\,\pi^{11}\,r^2\,\theta^5-98\,304\,\pi^{11}\,\eta^2\,\theta^5-212\,992\,\pi^{10}\,r^2\,\theta^6+$$
$$53\,248\,\pi^{10}\,\eta^2\,\theta^6+57\,344\,\pi^9\,r^2\,\theta^7-13\,312\,\pi^9\,\eta^2\,\theta^7-22\,528\,\pi^8\,r^2\,\theta^8+$$
$$3328\,\pi^8\,\eta^2\,\theta^8+16\,384\,\pi^7\,r^2\,\theta^9-2048\,\pi^7\,\eta^2\,\theta^9-7232\,\pi^6\,r^2\,\theta^{10}+$$
$$896\,\pi^6\,\eta^2\,\theta^{10}+1472\,\pi^5\,r^2\,\theta^{11}-128\,\pi^5\,\eta^2\,\theta^{11}-304\,\pi^4\,r^2\,\theta^{12}+160\,\pi^3\,r^2\,\theta^{13}-$$
$$56\,\pi^2\,r^2\,\theta^{14}+8\,\pi\,r^2\,\theta^{15}-32\,768\,\pi^{11}\,\theta\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+$$
$$8192\,\pi^{10}\,\theta^2\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+512\,\pi^8\,\theta^4\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}-$$
$$512\,\pi^7\,\theta^5\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}+128\,\pi^6\,\theta^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\Big)\Big/$$
$$\left(-256\,\pi^5\,r^2+64\,\pi^5\,\eta^2+64\,\pi^4\,r^2\,\theta-16\,\pi^4\,\eta^2\,\theta+4\,\pi^2\,r^2\,\theta^3-4\,\pi\,r^2\,\theta^4+r^2\,\theta^5\right),$$

$$\{\eta,-1,1\},\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}]$$


1.0
0.5
0.0
−0.5
−1.0
−0.5
0.0
0.5
1.0

$$\text{Factor}\Big[\frac{1}{\theta}2\pi\Big(-\frac{256\pi^7\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^6}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\Big(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\Big)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big)\Big]$$

$$\frac{32\pi^5\left(16\pi^3\eta^2\theta^3-20\pi^2\eta^2\theta^4+8\pi\eta^2\theta^5-\eta^2\theta^6-8\pi^2\sqrt{\eta^4(2\pi-\theta)^2(4\pi-\theta)^3\theta^3}\right)}{(2\pi-\theta)^2\theta^4\left(256\pi^5-64\pi^4\theta-4\pi^2\theta^3+4\pi\theta^4-\theta^5\right)}$$

$$2\pi\Big(-\frac{1}{\theta}\frac{256\pi^7\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\frac{320\pi^6\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{1}{\theta}\frac{128\pi^5\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\frac{16\pi^4\eta^2\theta^6}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{1}{\theta}\Big(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\Big)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big)$$

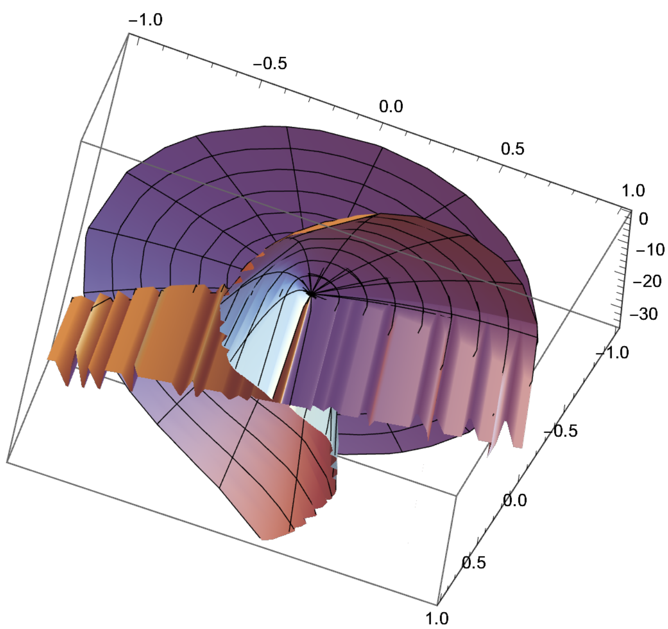
$$2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta\,\theta^3+1280\pi^6\theta\,\theta^4-512\pi^5\theta\,\theta^5+80\pi^4\theta\,\theta^6-32\pi^3\theta\,\theta^7+24\pi^2\theta\,\theta^8-8\pi\theta\,\theta^9+\theta\,\theta^{10}\right)\right)$$

$$2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}}{-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}}\right)$$

```
RevolutionPlot3D[
```

$$2\pi\left(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\right),$$

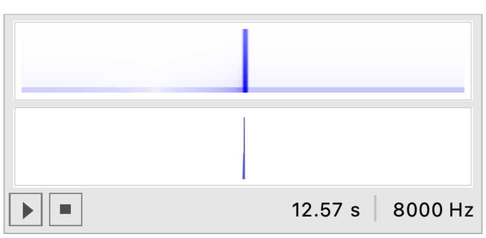
```
{η, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\Big[2\pi\Big(-\frac{256\pi^7\eta^2\theta^2}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{320\pi^6\eta^2\theta^3}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{128\pi^5\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{16\pi^4\eta^2\theta^5}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8}\right)\Big/\left(-1024\pi^7\theta^4+1280\pi^6\theta^5-512\pi^5\theta^6+80\pi^4\theta^7-32\pi^3\theta^8+24\pi^2\theta^9-8\pi\theta^{10}+\theta^{11}\right)\Big) == (r\wedge 2)\,/\,((\theta)\,/\,(2\pi)),\ r\Big]$$

$$\text{Play}\Big[-\frac{1}{\sqrt{2}}\,i\,\sqrt{\theta}\,\sqrt{\Big(-\left(512\pi^7\eta^2\theta^2\right)\Big/\left(1024\pi^7\theta^3-1280\pi^6\theta^4+512\pi^5\theta^5-80\pi^4\theta^6+32\pi^3\theta^7-24\pi^2\theta^8+8\pi\theta^9-\theta^{10}\right)+\frac{640\pi^6\eta^2\theta^3}{1024\pi^7\theta^3-1280\pi^6\theta^4+512\pi^5\theta^5-80\pi^4\theta^6+32\pi^3\theta^7-24\pi^2\theta^8+8\pi\theta^9-\theta^{10}}-\frac{256\pi^5\eta^2\theta^4}{1024\pi^7\theta^3-1280\pi^6\theta^4+512\pi^5\theta^5-80\pi^4\theta^6+32\pi^3\theta^7-24\pi^2\theta^8+8\pi\theta^9-\theta^{10}}+\frac{32\pi^4\eta^2\theta^5}{1024\pi^7\theta^3-1280\pi^6\theta^4+512\pi^5\theta^5-80\pi^4\theta^6+32\pi^3\theta^7-24\pi^2\theta^8+8\pi\theta^9-\theta^{10}}+\left(256\pi^6\sqrt{\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)}\right)\Big/\left(1024\pi^7\theta^4-1280\pi^6\theta^5+512\pi^5\theta^6-80\pi^4\theta^7+32\pi^3\theta^8-24\pi^2\theta^9+8\pi\theta^{10}-\theta^{11}\right)\Big)},\ \{\theta,-2\pi,2\pi\}\Big]$$

Sound::ssnm : A good PlayRange could not be found since most of the samples are not evaluating to machine−size real numbers. ≫



$$\theta := 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

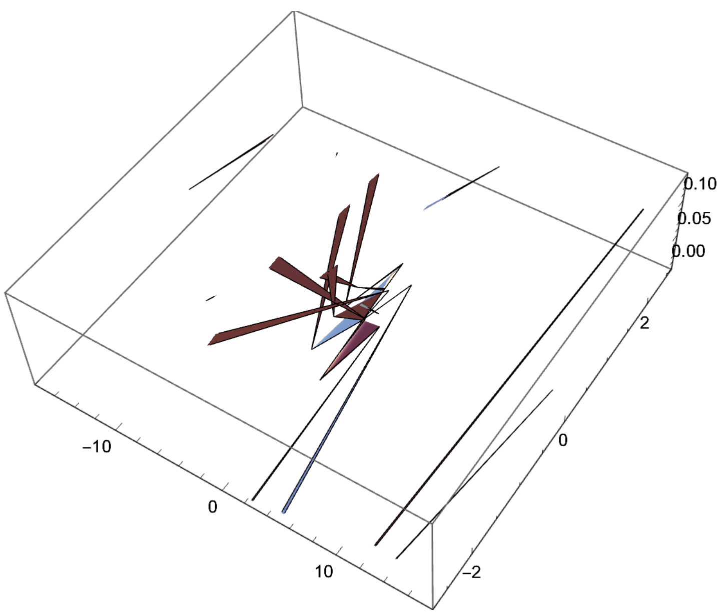
$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

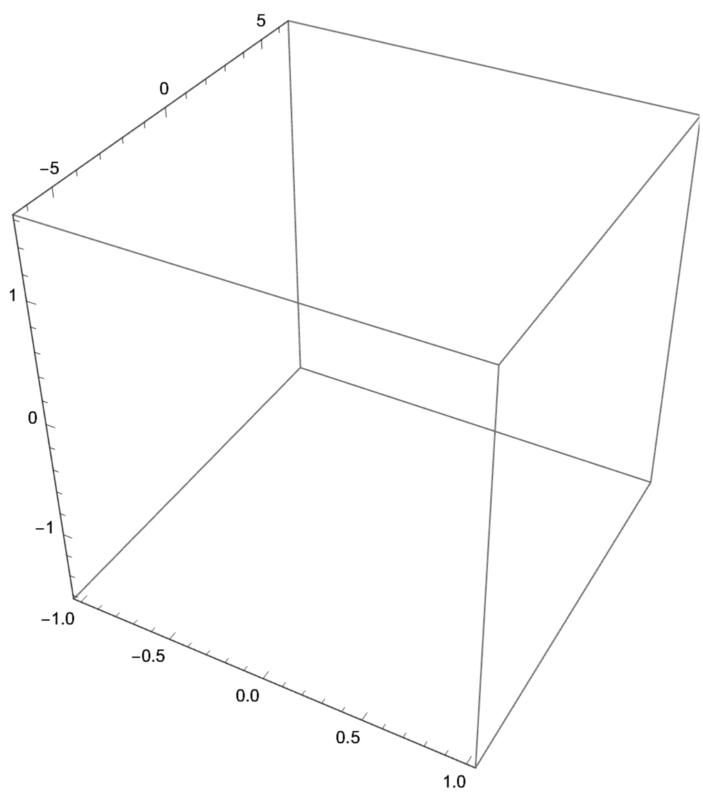
RevolutionPlot3D[

$$\frac{1}{\sqrt{2}}\,\mathbb{i}\,\sqrt{\theta}\,\sqrt{\left(-\frac{512\,\pi^7\,\eta^2\,\theta^2}{1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}}+\frac{640\,\pi^6\,\eta^2\,\theta^3}{1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}}-\frac{256\,\pi^5\,\eta^2\,\theta^4}{1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}}+\frac{32\,\pi^4\,\eta^2\,\theta^5}{1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}}+\left(256\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\right)\Big/\left(1024\,\pi^7\,\theta^4-1280\,\pi^6\,\theta^5+512\,\pi^5\,\theta^6-80\,\pi^4\,\theta^7+32\,\pi^3\,\theta^8-24\,\pi^2\,\theta^9+8\,\pi\,\theta^{10}-\theta^{11}\right)\right)}$$

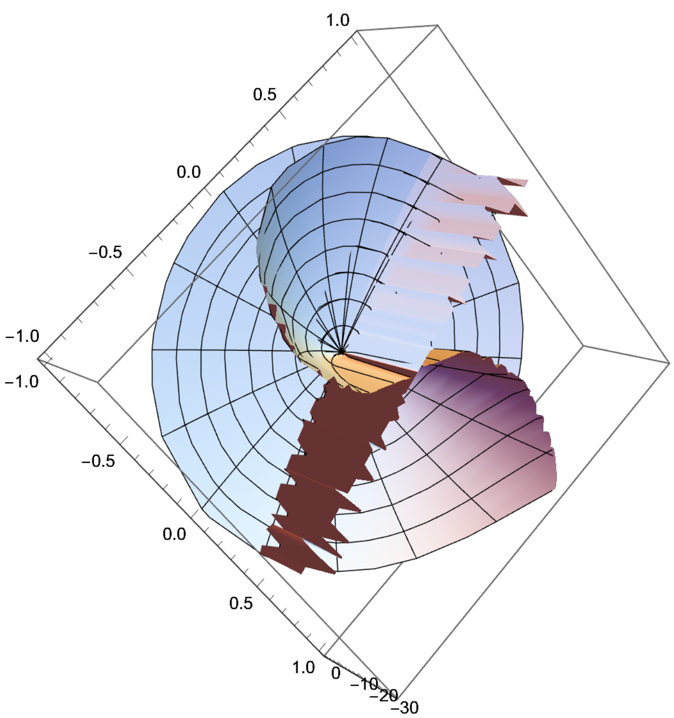
, {η, -1, 1}, {θ, -2 π, 2 π}]



```
ContourPlot3D[1/Sqrt[2] Sqrt[-((2 π Sin[β])/Sqrt[4 π θ - θ^2])] Sqrt[θ]
  Sqrt[(-((512 π^7 η^2 θ^2)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10)) +
    (640 π^6 η^2 θ^3)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) -
    (256 π^5 η^2 θ^4)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
    (32 π^4 η^2 θ^5)/(1024 π^7 θ^3 - 1280 π^6 θ^4 + 512 π^5 θ^5 - 80 π^4 θ^6 + 32 π^3 θ^7 - 24 π^2 θ^8 + 8 π θ^9 - θ^10) +
    (256 π^6 Sqrt[256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8]) /
    (1024 π^7 θ^4 - 1280 π^6 θ^5 + 512 π^5 θ^6 - 80 π^4 θ^7 + 32 π^3 θ^8 - 24 π^2 θ^9 + 8 π θ^10 - θ^11))],
 {η, -1, 1}, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
Simplify[
 1/(θ/(2 π)) ((√(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
          8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
          32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) - (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 -
          512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
        (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
       (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
        (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)))) ^2]

RevolutionPlot3D[
 -(32 π^5 (16 π^3 η^2 θ^3 + 8 π η^2 θ^5 - η^2 θ^6 - 4 π^2 (5 η^2 θ^4 + 2 Sqrt[η^4 (4 π - θ)^3 θ^3 (-2 π + θ)^2]))) /
   (θ^4 (-2 π + θ)^2 (-256 π^5 + 64 π^4 θ + 4 π^2 θ^3 - 4 π θ^4 + θ^5)), {η, -1, 1}, {θ, -2 π, 2 π}]
```



$$\frac{1}{\frac{\theta}{2\,\pi}}\left(\left(\sqrt{}\left(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)\right)\right)$$

Simplify[

$$\frac{1}{\theta}\,2\,\pi\,\sqrt{\left(-\frac{256\,\pi^7\,\eta^2\,\theta^3}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{320\,\pi^6\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\left(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)}\Bigg]$$

$$\frac{8\,\pi^3\,\sqrt{-\frac{16\,\pi^3\,\eta^2\,\theta^3+8\,\pi\,\eta^2\,\theta^5-\eta^2\,\theta^6-4\,\pi^2\,\left(5\,\eta^2\,\theta^4+2\,\sqrt{\eta^4\,(4\,\pi-\theta)^3\,\theta^3\,(-2\,\pi+\theta)^2}\right)}{\theta^3\,(-2\,\pi+\theta)^2\,\left(-256\,\pi^5+64\,\pi^4\,\theta+4\,\pi^2\,\theta^3-4\,\pi\,\theta^4+\theta^5\right)}}}{\theta}$$

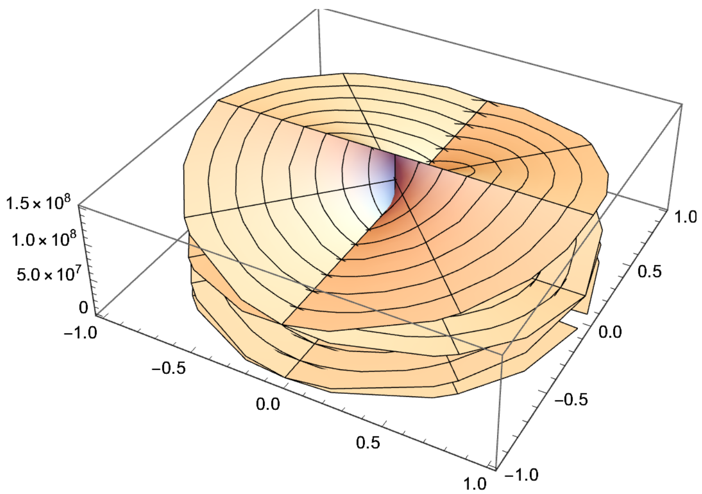
$$\frac{(r\verb|^|2)}{\frac{\theta}{2\,\pi}} ==$$

$$\left(\sqrt{}\left(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)\right)$$

$$\text{Solve}\left[\frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2-(\eta)^2}\right)}{(\theta)^2} == \left(\sqrt{\left(-1.129409066758147\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\,\theta^2 + 3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right), r\right]$$

$$\left\{\left\{r \to 6.9656\times 10^{-23}\left(\frac{9.45258\times 10^{14}\,\eta^2}{\theta^2} + 5.45095\times 10^{28}\,\theta^2\right)\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[6.965601593354798\text{`}*\text{^}-23\left(\frac{9.452580995025\text{`}*\text{^}14\,\eta^2}{\theta^2} + 5.450951774320537\text{`}*\text{^}28\,\theta^2\right), \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[6.965601593354798\text{`}*\text{^}-23\left(\frac{9.452580995025\text{`}*\text{^}14\,\eta^2}{\theta^2} + 5.450951774320537\text{`}*\text{^}28\,\theta^2\right) == \sqrt{\left(-\left(256\pi^7\eta^2\theta^3\right) / \left(-1024\pi^7\theta^3 + 1280\pi^6\theta^4 - 512\pi^5\theta^5 + 80\pi^4\theta^6 - 32\pi^3\theta^7 + 24\pi^2\theta^8 - 8\pi\theta^9 + \theta^{10}\right) + \left(320\pi^6\eta^2\theta^4\right) / \left(-1024\pi^7\theta^3 + 1280\pi^6\theta^4 - 512\pi^5\theta^5 + 80\pi^4\theta^6 - 32\pi^3\theta^7 + 24\pi^2\theta^8 - 8\pi\theta^9 + \theta^{10}\right) - \left(128\pi^5\eta^2\theta^5\right) / \left(-1024\pi^7\theta^3 + 1280\pi^6\theta^4 - 512\pi^5\theta^5 + 80\pi^4\theta^6 - 32\pi^3\theta^7 + 24\pi^2\theta^8 - 8\pi\theta^9 + \theta^{10}\right) + \left(16\pi^4\eta^2\theta^6\right) / \left(-1024\pi^7\theta^3 + 1280\pi^6\theta^4 - 512\pi^5\theta^5 + 80\pi^4\theta^6 - 32\pi^3\theta^7 + 24\pi^2\theta^8 - 8\pi\theta^9 + \theta^{10}\right) + \left(128\pi^6\sqrt{\left(256\pi^5\eta^4\theta^3 - 448\pi^4\eta^4\theta^4 + 304\pi^3\eta^4\theta^5 - 100\pi^2\eta^4\theta^6 + 16\pi\eta^4\theta^7 - \eta^4\theta^8\right)}\right) / \left(-1024\pi^7\theta^3 + 1280\pi^6\theta^4 - 512\pi^5\theta^5 + 80\pi^4\theta^6 - 32\pi^3\theta^7 + 24\pi^2\theta^8 - 8\pi\theta^9 + \theta^{10}\right)\right)}, \eta\right]$$

$$\eta := \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\sqrt{}\Big(-\left(256\pi^7\eta^2\theta^3\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(320\pi^6\eta^2\theta^4\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)-\left(128\pi^5\eta^2\theta^5\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(16\pi^4\eta^2\theta^6\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+\left(128\pi^6\sqrt{}\left(256\pi^5\eta^4\theta^3-448\pi^4\eta^4\theta^4+304\pi^3\eta^4\theta^5-100\pi^2\eta^4\theta^6+16\pi\eta^4\theta^7-\eta^4\theta^8\right)\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\Big)$$

$$\sqrt{\left(-\frac{64\pi^5\theta^3\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{80\pi^4\theta^4\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-\frac{32\pi^3\theta^5\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\frac{4\pi^2\theta^6\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}+\left(128\pi^6\sqrt{\left(16\pi\theta^3\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2-28\theta^4\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2+\frac{19\theta^5\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2}{\pi}-\frac{25\theta^6\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2}{4\pi^2}+\frac{\theta^7\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2}{\pi^3}-\frac{\theta^8\left(\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}\right)^2}{16\pi^4}\right)}\right)\Big/\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)\right)}$$

$$\mathrm{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-(\eta)^2}\right)}{\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2}==\frac{4\pi r^2-2r^2\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}{2\sqrt{4\pi r^2\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2}},\ r\right]$$

$$\text{Solve}\Big[\Bigg(\sqrt{\Big(-1.1294090667581471\grave{}*\hat{}18\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}+}$$

$$8.987551787368176\grave{}*\hat{}16\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}\right)^2+$$

$$3.5481432270250993\grave{}*\hat{}18\ \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\Big)\Bigg)\Bigg/$$

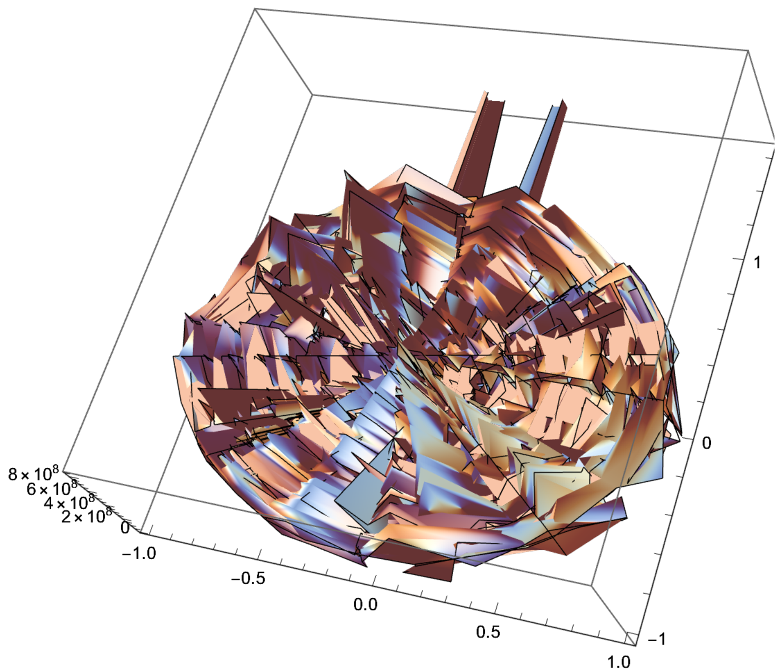
$$\Bigg(\sqrt{\Big(-12.566370614359172\grave{}\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}+}$$

$$\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}\right)^2+$$

$$39.47841760435743\grave{}\ \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\Big)\Bigg)==$$

$$\frac{\pi\,(4\pi-2\,\theta)}{(4\pi-\theta)\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta^2}+\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2\,\theta},\ r\Big]$$

$$\text{RevolutionPlot3D}\Bigg[\left(\sqrt{\left(-1.1294090667581471\text{`*^}18\,\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}+8.987551787368176\text{`*^}16\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}\right)^2+3.5481432270250993\text{`*^}18\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\text{`}\,\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}+\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\left(r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)^2}\right)}{r^2}\right)^2+39.47841760435743\text{`}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2\right)}\right),\{r,-1,1\},\{\theta,-2\pi,2\pi\}\Bigg]$$



$$D\left[\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta},\theta\right]$$

$$\frac{\pi\,(4\pi-2\theta)}{(4\pi-\theta)\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta^2}+\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2\,\theta}$$

$$2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta\,\theta}$$

$$\text{Solve}\Big[\frac{4\pi^2\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta^2}==\Big(\sqrt{}\,\big(3.5481432270250993\text{`*^}18\,\eta^2-1.1294090667581471\text{`*^}18\,r^2\,\theta+8.987551787368176\text{`*^}16\,r^2\,\theta^2\big)\Big)\Big/\left(\sqrt{39.47841760435743\text{`}\,\eta^2-12.566370614359172\text{`}\,r^2\,\theta+r^2\,\theta^2}\right),\eta\Big]$$

$$\{\{\text{Solve`Auxiliary}[\theta][\theta]\to-5.56664\times10^{-6}-9.64169\times10^{-6}\,i\},$$
$$\{\text{Solve`Auxiliary}[\theta][\theta]\to-5.56664\times10^{-6}+9.64169\times10^{-6}\,i\},$$
$$\{\text{Solve`Auxiliary}[\theta][\theta]\to0.0000111333\},$$
$$\{\text{Solve`Auxiliary}[\theta][\theta]\to12.5664\},\{\text{Solve`Auxiliary}[\theta][\theta]\to12.5664\}\}$$

```
Solve[
 (4 π^2 Sqrt[(4 π - θ) θ])/((4 π - θ) θ^2) == (√(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
      8.987551787368176`*^16 r^2 θ^2))/
   (Sqrt[39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2]), θ]
```

$\{\{\theta \to -5.56664 \times 10^{-6} - 9.64169 \times 10^{-6}\, i\}, \{\theta \to -5.56664 \times 10^{-6} + 9.64169 \times 10^{-6}\, i\},$
$\{\theta \to 0.0000111333\}, \{\theta \to 12.5664\}, \{\theta \to 12.5664\}\}$

```
Solve[r / (θ / (2 π)) == (√(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2))/
   (Sqrt[39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2]), ]
```

{}

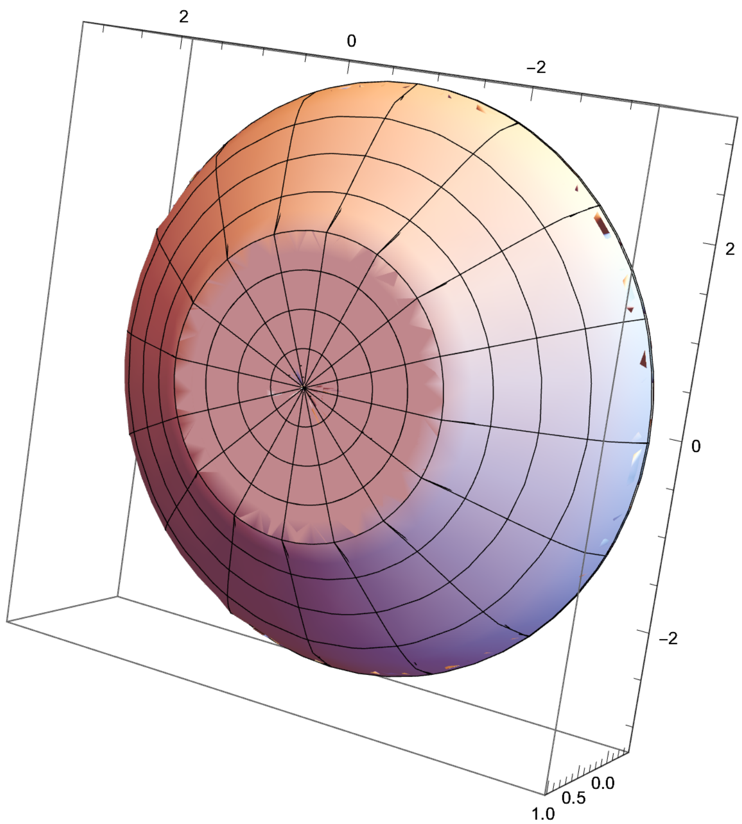
$$\text{Solve}\left[\frac{2\pi\eta}{\sqrt{-4\, i\, \pi\, \text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]] + \text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]]^2}} == \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}, \theta\right]$$

Solve::tdep : The equations appear to involve the variables to be solved for in an essentially non–algebraic way. ≫

$$\text{Solve}\left[\frac{2\pi\eta}{\sqrt{-4\, i\, \pi\, \text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]] + \text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]]^2}} == \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}, \theta\right]$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{(4\pi-\theta)\theta}\ \sqrt{-i\,(4\pi + i\,\text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]])\ \text{ArcSinh}[e^{i\theta} - \text{Cos}[\theta]]}}{(4\pi-\theta)\theta}, \{\theta, -2\pi, 2\pi\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}\ \sqrt{-\mathrm{i}\left(4\pi+\mathrm{i}\,\text{ArcSinh}\left[e^{\mathrm{i}\,\theta}-\text{Cos}[\theta]\right]\right)\text{ArcSinh}\left[e^{\mathrm{i}\,\theta}-\text{Cos}[\theta]\right]}}{(4\pi-\theta)\,\theta},\ \{\theta,-2\pi,2\pi\}\right]$$




```
h := 6.62606896 * 10^(-34)
```

```
c := 2.99792458 * (10^8)
```

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

```
RevolutionPlot3D[
```

$$\left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\ \frac{4\,\pi\,r^2}{c^2+r^2}+8.987551787368176`*^{\wedge}16\left(\frac{4\,\pi\,r^2}{c^2+r^2}\right)^2+3.5481432270250993`*^{\wedge}18\ \mathrm{Sin}[\beta]^2\right)}\right)\Big/$$

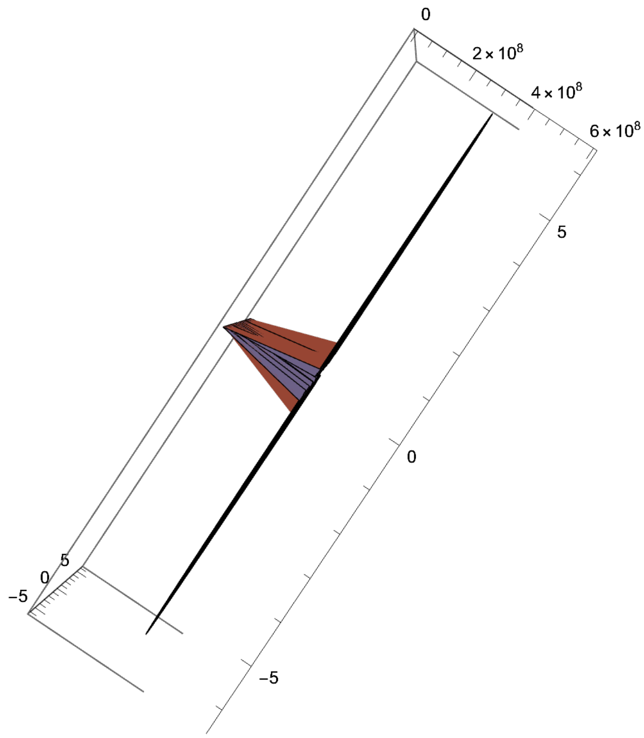
$$\left(\sqrt{\left(-12.566370614359172`\ \frac{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\right)^2}{c^2+r^2}+\left(\frac{4\,\pi\,r^2}{c^2+r^2}\right)^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}]$$

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

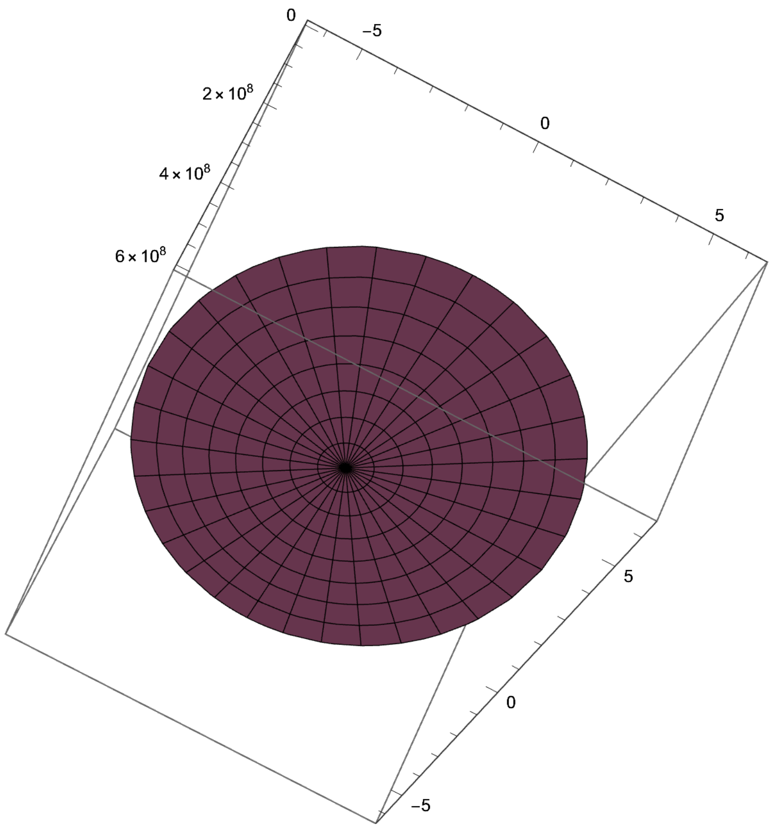
Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫



0
2 × 10^8
4 × 10^8
6 × 10^8
5
0
−5
5
0
−5

$$\text{RevolutionPlot3D}\Big[\left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\ \frac{4\pi r^2}{c^2+r^2}+8.987551787368176`*^{\wedge}16\left(\frac{4\pi r^2}{c^2+r^2}\right)^2+3.5481432270250993`*^{\wedge}18\ \text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172`\ \frac{4\pi r^2}{c^2+r^2}+\left(\frac{4\pi r^2}{c^2+r^2}\right)^2+39.47841760435743`\ \text{Sin}[\beta]^2\right)}\right),\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



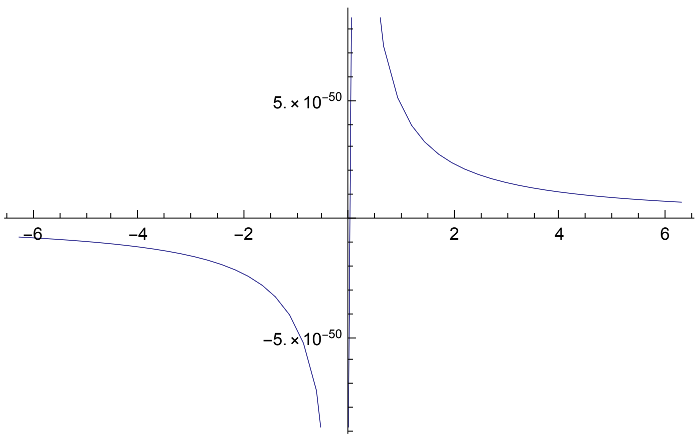
$$\text{Solve}\left[\text{Energy}==\frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2h\pi}{\text{Energy}}\right\}\right\}$$

$$\text{Solve}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2} == m\,c\,\hat{}\,2,\ m\right]$$

$$\left\{\left\{m \to \frac{3.31303\times 10^{-34}\ (12.5664-1.\ \theta)\ \left(c^2+\frac{c^2\ \theta}{12.5664-1.\ \theta}\right)}{c^4\ \theta}\right\}\right\}$$

```
Plot[1/(c^4 θ) 3.3130344800000002`*^-34 (12.566370614359172`- 1.` θ)
  (c^2 + (c^2 θ)/(12.566370614359172`- 1.` θ)), {θ, -2 π, 2 π}]
```

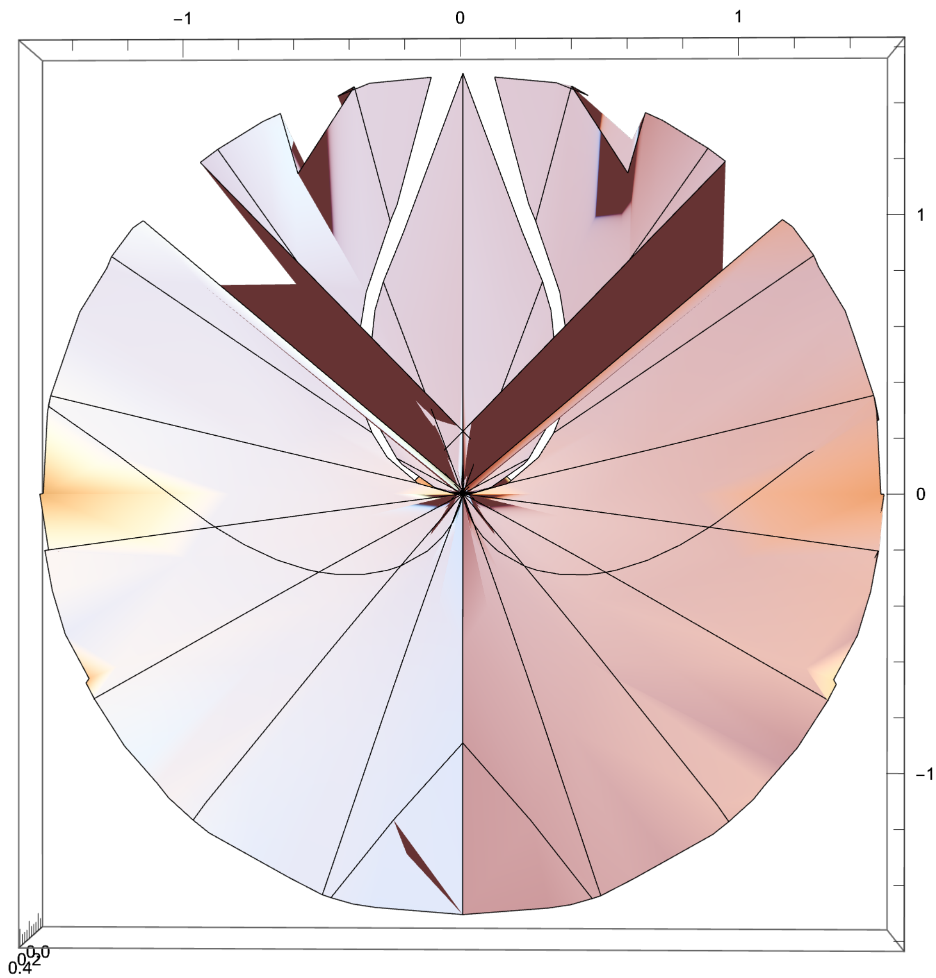



```
(1/(c^4 θ) 3.3130344800000002`*^-34
  (12.566370614359172`- 1.` θ) (c^2 + (c^2 θ)/(12.566370614359172`- 1.` θ)))
```

```
SphericalPlot3D[ArcSin[
```

$$\frac{1}{4\pi^2}\left(4\pi\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\theta-\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,\theta}\right.$$

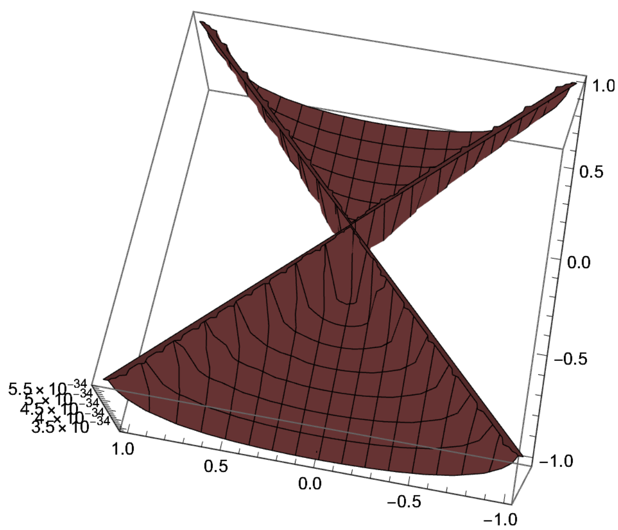
$$\left.\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2\right]\text{, \{}\theta\text{, -2}\pi\text{, 2}\pi\text{\}, \{}\beta\text{, -}\pi\text{/2, }\pi\text{/2\}]}$$



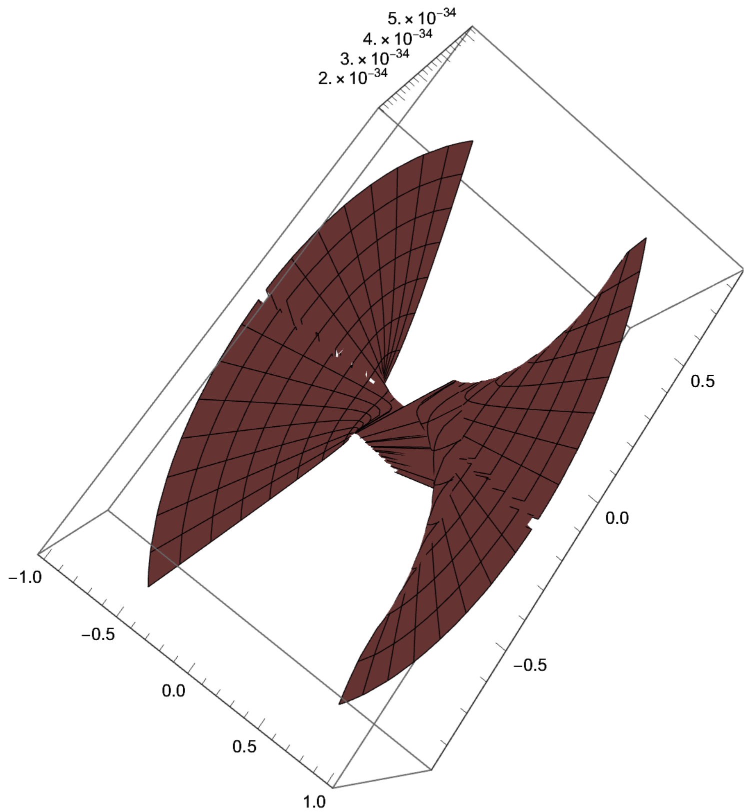
$$\frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2}$$

$$\frac{2\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}$$

$$\text{Plot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}{\sqrt{4\pi-\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}\right)^2\right)}{2\left(\frac{c\sqrt{\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}{\sqrt{4\pi-\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}\right)^2}, \{r, -1, 1\}, \{\eta, -1, 1\}\right]$$

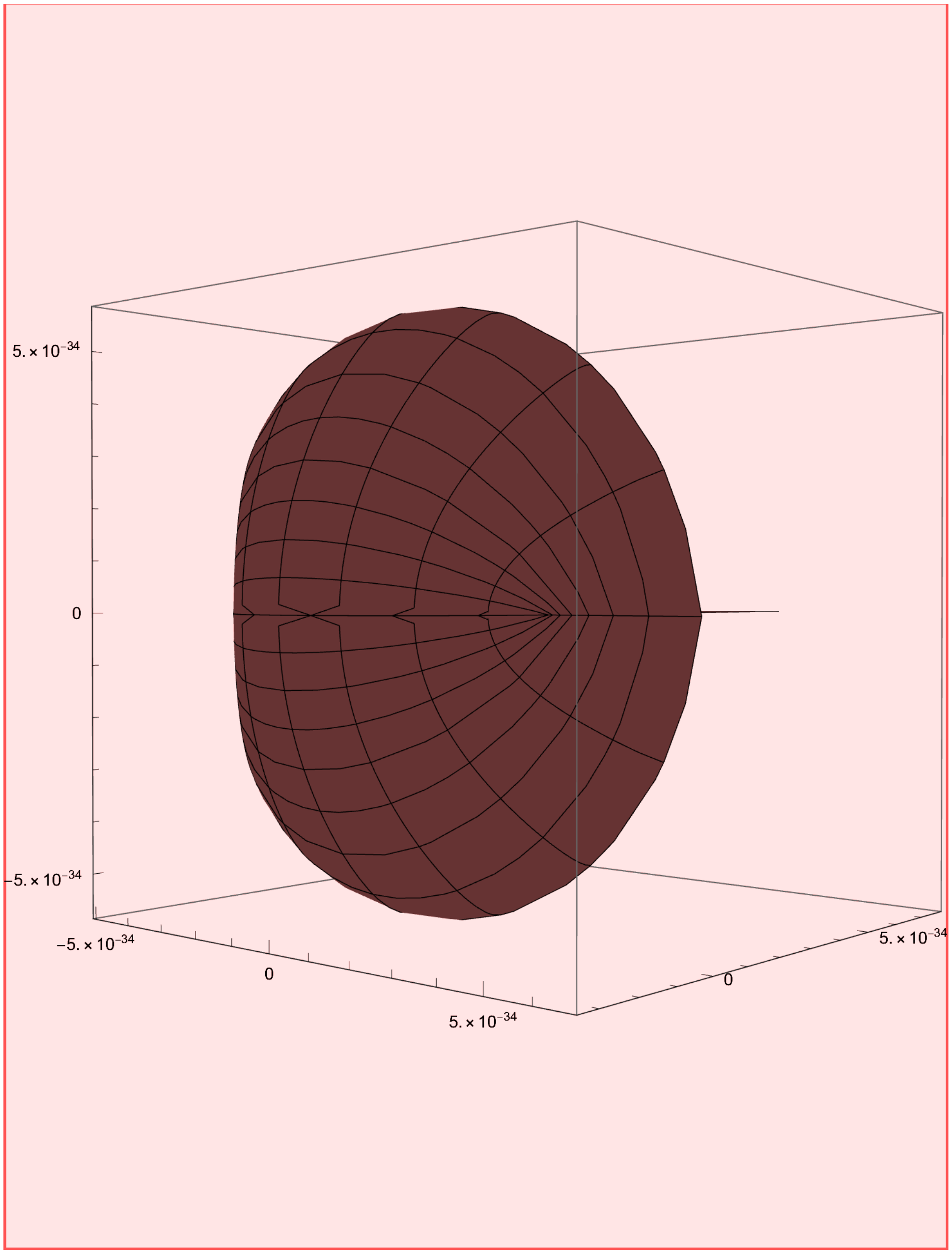


$$\texttt{RevolutionPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\;r\,\text{Sin}[\beta]^2}\right)}{r^2}}}{\sqrt{4\,\pi-\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\;r\,\text{Sin}[\beta]^2}\right)}{r^2}}}\right)^2\right)}{2\left(\frac{c\sqrt{\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\;r\,\text{Sin}[\beta]^2}\right)}{r^2}}}{\sqrt{4\,\pi-\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\;r\,\text{Sin}[\beta]^2}\right)}{r^2}}}\right)^2},\ \{r,\ -1,\ 1\},\ \{\beta,\ -1,\ 1\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\frac{2\pi\left(r^2+\sqrt{r^4-r^2\ r\ \text{Sin}[\beta]^2}\right)}{r^2}}}{\sqrt{4\pi-\frac{2\pi\left(r^2+\sqrt{r^4-r^2\ r\ \text{Sin}[\beta]^2}\right)}{r^2}}}\right)^2\right)}{2\left(\frac{c\sqrt{\frac{2\pi\left(r^2+\sqrt{r^4-r^2\ r\ \text{Sin}[\beta]^2}\right)}{r^2}}}{\sqrt{4\pi-\frac{2\pi\left(r^2+\sqrt{r^4-r^2\ r\ \text{Sin}[\beta]^2}\right)}{r^2}}}\right)^2},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}\right]$$



$$(\text{Energy of Photon with Wavelength } \eta) = \frac{h\left(c^2+\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\pi-\theta}}\right)^2}\ \text{Joules}$$

$$\text{D}\left[k\,\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right]$$

$$\frac{k\left(4\pi r^2-2r^2\theta\right)}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

$$\text{Solve}\left[\frac{\eta}{t}==\frac{k\left(4\pi r^2-2r^2\theta\right)}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}},k\right]$$

$$\left\{\left\{k\to\frac{2\pi\eta\sqrt{r^2(4\pi-\theta)\theta}}{r^2 t(2\pi-\theta)}\right\}\right\}$$

$$\frac{2\pi\eta\sqrt{r^2\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{r^2 t\left(2\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}$$

$$\frac{2\pi\,\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\sqrt{r^2(4\pi-\theta)\theta}}{r^2 t(2\pi-\theta)}$$

$$\frac{2\pi\,\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}}{2\pi}\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2(4\pi-\theta)\theta}}{\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2 t(2\pi-\theta)}$$

$$\frac{(4\pi-\theta)\theta\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}{2\pi t(2\pi-\theta)}$$

$$\text{Solve}\left[k==\frac{(4\pi-\theta)\theta\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}{2\pi t(2\pi-\theta)},\theta\right]$$

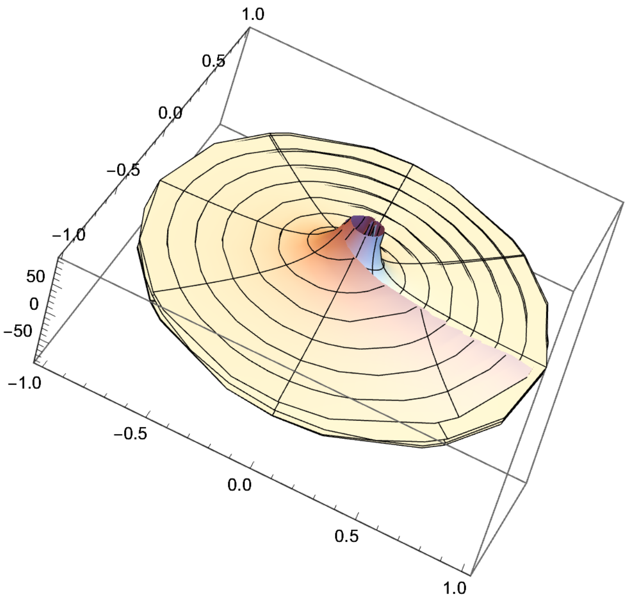
$$\left\{\left\{\theta\to\frac{1}{2}\left(4\pi+k\,t-\sqrt{16\pi^2+k^2t^2}\right)\right\},\left\{\theta\to\frac{1}{2}\left(4\pi+k\,t+\sqrt{16\pi^2+k^2t^2}\right)\right\}\right\}$$

$$\frac{1}{2}\left(4\pi+k\,t+\sqrt{16\pi^2+k^2t^2}\right)$$

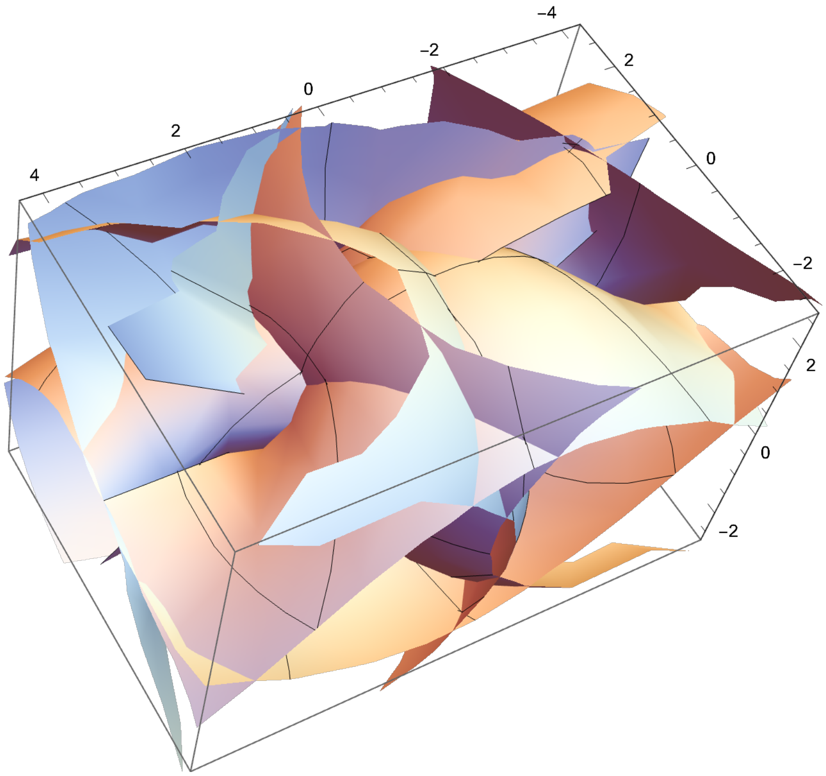
$$\text{Solve}\left[k == \frac{(4\pi - \theta)\,\theta\,\sqrt{\frac{16\pi^3}{4\pi-\theta} - \frac{4\pi^2\theta}{4\pi-\theta}}}{2\pi t\,(2\pi - \theta)},\ t\right]$$

$$\left\{\left\{t \to \frac{4\pi\theta - \theta^2}{k\,(2\pi - \theta)}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{4\pi\theta - \theta^2}{k\,(2\pi - \theta)},\ \{k, -1, 1\},\ \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{(4\pi-\theta)\,\theta\,\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}{2\pi\,t\,(2\pi-\theta)},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{t,\ -4\pi,\ 4\pi\}\right]$$



$$\frac{2\pi\,\eta\,\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2(4\pi-\theta)\,\theta}}{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2 t\,(2\pi-\theta)}$$

$$\text{RevolutionPlot3D}\Big[\Big(\Big(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big)\left(2\sqrt{2\,\pi^2-\pi^2\,\text{Sin}[\beta]^2+2\,\pi^2\sqrt{1-\text{Sin}[\beta]^2}}\right)\Big)$$

$$\left(2\left(2\,\pi-\frac{\pi^2\,\text{Sin}[\beta]^2}{\pi+\pi\sqrt{1-\text{Sin}[\beta]^2}}\right)\right)\left(2\left(\pi+\frac{\sqrt{\pi^2\,\text{Sin}[\beta]^2-\pi^2\,\text{Sin}[\beta]^3\sqrt{\text{Sin}[\beta]^2}}}{\sqrt{\text{Sin}[\beta]^2}}\right)\right)\Big(\Big(\Big(0.5\text{`}$$

$$\left(6.916640561054567\text{`}*\text{^}33+\frac{1.5190901312653737\text{`}*\text{^}18}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}+\right.$$

$$2.3071429505590057\text{`}*\text{^}25\sqrt{\left(8.987551787368176\text{`}*\text{^}16+\right.}$$

$$\left.\left.\left.\frac{19.739208802178716\text{`}}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\right)\right)\Big/$$

$$\left(5.504087674408674\text{`}*\text{^}32+\frac{1.2088535169650016\text{`}*\text{^}17}{\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\Big)\Big)$$

$$\left(-i\,\text{ArcSinh}\left[e^{2\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}-\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

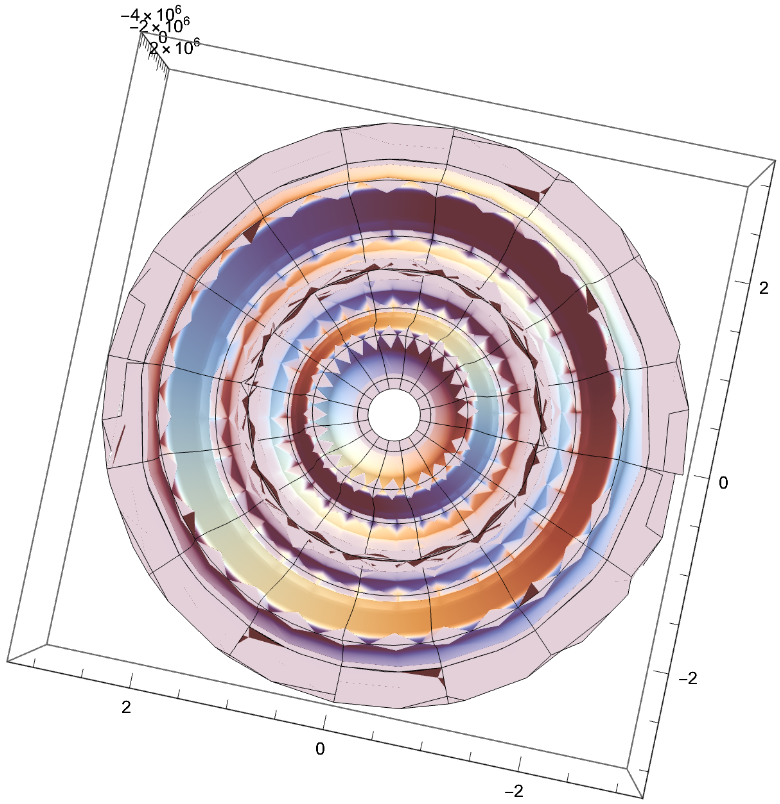
$$\left(-i\,\text{Log}\left[-e^{-i\sqrt{e^{-2\,i\,\beta}\left(1+e^{2\,i\,\beta}\right)^2}\,\pi}\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)$$

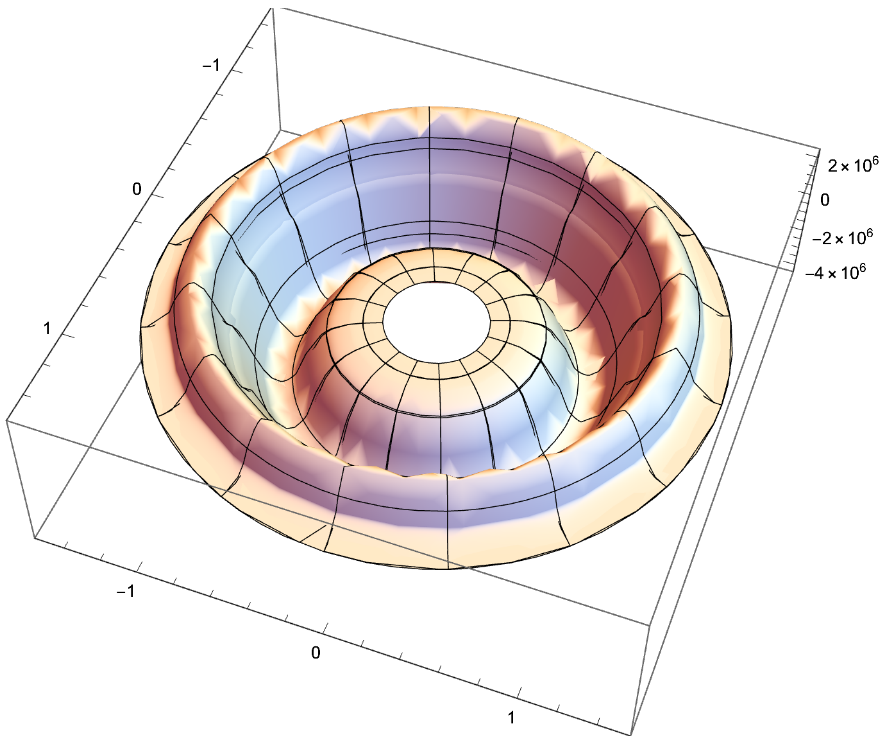
$$\left(-i\,\text{Log}\left[\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[e^{2\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}-i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$

$$\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right),\ \{\beta,-\pi,\pi\}\Big]$$


−4×10^6
−2×10^6
0
2×10^6
2
0
−2
2
0
−2

```
RevolutionPlot3D[
 ((2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) ^3) (2 (π + Sqrt[π^2 Sin[β]^2 - π^2 Sin[β]^3 Sqrt[Sin[β]^2]] / Sqrt[Sin[β]^2])) (((0.5`
      (6.916640561054567`*^33 + 1.5190901312653737`*^18 / ((π + Sqrt[π^2 - π^2 Sin[β]^2]) (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))) +
        2.3071429505590057`*^25 Sqrt[(8.987551787368176`*^16 +
             19.739208802178716` / ((π + Sqrt[π^2 - π^2 Sin[β]^2]) (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))))])) /
     (5.504087674408674`*^32 + 1.2088535169650016`*^17 / ((π + Sqrt[π^2 - π^2 Sin[β]^2]) (4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])))))
  (-ⅈ ArcSinh[ⅇ^(2 ⅈ π Sqrt[1-Sin[β]^2]) - Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (-ⅈ Log[-ⅇ^(-ⅈ Sqrt[ⅇ^(-2 ⅈ β) (1+ⅇ^(2 ⅈ β))^2] π)])
  (ArcCos[1/2 ⅇ^(-2 ⅈ π Sqrt[1-Sin[β]^2]) (1 + ⅇ^(4 ⅈ π Sqrt[1-Sin[β]^2]))])
  (-ⅈ Log[Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (ArcCos[ⅇ^(2 ⅈ π Sqrt[1-Sin[β]^2]) - ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (ArcCos[1/2 ⅇ^(-2 ⅈ π Sqrt[1-Sin[β]^2]) (1 + ⅇ^(4 ⅈ π Sqrt[1-Sin[β]^2]))]), {β, -π / 2, π / 2}]
```



-1
0
1
-1
0
1
2 × 10^6
0
-2 × 10^6
-4 × 10^6

$$\mathtt{RevolutionPlot3D}\Big[\Big(\Big(2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big)\,{}^{\wedge}4\Big)\,\Big(\Big(0.5`$$

$$\Big(6.916640561054567`{*}^{\wedge}33+\frac{1.5190901312653737`{*}^{\wedge}18}{\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big)}+$$

$$2.3071429505590057`{*}^{\wedge}25\,\sqrt{\Big(8.987551787368176`{*}^{\wedge}16+}$$

$$\frac{19.739208802178716`}{\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big)}\Big)\Big)\Big)\Big/$$

$$\Big(5.504087674408674`{*}^{\wedge}32+\frac{1.2088535169650016`{*}^{\wedge}17}{\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big)}\Big)\Big)$$

$$\Big(-i\,\mathtt{ArcSinh}\Big[e^{2\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}-\mathtt{Cos}\Big[2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big]\Big]\Big)$$

$$\Big(-i\,\mathtt{Log}\Big[-e^{-i\,\sqrt{e^{-2\,i\,\beta}\,\left(1+e^{2\,i\,\beta}\right)^2}\,\pi}\Big]\Big)$$

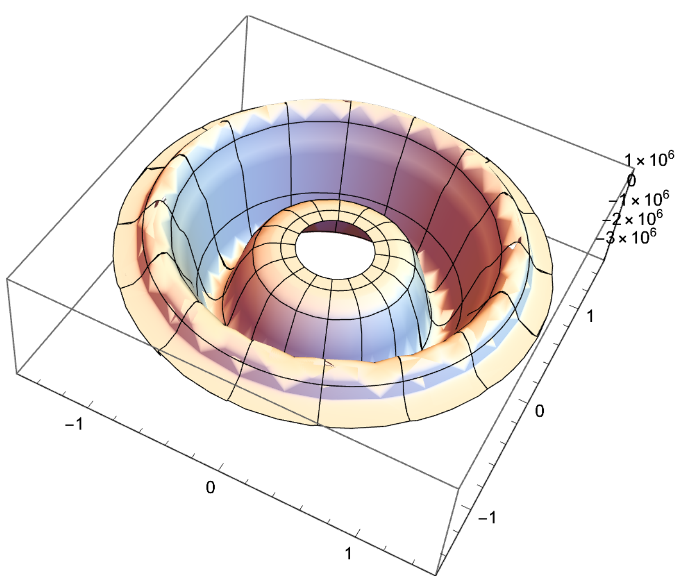
$$\Big(\mathtt{ArcCos}\Big[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}\,\Big(1+e^{4\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}\Big)\Big]\Big)$$

$$\Big(-i\,\mathtt{Log}\Big[\mathtt{Cos}\Big[2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big]+i\,\mathtt{Sin}\Big[2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big]\Big]\Big)$$

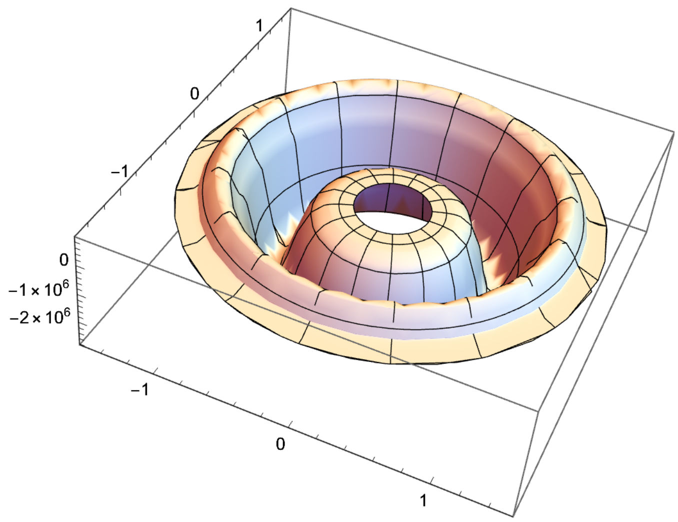
$$\Big(\mathtt{ArcCos}\Big[e^{2\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}-i\,\mathtt{Sin}\Big[2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathtt{Sin}[\beta]^2}\Big)\Big]\Big]\Big)$$

$$\Big(\mathtt{ArcCos}\Big[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}\,\Big(1+e^{4\,i\,\pi\,\sqrt{1-\mathtt{Sin}[\beta]^2}}\Big)\Big]\Big),\ \{\beta,$$

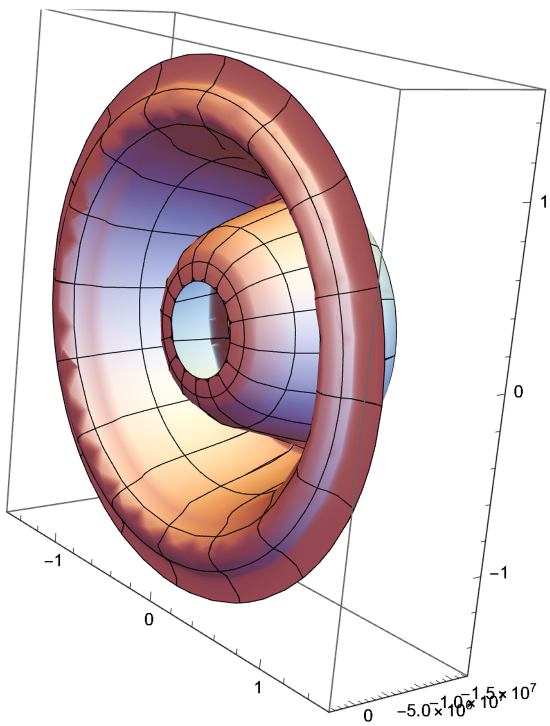
$$-\pi/2,\ \pi/2\}\Big]$$



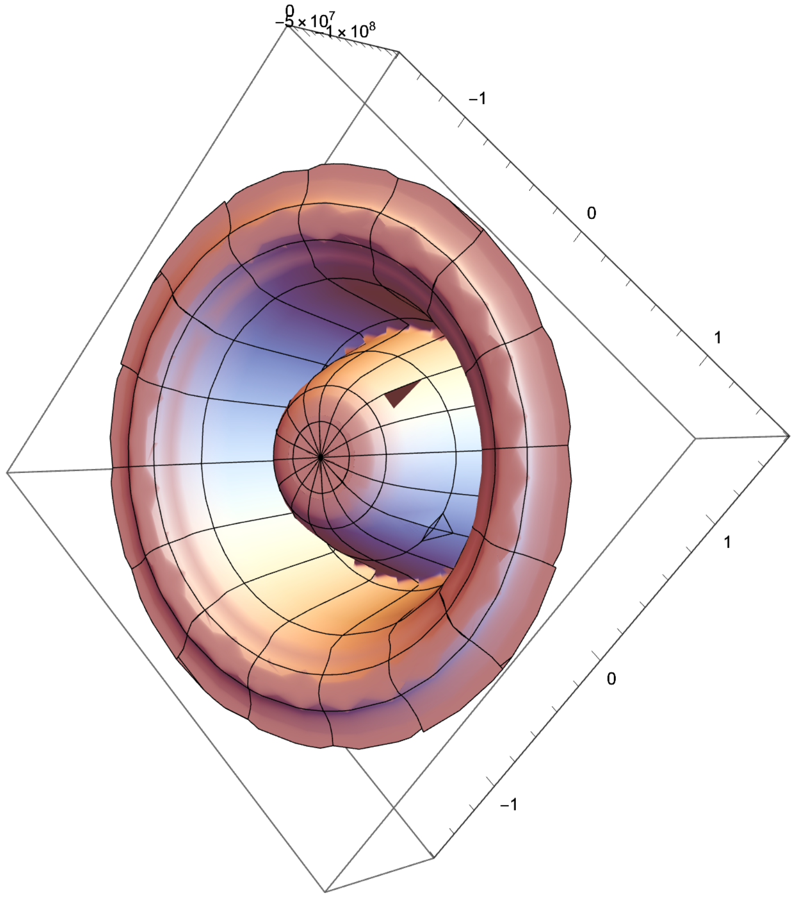
```
RevolutionPlot3D[((2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^5)
  (-ⅈ ArcSinh[ⅇ^(2 ⅈ π Sqrt[1-Sin[β]^2]) - Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (-ⅈ Log[-ⅇ^(-ⅈ Sqrt[ⅇ^(-2 ⅈ β) (1+ⅇ^(2 ⅈ β))^2] π)]) (ArcCos[1/2 ⅇ^(-2 ⅈ π Sqrt[1-Sin[β]^2]) (1 + ⅇ^(4 ⅈ π Sqrt[1-Sin[β]^2]))])
  (-ⅈ Log[Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (ArcCos[ⅇ^(2 ⅈ π Sqrt[1-Sin[β]^2]) - ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (ArcCos[1/2 ⅇ^(-2 ⅈ π Sqrt[1-Sin[β]^2]) (1 + ⅇ^(4 ⅈ π Sqrt[1-Sin[β]^2]))]), {β, -π / 2, π / 2}]
```



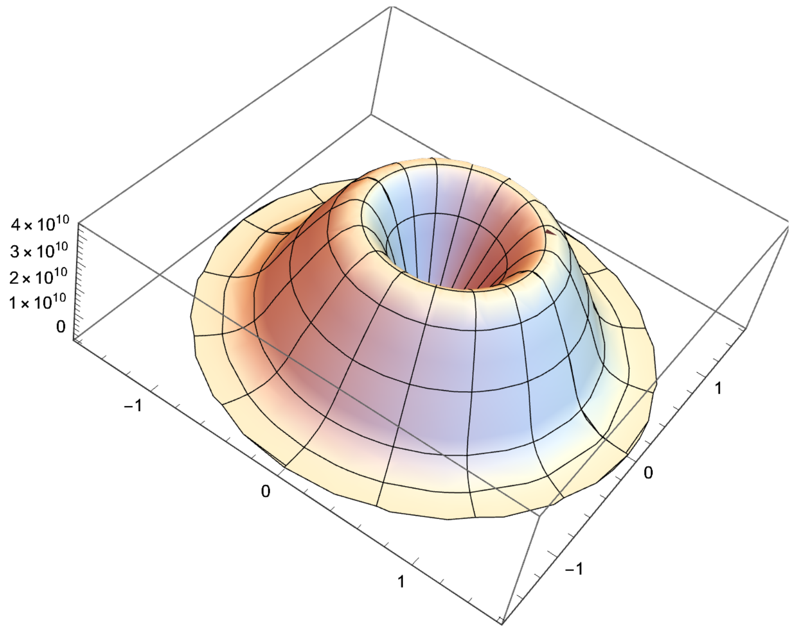
$$\text{RevolutionPlot3D}\Big[\Big(\Big(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big)\text{^}6\Big)$$
$$\left(-i\,\text{ArcSinh}\left[e^{2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}-\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$
$$\left(-i\,\text{Log}\left[-e^{-i\,\sqrt{e^{-2\,i\,\beta}\,\left(1+e^{2\,i\,\beta}\right)^2}\,\pi}\right]\right)\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)$$
$$\left(-i\,\text{Log}\left[\text{Cos}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right)$$
$$\left(\text{ArcCos}\left[e^{2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}-i\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\right]\right),\ \{\beta,\,-\pi/2,\,\pi/2\}\Big]$$



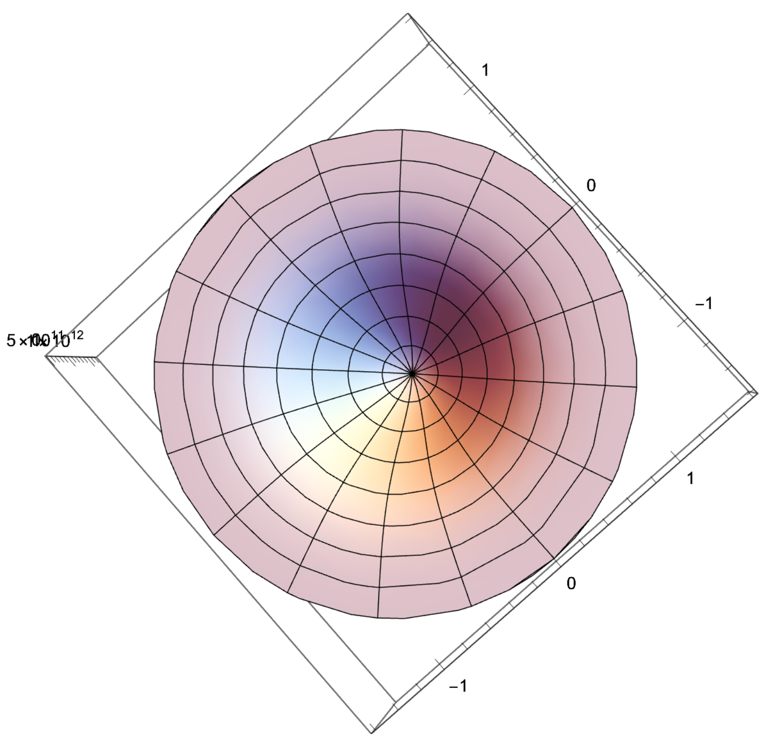
```
RevolutionPlot3D[((2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^7)
  (-i ArcSinh[e^(2 i π Sqrt[1-Sin[β]^2]) - Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]])
  (-i Log[-e^(-i Sqrt[e^(-2 i β) (1+e^(2 i β))^2] π)]) (ArcCos[1/2 e^(-2 i π Sqrt[1-Sin[β]^2]) (1 + e^(4 i π Sqrt[1-Sin[β]^2]))])
  (-i Log[Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + i Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]]), {β,
  -π / 2, π / 2}]
```



```
RevolutionPlot3D[((2 (π + √(π^2 - π^2 Sin[β]^2)))^10)
  (ArcCos[1/2 e^(-2 i π √(1-Sin[β]^2)) (1 + e^(4 i π √(1-Sin[β]^2)))]), {β, -π / 2, π / 2}]
```




```
RevolutionPlot3D[(2 (π + √(π^2 - π^2 Sin[β]^2)))^11, {β, -π / 2, π / 2}]
```



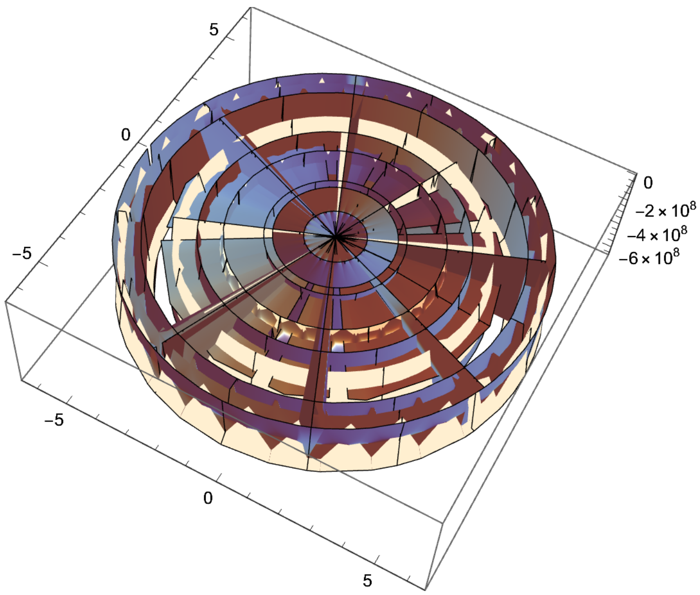
$$\mathrm{Solve}\left[\left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right)==\frac{\left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}}\right)}{\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}},\,v\right]$$

$$\mathrm{Solve}\left[\left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right)==\frac{\left(2\,\pi\,r-r\,\theta-2\,\pi\,\sqrt{r^2-\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}}\right)}{\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}},\,v\right]$$

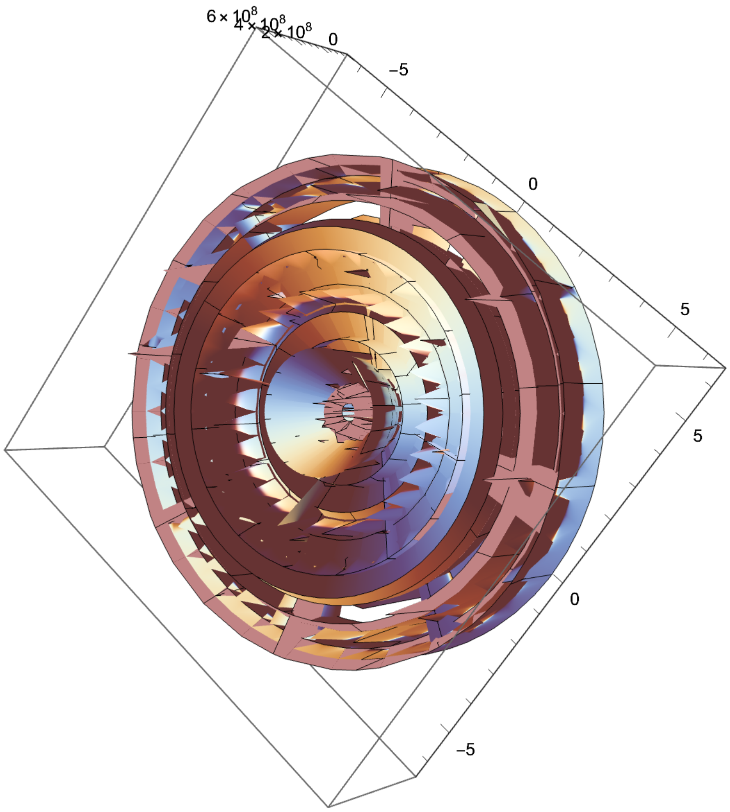
$$\Big\{\Big\{v\to-\Big(1.\,\sqrt{\big(-2.73058\times10^{35}+2.17293\times10^{34}\,\theta+8.69171\times10^{34}\,r^2\,\theta-1.38333\times10^{34}\,r^2\,\theta^2+5.50409\times10^{32}\,r^2\,\theta^3\big)}\Big)\Big/$$
$$\Big(\sqrt{\big(-3.03818\times10^{18}+2.41771\times10^{17}\,\theta+9.67083\times10^{17}\,r^2\,\theta-1.53916\times10^{17}\,r^2\,\theta^2+6.12412\times10^{15}\,r^2\,\theta^3\big)}\Big)\Big\},$$
$$\Big\{v\to\Big(\sqrt{\big(-2.73058\times10^{35}+2.17293\times10^{34}\,\theta+8.69171\times10^{34}\,r^2\,\theta-1.38333\times10^{34}\,r^2\,\theta^2+5.50409\times10^{32}\,r^2\,\theta^3\big)}\Big)\Big/$$
$$\Big(\sqrt{\big(-3.03818\times10^{18}+2.41771\times10^{17}\,\theta+9.67083\times10^{17}\,r^2\,\theta-1.53916\times10^{17}\,r^2\,\theta^2+6.12412\times10^{15}\,r^2\,\theta^3\big)}\Big)\Big\}\Big\}$$

$$r:=\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

```
RevolutionPlot3D[-(1.` √(-2.7305802448854928`*^35 +
      2.1729267174130213`*^34 θ + 8.691706869652085`*^34 r^2 θ -
      1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
  (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
     9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
     6.124123459454841`*^15 r^2 θ^3)), {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[
 (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
      r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
  (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
      6.124123459454841`*^15 r^2 θ^3)), {θ, -2 π, 2 π}]
```




```
Solve[
 (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
       r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ + 9.670828135720014`*^17
       r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 + 6.124123459454841`*^15 r^2 θ^3)) ==
  (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ]

{{θ → 0.}}
```

```
Solve[
 (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
        r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ + 9.670828135720014`*^17
        r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 + 6.124123459454841`*^15 r^2 θ^3)) ==
  (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
       3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), r]
```

$\{\{r \to 0.\}\}$

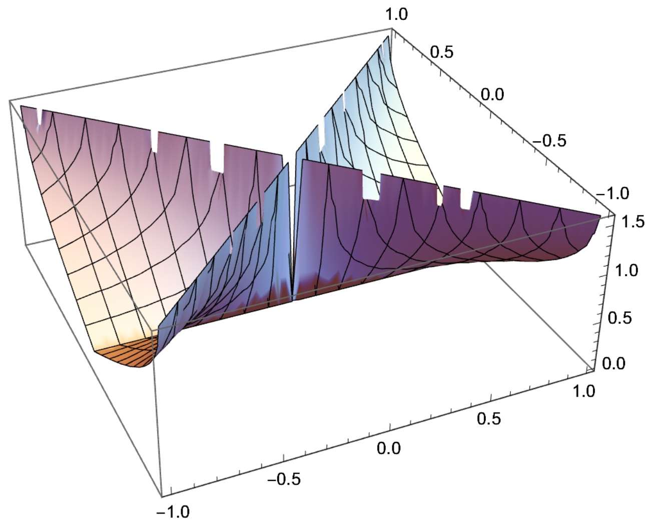
```
Solve[
 (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
        r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ + 9.670828135720014`*^17
        r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 + 6.124123459454841`*^15 r^2 θ^3)) ==
  (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
       3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), β]
```

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

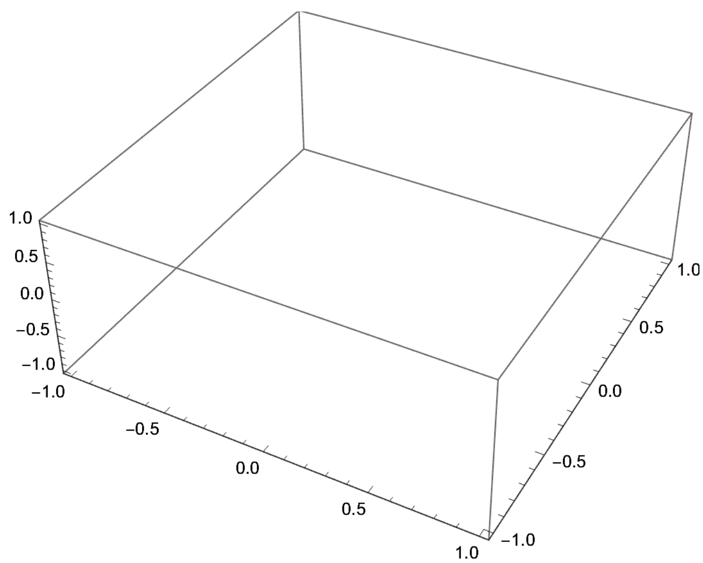
$$\left\{\left\{\beta \to -1.\ \mathrm{ArcSin}\left[8.42244\times10^{-9}\ \sqrt{4.48719\times10^{15} - 3.57079\times10^{14}\,\theta}\ \sqrt{\theta}\right]\right\}, \left\{\beta \to \mathrm{ArcSin}\left[8.42244\times10^{-9}\ \sqrt{4.48719\times10^{15} - 3.57079\times10^{14}\,\theta}\ \sqrt{\theta}\right]\right\}\right\}$$

```
Plot3D[ArcSin[8.422437466061065`*^-9
```

$$\sqrt{4.487190804107819\grave{}*\hat{}15 - 3.57079298535128\grave{}*\hat{}14\,\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}}\;\sqrt{\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}}\Big],\ \{r,-1,1\},\ \{\eta,-1,1\}\Big]$$



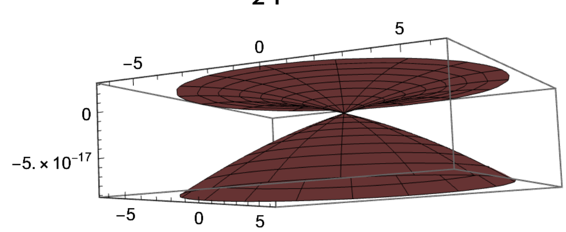
$$\text{Plot3D}\Big[\text{ArcSin}\Big[8.422437466061065`*^{\wedge}-9\sqrt{\left(4.487190804107819`*^{\wedge}15 - 3.57079298535128`*^{\wedge}14 \times 2\left(2\pi + \frac{\pi}{3^{1/3}\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}} - \frac{\pi\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}{3^{2/3}r^2}\right)\right)}\sqrt{\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}\Big], \{r, -1, 1\}, \{\eta, -1, 1\}\Big]$$



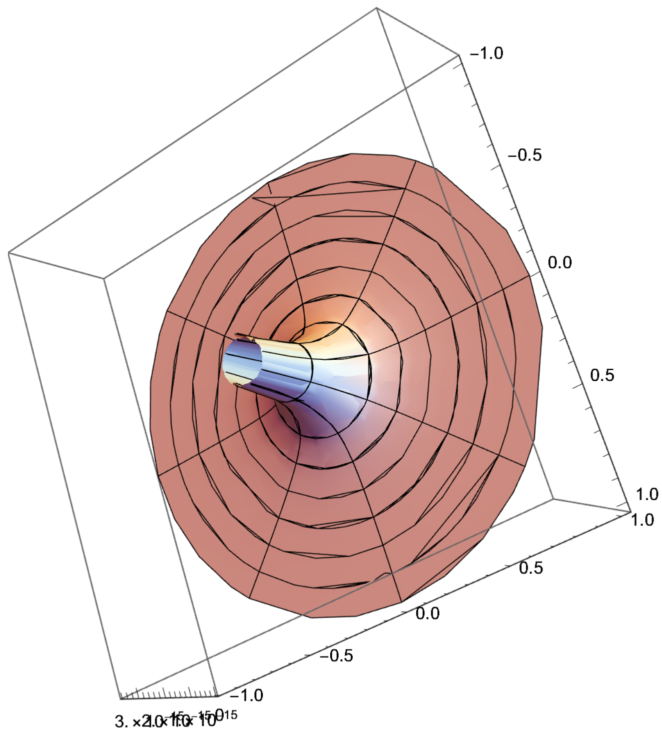
$$\frac{h\left(c^2+r^2\right)}{2r^2}$$

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}$$

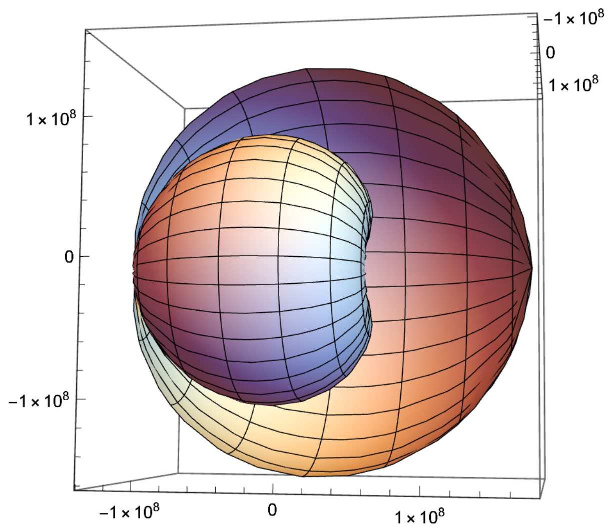
$$\text{RevolutionPlot3D}\Big[\frac{h\left(c^2+r^2\right)}{2r^2}, \{\theta, -2\pi, 2\pi\}\Big]$$



$$\text{RevolutionPlot3D}\left[\frac{h\left(c^2+\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\right)}{2\,(r)^2},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
      Sin[ArcSin[√((4 π - 2 (π + √(π^2 - π^2 Sin[β]^2)) θ)/(2 π)]]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[ArcSin[
       √((4 π - θ) 2 (π + √(π^2 - π^2 Sin[β]^2)))/(2 π)]]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}}{2\pi}\right]\right]^2\right)}\right)\Big/$$

$$\left(\sqrt{\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{2\pi}\right]\right]^2\right)}\right)$$

$$\mathrm{Solve}\Big[\frac{1}{2\pi}\Bigg(\sqrt{\Bigg(4\pi r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)-}$$

$$r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)^2\Bigg)\Bigg)==$$

$$r\,\mathrm{Sin}\left[\mathrm{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right],$$

$$\theta\Big]$$

Solve::verif : Potential solution {$\theta \to$ ComplexInfinity} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\Big\{\Big\{\theta\to$$

$$\frac{4\pi}{3}+\Bigg(2^{1/3}\Bigg(-1296\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\pi^2\,\mathrm{Sin}[\beta]^2-453\pi^2\,\mathrm{Sin}[\beta]^4+36\pi^2\,\mathrm{Sin}[\beta]^6+$$

$$5\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$78\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$9\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\left(-1+18\,\text{Sin}[\beta]^2+\right.$$
$$\left.3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+243$$
$$\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$9\,\pi^2\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+5\,\pi^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-88\,\pi^2\,\text{Sin}[$$
$$\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-36$$
$$\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$6\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left.\left.\left.\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)\right)\Big/$$
$$\left(27\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right.$$
$$\left(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-\right.$$
$$76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-$$
$$2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-$$
$$430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16}-$$
$$1\,924\,560\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984\,\pi^3$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-22\,394\,880$$
$$\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$
$$\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-69\,984\,\pi^3$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+19\,455\,552$$
$$\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+23\,329\,866\,240\ \pi^3\ \text{Sin}[\beta]^6$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}-$$

$$217\,196\,393\,760\ \pi^3\ \text{Sin}[\beta]^8\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+725\,922\,896\,832\ \pi^3\ \text{Sin}[\beta]^{10}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$79\,877\,708\,064\ \pi^3\ \text{Sin}[\beta]^{12}\ \Big(-1+18\ \text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+1\,632\,586\,752\ \pi^3\ \text{Sin}[\beta]^{14}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$909\,792\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}-$$

$$91\,119\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}-$$

$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$51\,018\,336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ \Big)^{2/3}+$$

$$\sqrt{}\ \Big(\Big(128\,304\ \pi^3-46\,049\,472\ \pi^3\ \text{Sin}[\beta]^2+3\,084\,719\,760\ \pi^3\ \text{Sin}[\beta]^4-76\,984\,149\,600$$

$$\pi^3\ \text{Sin}[\beta]^6+791\,034\,575\,760\ \pi^3\ \text{Sin}[\beta]^8-2\,463\,947\,543\,232\ \pi^3\ \text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\ \pi^3\ \text{Sin}[\beta]^{12}-430\,339\,664\,160\ \pi^3\ \text{Sin}[\beta]^{14}-9\,183\,300\,480$$

$$\pi^3\ \text{Sin}[\beta]^{16}-1\,924\,560\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ +$$

$$240\,395\,040\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$

$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ +$$

$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$

$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$

$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{14}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +69\,984\ \pi^3$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \mathrm{Sin}[\beta]^2\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$1\,412\,976\,960\ \pi^3\ \mathrm{Sin}[\beta]^4\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$34\,362\,423\,936\ \pi^3\ \mathrm{Sin}[\beta]^6\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$361\,323\,192\,960\ \pi^3\ \mathrm{Sin}[\beta]^8\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$1\,382\,528\,881\,152\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$10\,033\,606\,080\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$11\,224\,033\,920\ \pi^3\ \mathrm{Sin}[\beta]^{14}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$153\,055\,008\ \pi^3\ \mathrm{Sin}[\beta]^{16}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$979\,776\ \sqrt{3}\ \pi^3\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$112\,534\,272\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^2\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$3\,868\,575\,552\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^4\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}+$$
$$52\,016\,027\,904\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^6\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$
$$241\,951\,624\,128\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^8\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}\Big)^2+4\,\Big(-1296\,\pi^2$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{10/3}-$$
$$324\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{5/3}$$
$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}-78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}+9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}+\pi^2\,\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}-$$
$$35\,\pi^2\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}+$$
$$243\,\pi^2\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}+$$
$$9\,\pi^2\,\text{Sin}[\beta]^6\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}-$$
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big(-1+18$$
$$\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}+$$
$$42\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{1/3}+5\,\pi^2\,\Big(-1+18$$
$$\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}-$$
$$88\,\pi^2\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}-$$
$$36\,\pi^2\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big)^{2/3}-15\,\sqrt{3}\,\pi^2$$
$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \Big)^{2/3}-6\ \sqrt{3}\ \pi^2$$
$$\mathrm{Sin}[\beta]^2\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \Big(-1+18\ \mathrm{Sin}[\beta]^2+$$
$$3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big)-$$

$$\Big(128\,304\ \pi^3-46\,049\,472\ \pi^3\ \mathrm{Sin}[\beta]^2+3\,084\,719\,760\ \pi^3\ \mathrm{Sin}[\beta]^4-76\,984\,149\,600$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^6+791\,034\,575\,760$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^8-2\,463\,947\,543\,232$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{10}-4\,120\,487\,403\,984$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{12}-430\,339\,664\,160$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{16}-1\,924\,560$$
$$\sqrt{3}$$
$$\pi^3$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +240\,395\,040$$
$$\sqrt{3}$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^2$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^4$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^6$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^8$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{10}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{12}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{14}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +$$
$$69\,984\ \pi^3\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \right)^{1/3}-$$

$$22394880$$
$$\pi^3 \operatorname{Sin}[\beta]^2$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1412976960 \pi^3 \operatorname{Sin}[\beta]^4$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34362423936 \pi^3 \operatorname{Sin}[\beta]^6$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361323192960 \pi^3 \operatorname{Sin}[\beta]^8$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1382528881152 \pi^3 \operatorname{Sin}[\beta]^{10}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10033606080 \pi^3 \operatorname{Sin}[\beta]^{12}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11224033920 \pi^3 \operatorname{Sin}[\beta]^{14}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153055008 \pi^3 \operatorname{Sin}[\beta]^{16}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979776 \sqrt{3} \pi^3 \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112534272 \sqrt{3} \pi^3 \operatorname{Sin}[\beta]^2 \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3868575552 \sqrt{3} \pi^3 \operatorname{Sin}[\beta]^4$$
$$\sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52016027904 \sqrt{3} \pi^3 \operatorname{Sin}[\beta]^6$$
$$\sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241951624128 \sqrt{3} \pi^3 \operatorname{Sin}[\beta]^8$$
$$\sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12788596224 \sqrt{3} \pi^3 \operatorname{Sin}[\beta]^{10}$$
$$\sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}$$
$$\left(-1+18 \operatorname{Sin}[\beta]^2+3 \sqrt{3} \sqrt{\operatorname{Sin}[\beta]^2 \left(-1+11 \operatorname{Sin}[\beta]^2+\operatorname{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\,\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$\sqrt{\Bigg(\Bigg(128304\,\pi^3 - 46049472\,\pi^3\,\text{Sin}[\beta]^2 + 3084719760\,\pi^3\,\text{Sin}[\beta]^4 - 76984149600\,\pi^3\,\text{Sin}[\beta]^6 + 791034575760\,\pi^3\,\text{Sin}[\beta]^8 - 2463947543232\,\pi^3\,\text{Sin}[\beta]^{10} - 4120487403984\,\pi^3\,\text{Sin}[\beta]^{12} - 430339664160\,\pi^3\,\text{Sin}[\beta]^{14} - 9183300480\,\pi^3\,\text{Sin}[\beta]^{16} - 1924560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 240395040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 8641939248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 116076162240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 464847899760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 696655378080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 43748223120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 306110016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 69984\,\pi^3\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} - 22394880\,\pi^3\,\text{Sin}[\beta]^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 1412976960\,\pi^3\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} - 34362423936\,\pi^3\,\text{Sin}[\beta]^6\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 361323192960\,\pi^3\,\text{Sin}[\beta]^8\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} - 1382528881152\,\pi^3\,\text{Sin}[\beta]^{10}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 10033606080\,\pi^3\,\text{Sin}[\beta]^{12}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 11224033920\,\pi^3\,\text{Sin}[\beta]^{14}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 153055008\,\pi^3\,\text{Sin}[\beta]^{16}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} - 979776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} + 112534272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left.\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\right)^2+$$
$$4\left(-1296\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-\right.$$
$$324\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\left(-\pi^2+50\,\pi^2\,\mathrm{Sin}[\beta]^2-453\,\pi^2\,\mathrm{Sin}[\beta]^4+36\,\pi^2\,\mathrm{Sin}[\beta]^6+\right.$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-78\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+9\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2\,\mathrm{Sin}[\beta]^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$243\,\pi^2\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+9\,\pi^2\,\mathrm{Sin}[\beta]^6$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+42\,\sqrt{3}\,\pi^2$$
$$\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+5\,\pi^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-36\,\pi^2\,\mathrm{Sin}[\beta]^4$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$15\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+$$
$$3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{2/3}-6\sqrt{3}\,\pi^2$$
$$\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+$$
$$3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big/$$
$$\left(27\times 2^{1/3}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}\right)\Big\},\ \Big\{\theta\to$$
$$\frac{4\pi}{3}-$$
$$\Big(\Big(1+$$
$$i\sqrt{3}\Big)$$
$$\Big(-1296\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-$$
$$324$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\Big(-\pi^2+50\,\pi^2\,\mathrm{Sin}[\beta]^2-453\,\pi^2\,\mathrm{Sin}[\beta]^4+36\,\pi^2\,\mathrm{Sin}[\beta]^6+$$
$$5\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$
$$78\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$
$$9\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$
$$\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$35\,\pi^2\,\mathrm{Sin}[\beta]^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+243\,\pi^2$$
$$\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$9\,\pi^2\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$5\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\,\pi^2\,\mathrm{Sin}[\beta]^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-36\,\pi^2$$
$$\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$6\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\Big)\Big)\Big)\Big/$$

$$\Big(27\times 2^{2/3}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\mathrm{Sin}[\beta]^2+$$

$$3\,084\,719\,760\,\pi^3\,\mathrm{Sin}[\beta]^4-76\,984\,149\,600\,\pi^3\,\mathrm{Sin}[\beta]^6+$$

$$791\,034\,575\,760\,\pi^3\,\mathrm{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\mathrm{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\mathrm{Sin}[\beta]^{12}-$$

$$430\,339\,664\,160\,\pi^3\,\mathrm{Sin}[\beta]^{14}-9\,183\,300\,480\,\pi^3\,\mathrm{Sin}[\beta]^{16}-$$

$$1\,924\,560\sqrt{3}\,\pi^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{14}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\mathrm{Sin}[\beta]^2$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,412\,976\,960\,\pi^3\,\mathrm{Sin}[\beta]^4\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}-34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$

$$\pi^3\,\text{Sin}[\beta]^{16}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600}$$
$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984\,\pi^3$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\,\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\sqrt{3}\,\pi^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}\Big)^2+4\,\Big(-1296\,\pi^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{10/3}-$$
$$324\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{5/3}$$
$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$35\,\pi^2\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$243\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$9\,\pi^2\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$4\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$42\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+5\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$88\,\pi^2\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$36\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-15\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-6\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Bigg)\Bigg)^3\Bigg)\Bigg)^{1/3}\Bigg)+$$

$$\Bigg(\left(1-\mathrm{i}\sqrt{3}\right)\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-$$

$$76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6+$$

$$791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-$$

$$2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-$$

$$430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-$$

$$9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16}-$$

$$1\,924\,560\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$
$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+$
$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$
$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$
$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$
$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$
$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+$
$69\,984\,\pi^3\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$
$\pi^3\,\text{Sin}[\beta]^{16}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$

$$241\,951\,624\,128\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\ \pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\ \pi^3\ \text{Sin}[\beta]^2$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\ \pi^3\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\ \pi^3\ \text{Sin}[\beta]^6$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\ \pi^3\ \text{Sin}[\beta]^8$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\ \pi^3\ \text{Sin}[\beta]^{10}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\ \pi^3\ \text{Sin}[\beta]^{12}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\ \pi^3\ \text{Sin}[\beta]^{14}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$\sqrt{}\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600$$

$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$

$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984\,\pi^3$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{1/3} -$$
$$979776 \sqrt{3} \pi^3 \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$112534272 \sqrt{3} \pi^3 \text{Sin}[\beta]^2 \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$3868575552 \sqrt{3} \pi^3 \text{Sin}[\beta]^4 \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$52016027904 \sqrt{3} \pi^3 \text{Sin}[\beta]^6 \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$241951624128 \sqrt{3} \pi^3 \text{Sin}[\beta]^8 \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$12788596224 \sqrt{3} \pi^3 \text{Sin}[\beta]^{10} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$1122403392 \sqrt{3} \pi^3 \text{Sin}[\beta]^{12} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$
$$\left(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3} \sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$69984 \pi^3 \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$
$$19455552 \pi^3 \text{Sin}[\beta]^2 \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} -$$
$$1082722464 \pi^3 \text{Sin}[\beta]^4 \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$
$$23329866240 \pi^3 \text{Sin}[\beta]^6 \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} -$$
$$217196393760 \pi^3 \text{Sin}[\beta]^8 \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$
$$725922896832 \pi^3 \text{Sin}[\beta]^{10} \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$
$$79877708064 \pi^3 \text{Sin}[\beta]^{12} \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11 \text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$
$$1632586752 \pi^3 \text{Sin}[\beta]^{14} \Big(-1 + 18 \text{Sin}[\beta]^2 + 3 \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}\Big)^2+4\,\Big(-1296\,\pi^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$
$$324\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\,\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$
$$35\,\pi^2\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$243\,\pi^2\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$9\,\pi^2\,\text{Sin}[\beta]^6\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big(-1+18$$

$$\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{1/3} +$$

$$42\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}$$

$$(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}$$

$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{1/3} + 5\,\pi^2\,(-1 + 18$$

$$\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{2/3} -$$

$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\,(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}$$

$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{2/3} -$$

$$36\,\pi^2\,\mathrm{Sin}[\beta]^4\,(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}$$

$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{2/3} - 15\sqrt{3}\,\pi^2$$

$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,(-1 + 18\,\mathrm{Sin}[\beta]^2 +$$

$$3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{2/3} - 6\sqrt{3}\,\pi^2$$

$$\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,(-1 + 18\,\mathrm{Sin}[\beta]^2 +$$

$$3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\,)^{2/3}))^3))^{1/3})\Big/$$

$$(54 \times 2^{1/3}\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{5/3})\},\ \{\theta \to$$

$$\frac{4\pi}{3} -$$

$$((1 -$$

$$\mathbb{i}$$

$$\sqrt{3})$$

$$(-1296\,\pi^2\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{10/3} -$$

$$324$$

$$\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$(-\pi^2 + 50\,\pi^2\,\mathrm{Sin}[\beta]^2 - 453\,\pi^2\,\mathrm{Sin}[\beta]^4 + 36\,\pi^2\,\mathrm{Sin}[\beta]^6 +$$

$$5\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)} -$$

$$78\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)} +$$

$$9\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)} +$$

$$\pi^2\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$

$$35\,\pi^2\,\mathrm{Sin}[\beta]^2$$

$$\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{1/3} + 243\,\pi^2$$

$$\mathrm{Sin}[\beta]^4\left(-1 + 18\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1 + 11\,\mathrm{Sin}[\beta]^2 + \mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$

$$9\pi^2 \text{Sin}[\beta]^6 \left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$4\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$42\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$5\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3} -$$
$$88\pi^2\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3} - 36\pi^2$$
$$\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3} -$$
$$15\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3} -$$
$$6\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left.\left.\left.\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)\right)\Big/$$
$$\left(27\times 2^{2/3}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right.$$
$$\left(128\,304\,\pi^3 - 46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2 +\right.$$
$$3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4 -$$
$$76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6 +$$
$$791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8 -$$
$$2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10} -$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12} -$$
$$430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14} -$$
$$9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16} -$$
$$1\,924\,560\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$
$$240\,395\,040\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$
$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$464\,847\,899\,760\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$696\,655\,378\,080\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$43\,748\,223\,120\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$306\,110\,016\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$
$$\pi^3\,\text{Sin}[\beta]^{16}\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}-$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\right)^{2/3}+$$

$$\sqrt{}\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600$$

$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$

$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$$
$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$$
$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$$
$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+69\,984\,\pi^3$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\Bigg)^2+4\,\Big(-1296\,\pi^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-$$
$$324\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\Big(-\pi^2+50\,\pi^2\,\mathrm{Sin}[\beta]^2-453\,\pi^2\,\mathrm{Sin}[\beta]^4+36\,\pi^2\,\mathrm{Sin}[\beta]^6+$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-78\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+9\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+\pi^2\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}-$$
$$35\,\pi^2\,\mathrm{Sin}[\beta]^2\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$243\,\pi^2\,\mathrm{Sin}[\beta]^4\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$9\,\pi^2\,\mathrm{Sin}[\beta]^6\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}-$$
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\,\Big(-1+18$$
$$\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$42\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3}+5\,\pi^2\,\Big(-1+18$$
$$\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{2/3}-$$
$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{2/3}-$$
$$36\,\pi^2\,\mathrm{Sin}[\beta]^4\,\Big(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-15\sqrt{3}\,\pi^2$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-6\sqrt{3}\,\pi^2$$
$$\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big)+$$

$$\Big(\left(1+i\sqrt{3}\right)\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-$$
$$76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6+$$
$$791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-$$
$$2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-$$
$$430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-$$
$$9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16}-$$
$$1\,924\,560\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$
$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$
$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$\sqrt{}\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600$
$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$
$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$
$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$
$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$
$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$
$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$
$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$
$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$
$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$
$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984\,\pi^3$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Big)^2+4\,\Big(-1296\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$

$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$35\,\pi^2\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+243\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$9\,\pi^2\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$42\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+5\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$88\,\pi^2\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-36\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-15\,\sqrt{3}\,\pi^2$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-6\,\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big)\Big/$$

$$\left(54\times 2^{1/3}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}\right)\}\}$$

RevolutionPlot3D[

$$\frac{4\pi}{3}+\Bigg(2^{1/3}\Bigg(-1296\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\mathrm{Sin}[\beta]^2-453\,\pi^2\,\mathrm{Sin}[\beta]^4+36\,\pi^2\,\mathrm{Sin}[\beta]^6+$$

$$5\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$78\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$9\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2$$

$$\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+243$$

$$\pi^2\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$9\,\pi^2\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$4\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$42\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$5\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$36\,\pi^2\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$15\,\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$6\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\Big)\Bigg)\Bigg)\Big/$$

$$\Big(27\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(128\,304\,\pi^3 - 46\,049\,472\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,084\,719\,760\,\pi^3\,\mathrm{Sin}[\beta]^4 - 76\,984\,149\,600\,\pi^3\,\mathrm{Sin}[\beta]^6 +$$
$$791\,034\,575\,760\,\pi^3\,\mathrm{Sin}[\beta]^8 - 2\,463\,947\,543\,232\,\pi^3\,\mathrm{Sin}[\beta]^{10} -$$
$$4\,120\,487\,403\,984\,\pi^3\,\mathrm{Sin}[\beta]^{12} - 430\,339\,664\,160\,\pi^3\,\mathrm{Sin}[\beta]^{14} -$$
$$9\,183\,300\,480\,\pi^3\,\mathrm{Sin}[\beta]^{16} - 1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} +$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$
$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} +$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$
$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$
$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$
$$306\,110\,016\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{14}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} +$$
$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$22\,394\,880\,\pi^3\,\mathrm{Sin}[\beta]^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} + 1\,412\,976\,960$$
$$\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6\Big(-1+18\,\mathrm{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3} + 361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\Big(-1+18\,\mathrm{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^{1/3} + 11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} + 153\,055\,008$$
$$\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-1\,082\,722\,464$$

$$\pi^3\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\,\left(-1+18\,\text{Sin}[\beta]^2+\right.$$

$$\left.3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\,\left(-1+18\,\text{Sin}[\beta]^2+\right.$$

$$\left.3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+1\,632\,586\,752$$

$$\pi^3\,\text{Sin}[\beta]^{14}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$51\,018\,336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$\sqrt{\Big(\Big(128\,304\ \pi^3-46\,049\,472\ \pi^3\ \text{Sin}[\beta]^2+3\,084\,719\,760\ \pi^3\ \text{Sin}[\beta]^4-76\,984\,149\,600}$$

$$\pi^3\ \text{Sin}[\beta]^6+791\,034\,575\,760\ \pi^3\ \text{Sin}[\beta]^8-2\,463\,947\,543\,232\ \pi^3\ \text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\ \pi^3\ \text{Sin}[\beta]^{12}-430\,339\,664\,160\ \pi^3\ \text{Sin}[\beta]^{14}-9\,183\,300\,480$$

$$\pi^3\ \text{Sin}[\beta]^{16}-1\,924\,560\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984$$

$$\pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\ \pi^3\ \text{Sin}[\beta]^2\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$1\,412\,976\,960\ \pi^3\ \text{Sin}[\beta]^4\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$

$$34\,362\,423\,936\ \pi^3\ \text{Sin}[\beta]^6\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3} +$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8 \Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3} -$$
$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10} \Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3} +$$
$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12} \Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3} +$$
$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14} \Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3} + 153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$979\,776\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$112\,534\,272\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$3\,868\,575\,552\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$52\,016\,027\,904\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$241\,951\,624\,128\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$12\,788\,596\,224\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$1\,122\,403\,392\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$69\,984\,\pi^3 \Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3} + 19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{2/3}\Big)^2+4\,\Big(-1296\,\pi^2$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{10/3}-$$

$$324\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$

$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}-78\,\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}+9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4$$

$$\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}+\pi^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}+$$

$$243\,\pi^2\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}+9\,\pi^2\,\text{Sin}[\beta]^6$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}-$$

$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}+42\,\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{1/3}+5\,\pi^2$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{2/3}-$$

$$88\,\pi^2\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{2/3}-36\,\pi^2\,\text{Sin}[\beta]^4$$

$$\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{2/3}-$$

$$15\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big)^{2/3}-6\,\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\big(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\big)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ )^{2/3}))^3))^{1/3}) -$$

$$(128\,304\ \pi^3-46\,049\,472\ \pi^3\ \text{Sin}[\beta]^2+3\,084\,719\,760\ \pi^3\ \text{Sin}[\beta]^4-76\,984\,149\,600$$

$$\pi^3$$
$$\text{Sin}[\beta]^6+791\,034\,575\,760$$
$$\pi^3$$
$$\text{Sin}[\beta]^8-2\,463\,947\,543\,232$$
$$\pi^3$$
$$\text{Sin}[\beta]^{10}-4\,120\,487\,403\,984$$
$$\pi^3$$
$$\text{Sin}[\beta]^{12}-430\,339\,664\,160$$
$$\pi^3$$
$$\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3$$
$$\text{Sin}[\beta]^{16}-1\,924\,560$$
$$\sqrt{3}\ \pi^3$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ +240\,395\,040$$
$$\sqrt{3}\ \pi^3$$
$$\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$
$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ +$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}$$
$$\sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\ +$$
$$69\,984\ \pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \text{Sin}[\beta]^2$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \ \sqrt{\text{Sin}[\beta]^2\ (-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{1/3}+$$
$$1\,412\,976\,960\ \pi^3\ \text{Sin}[\beta]^4$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\mathrm{Sin}[\beta]^8$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\mathrm{Sin}[\beta]^{10}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\mathrm{Sin}[\beta]^{12}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$51018336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\Big(\Big(128304\ \pi^3-46049472\ \pi^3\ \text{Sin}[\beta]^2+3084719760\ \pi^3\ \text{Sin}[\beta]^4-76984149600}$$
$$\pi^3\ \text{Sin}[\beta]^6+791034575760\ \pi^3\ \text{Sin}[\beta]^8-2463947543232\ \pi^3\ \text{Sin}[\beta]^{10}-$$
$$4120487403984\ \pi^3\ \text{Sin}[\beta]^{12}-430339664160\ \pi^3\ \text{Sin}[\beta]^{14}-9183300480$$
$$\pi^3\ \text{Sin}[\beta]^{16}-1924560\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240395040\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8641939248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116076162240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464847899760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696655378080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43748223120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306110016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$69984\ \pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22394880\ \pi^3\ \text{Sin}[\beta]^2\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+1412976960\ \pi^3\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34362423936\ \pi^3\ \text{Sin}[\beta]^6\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+361323192960\ \pi^3\ \text{Sin}[$$
$$\beta]^8\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1382528881152\ \pi^3\ \text{Sin}[\beta]^{10}\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+10033606080\ \pi^3\ \text{Sin}[$$
$$\beta]^{12}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11224033920\ \pi^3\ \text{Sin}[\beta]^{14}\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+153055008\ \pi^3\ \text{Sin}[\beta]^{16}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979776\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}-$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}+$$

$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}+$$

$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}+$$

$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{2/3}\Bigg)^2+$$

$$4\,\Bigg(-1296\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{10/3}-$$

$$324\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{5/3}$$

$$\Bigg(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$

$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}-$$

$$78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}+9\,\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}+\pi^2\,\Bigg(-1+18\,\text{Sin}[\beta]^2+$$

$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\Bigg)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{1/3}+$$

$$243\,\pi^2\,\text{Sin}[\beta]^4\,\Bigg(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\Bigg)^{1/3}+9\,\pi^2\,\text{Sin}[\beta]^6$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{1/3}-$$

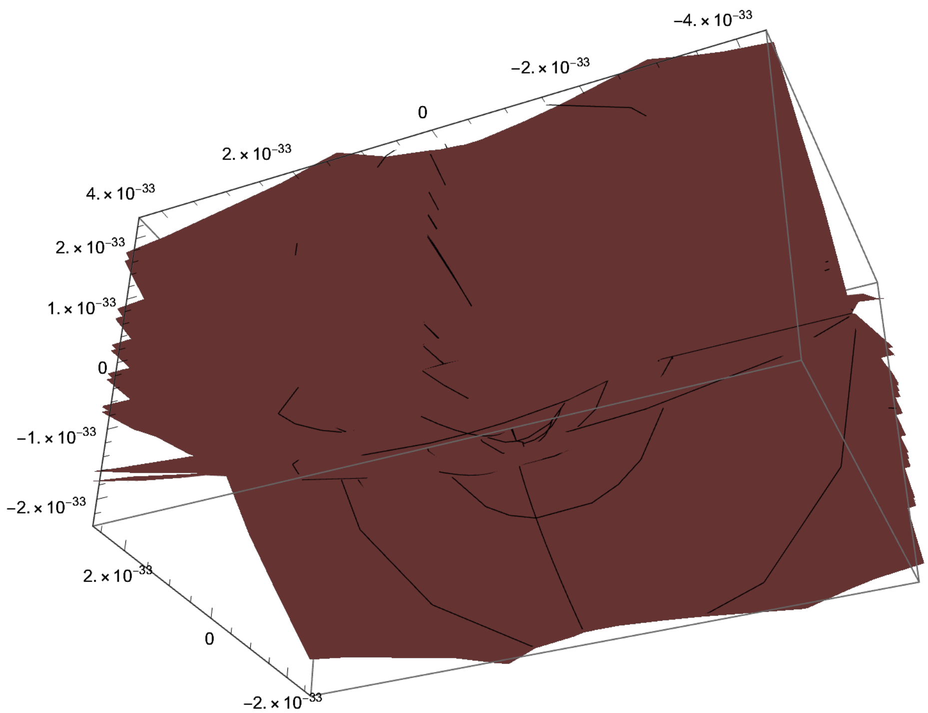
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4)}\right)^{1/3}+$$

$$42\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$5\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-36\,\pi^2\,\mathrm{Sin}[\beta]^4$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\sqrt{3}\,\pi^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-6\sqrt{3}\,\pi^2$$
$$\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.\left.\left.\left.\left.3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)^3\right)\right)^{1/3}\Big/$$
$$\left(27\times 2^{1/3}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}\right),$$

```
{β,
 -π /
  2,
 π /
  2}]
```

$$\mathtt{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{\theta}}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}\right)^2\right)}{2\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\pi-\theta}}\right)^2},\ \{\theta,-4\pi,4\pi\},\ \{\beta,-\pi,\pi\}\right]$$



α = GoldenRatio[ξ]

η = r Sin[β] = r2 Sin[ο] = r3 Sin[γ]

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\left(\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}\right)^2}}{2\,\pi} == r\,\text{Sin}[\beta],\ r\right]$$

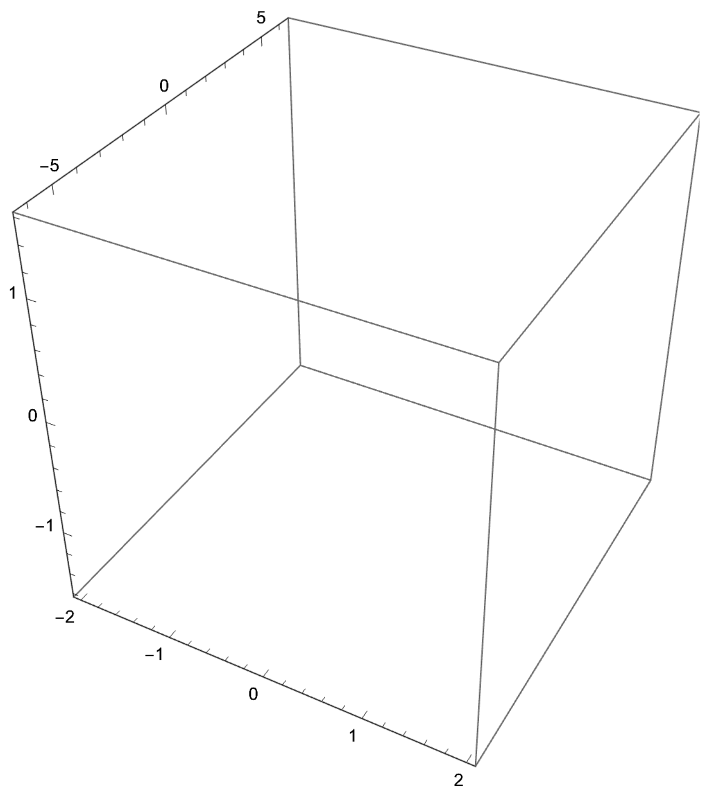
$$\left\{\left\{r \to -\sqrt{\left(-\frac{\pi\,\eta^2\,\theta}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{\pi^2\,\eta^2\,\text{Sin}[\beta]^2}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}-\frac{2\,\pi^{3/2}\,\sqrt{-\eta^4\left(-\theta+\pi\,\text{Sin}[\beta]^2\right)}}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}\right)}\right\},\right.$$

$$\left\{r \to \sqrt{\left(-\frac{\pi\,\eta^2\,\theta}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{\pi^2\,\eta^2\,\text{Sin}[\beta]^2}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}-\frac{2\,\pi^{3/2}\,\sqrt{-\eta^4\left(-\theta+\pi\,\text{Sin}[\beta]^2\right)}}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}\right)}\right\},$$

$$\left\{r \to -\sqrt{\left(-\frac{\pi\,\eta^2\,\theta}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{\pi^2\,\eta^2\,\text{Sin}[\beta]^2}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{2\,\sqrt{\pi^3\,\eta^4\,\theta-\pi^4\,\eta^4\,\text{Sin}[\beta]^2}}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}\right)}\right\},$$

$$\left.\left\{r \to \sqrt{\left(-\frac{\pi\,\eta^2\,\theta}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{\pi^2\,\eta^2\,\text{Sin}[\beta]^2}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{2\,\sqrt{\pi^3\,\eta^4\,\theta-\pi^4\,\eta^4\,\text{Sin}[\beta]^2}}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}\right)}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\sqrt{\left(-\frac{\pi\,\eta^2\,\theta}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{\pi^2\,\eta^2\,\text{Sin}[\beta]^2}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}+\frac{2\,\sqrt{\pi^3\,\eta^4\,\theta-\pi^4\,\eta^4\,\text{Sin}[\beta]^2}}{-4\,\pi\,\theta+\theta^2+4\,\pi^2\,\text{Sin}[\beta]^2-2\,\pi\,\theta\,\text{Sin}[\beta]^2+\pi^2\,\text{Sin}[\beta]^4}\right)},\ \{\eta,-2,2\},\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



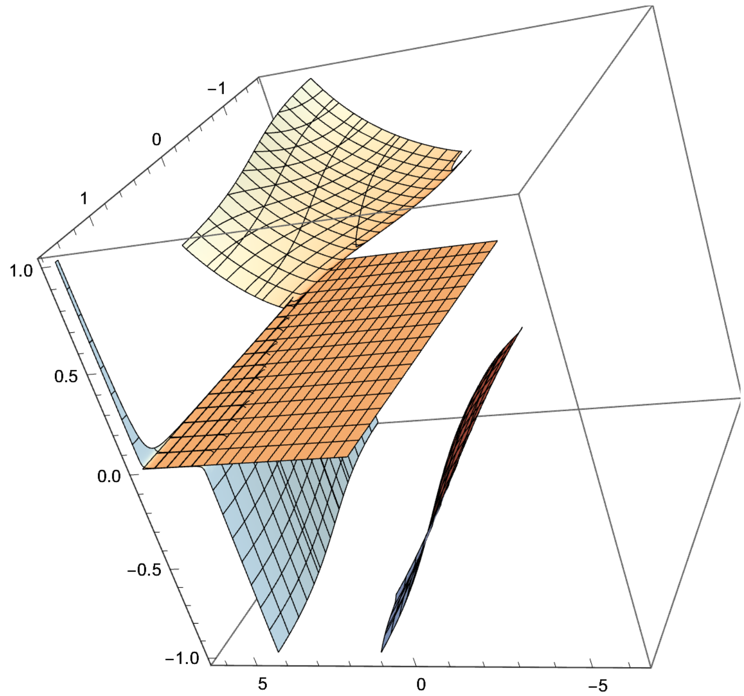
$\theta\,r = 2\,\pi\,r - 2\,\pi\,x$

$\theta\,r\ =\ 2\,\pi\,r\ -\ 2\,\pi\,x$

$$\text{Solve}\left[\theta\,r-(2\,\pi\,r-2\,\pi\,x) == \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-r\,\text{Sin}[\beta],\ x\right]$$

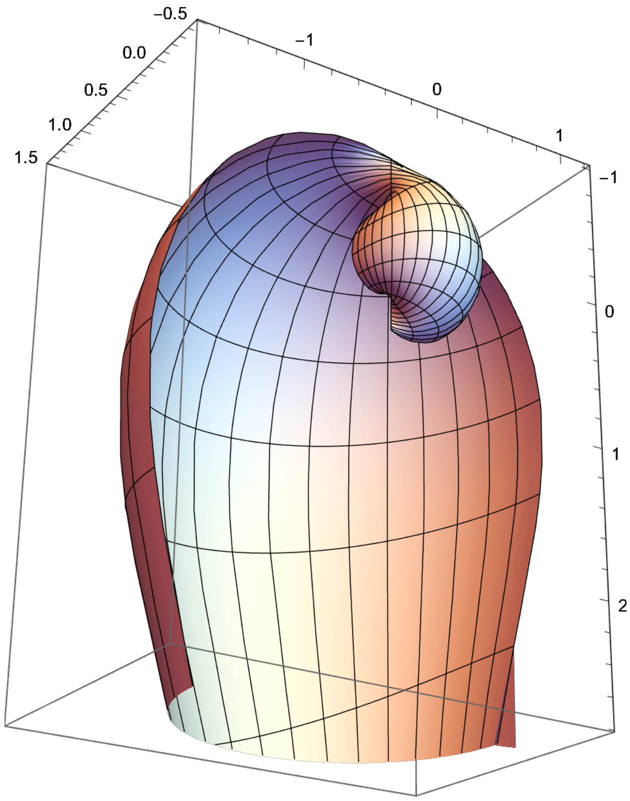
$$\left\{\left\{x\to\frac{4\,\pi^2\,r-2\,\pi\,r\,\theta+\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-2\,\pi\,r\,\text{Sin}[\beta]}{4\,\pi^2}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{4\,\pi^2\,r-2\,\pi\,r\,\theta+\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-2\,\pi\,r\,\text{Sin}[\beta]}{4\,\pi^2},\right.$$
$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{SphericalPlot3D}\left[\frac{4\,\pi^2\,r - 2\,\pi\,r\,\theta + \sqrt{r^2\,(4\,\pi - \theta)\,\theta} - 2\,\pi\,r\,\text{Sin}[\beta]}{4\,\pi^2},\right.$$
$$\left.\{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{Solve}\left[\frac{4\,\pi^2\,r - 2\,\pi\,r\,\theta + \sqrt{r^2\,(4\,\pi - \theta)\,\theta} - 2\,\pi\,r\,\text{Sin}[\beta]}{4\,\pi^2} == \frac{2\,\pi\,r - r\,\theta}{2\,\pi}, r\right]$$

$\{\{r \to 0\}\}$

$$\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$
\begin{aligned}
&\mathbf{Solve}\Big[\\
&\quad r == \Big(\sqrt{}\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)\big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-\right.\\
&\qquad\left.8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)\big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+\right.\\
&\qquad\left.80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)\big/\left(-1024\,\pi^7\,\theta^3+\right.\\
&\qquad\left.1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)\big/\\
&\qquad\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\\
&\qquad\left(128\,\pi^6\,\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)\right)\big/\\
&\qquad\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-\right.\\
&\qquad\left.32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\Big)\Big)\;\frac{\sqrt{4\,\pi\,\theta-\theta^2}}{2\,\pi\,\mathrm{Sin}[\beta]},\ \beta\Big]
\end{aligned}
$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$
\begin{aligned}
&\Big\{\Big\{\beta\to\mathrm{ArcCsc}\Big[\\
&\quad\Big(-64\,\pi^4\,r\,\eta^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{}\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+\right.\\
&\qquad\left.32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+\right.\\
&\qquad\left.512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\\
&\qquad\left(16\,\pi^4\,\eta^2\,\theta^6\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-\right.\\
&\qquad\left.24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)+\\
&\quad 80\,\pi^3\,r\,\eta^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{}\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+\right.\\
&\qquad\left.512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\\
&\qquad\left(128\,\pi^5\,\eta^2\,\theta^5\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+\right.\\
&\qquad\left.8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+\right.\\
&\qquad\left.32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)-\\
&\quad 32\,\pi^2\,r\,\eta^2\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{}\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+\right.\\
&\qquad\left.512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\\
&\qquad\left(128\,\pi^5\,\eta^2\,\theta^5\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+\right.\\
&\qquad\left.8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+\right.\\
&\qquad\left.32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\big/\\
&\qquad\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)+\\
&\quad 4\,\pi\,r\,\eta^2\,\theta^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{}\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-\right.\\
&\qquad\left.80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\big/
\end{aligned}
$$

$$\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)+$$

$$40\,\pi^2\,r\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\sqrt{\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)}+$$

$$34\,\pi\,r\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\sqrt{\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)}+$$

$$25\,r\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\sqrt{\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)\Big)}-$$

$$\Big(32\,768\,\pi^{10}\,r\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\sqrt{\Big(\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)+\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-24\,\pi^2\,\theta^8+8\,\pi\,\theta^9-\theta^{10}\right)-\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(1024\,\pi^7\,\theta^3-1280\,\pi^6\,\theta^4+512\,\pi^5\,\theta^5-80\,\pi^4\,\theta^6+32\,\pi^3\,\theta^7-$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 -$$

$$1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big)\Big)\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) +$$

$$\Big(16\,768\,\pi^6\,r\,\theta^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}$$

$$\surd\Big(\Big(\Big(256\,\pi^7\,\eta^2\,\theta^3\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(320\,\pi^6\,\eta^2\,\theta^4\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 +$$

$$512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) + \Big(128\,\pi^5\,\eta^2\,\theta^5\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$\Big(16\,\pi^4\,\eta^2\,\theta^6\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 -$$

$$1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big)\Big)\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$\Big(10\,592\,\pi^5\,r\,\theta^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}$$

$$\surd\Big(\Big(\Big(256\,\pi^7\,\eta^2\,\theta^3\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(320\,\pi^6\,\eta^2\,\theta^4\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 +$$

$$512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) + \Big(128\,\pi^5\,\eta^2\,\theta^5\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$\Big(16\,\pi^4\,\eta^2\,\theta^6\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 -$$

$$1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big)\Big)\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) +$$

$$\Big(1616\,\pi^4\,r\,\theta^8\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}$$

$$\surd\Big(\Big(\Big(256\,\pi^7\,\eta^2\,\theta^3\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(320\,\pi^6\,\eta^2\,\theta^4\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 +$$

$$512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) + \Big(128\,\pi^5\,\eta^2\,\theta^5\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$\Big(16\,\pi^4\,\eta^2\,\theta^6\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}\,\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 -$$

$$1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big)\Big)\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$\Big(272\,\pi^3\,r\,\theta^9\,\sqrt{(4\,\pi-\theta)\,\theta}\,\sqrt{\eta^4\,(2\,\pi-\theta)^2\,(4\,\pi-\theta)^3\,\theta^3}$$

$$\surd\Big(\Big(\Big(256\,\pi^7\,\eta^2\,\theta^3\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 -$$

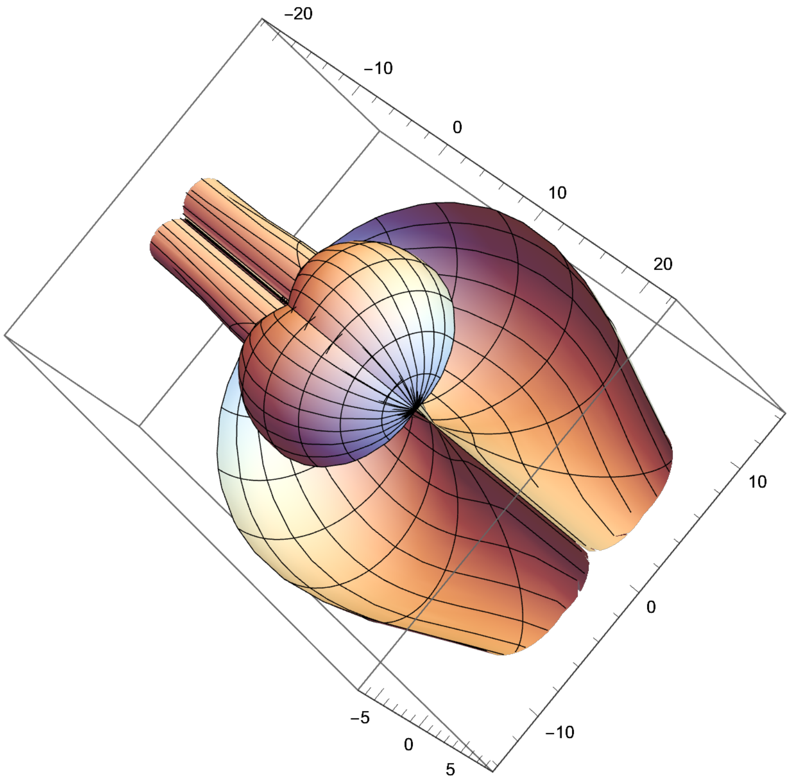
$$24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) - \Big(320\,\pi^6\,\eta^2\,\theta^4\Big) \Big/ \Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 +$$

$$512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) + \Big(128\,\pi^5\,\eta^2\,\theta^5\Big) \Big/$$

$$\Big(1024\,\pi^7\,\theta^3 - 1280\,\pi^6\,\theta^4 + 512\,\pi^5\,\theta^5 - 80\,\pi^4\,\theta^6 + 32\,\pi^3\,\theta^7 - 24\,\pi^2\,\theta^8 + 8\,\pi\,\theta^9 - \theta^{10}\Big) -$$

$$
\begin{aligned}
&\big(16\,\pi^4\,\eta^2\,\Theta^6\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3}\Big) \Big/ \big(1024\,\pi^7\,\Theta^3 - \\
&\quad 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big)\big)\big) \big/ \\
&\big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) + \\
&\Big(368\,\pi^2\,\mathrm{r}\,\Theta^{10}\,\sqrt{(4\,\pi - \Theta)\,\Theta}\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3} \\
&\quad \surd\Big(\big(\big(256\,\pi^7\,\eta^2\,\Theta^3\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \big(320\,\pi^6\,\eta^2\,\Theta^4\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + \\
&\quad 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) + \big(128\,\pi^5\,\eta^2\,\Theta^5\big) \big/ \\
&\quad \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \\
&\quad \big(16\,\pi^4\,\eta^2\,\Theta^6\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3}\Big) \Big/ \big(1024\,\pi^7\,\Theta^3 - \\
&\quad 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big)\big)\big) \big/ \\
&\big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \\
&\Big(166\,\pi\,\mathrm{r}\,\Theta^{11}\,\sqrt{(4\,\pi - \Theta)\,\Theta}\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3} \\
&\quad \surd\Big(\big(\big(256\,\pi^7\,\eta^2\,\Theta^3\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \big(320\,\pi^6\,\eta^2\,\Theta^4\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + \\
&\quad 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) + \big(128\,\pi^5\,\eta^2\,\Theta^5\big) \big/ \\
&\quad \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \\
&\quad \big(16\,\pi^4\,\eta^2\,\Theta^6\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3}\Big) \Big/ \big(1024\,\pi^7\,\Theta^3 - \\
&\quad 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big)\big)\big) \big/ \\
&\big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) + \\
&\Big(25\,\mathrm{r}\,\Theta^{12}\,\sqrt{(4\,\pi - \Theta)\,\Theta}\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3} \\
&\quad \surd\Big(\big(\big(256\,\pi^7\,\eta^2\,\Theta^3\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \big(320\,\pi^6\,\eta^2\,\Theta^4\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + \\
&\quad 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) + \big(128\,\pi^5\,\eta^2\,\Theta^5\big) \big/ \\
&\quad \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \\
&\quad \big(16\,\pi^4\,\eta^2\,\Theta^6\big) \big/ \big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - \\
&\quad 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big) - \Big(128\,\pi^6\,\sqrt{\eta^4\,(2\,\pi - \Theta)^2\,(4\,\pi - \Theta)^3\,\Theta^3}\Big) \Big/ \big(1024\,\pi^7\,\Theta^3 - \\
&\quad 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big)\big)\big) \big/ \\
&\big(1024\,\pi^7\,\Theta^3 - 1280\,\pi^6\,\Theta^4 + 512\,\pi^5\,\Theta^5 - 80\,\pi^4\,\Theta^6 + 32\,\pi^3\,\Theta^7 - 24\,\pi^2\,\Theta^8 + 8\,\pi\,\Theta^9 - \Theta^{10}\big)\big) \big/ \\
&\big(\pi^4\,\eta^4\,\big(2048\,\pi^3 - 1536\,\pi^2\,\Theta + 384\,\pi\,\Theta^2 - 32\,\Theta^3\big)\big)\big]\big\}\big\}
\end{aligned}
$$

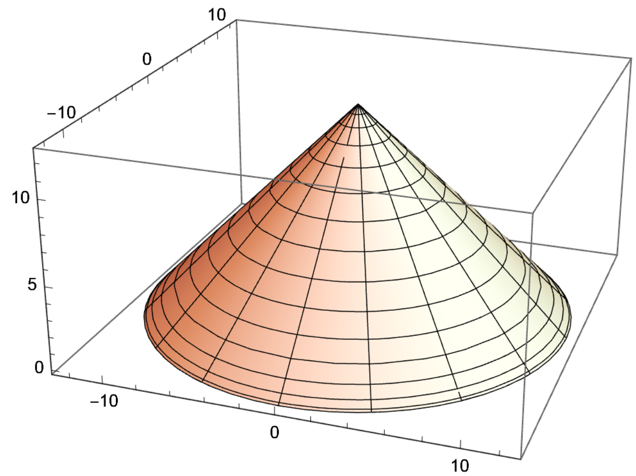
$$\text{SphericalPlot3D}\left[\left\{2\left(\pi-\sqrt{-\pi^2+\pi^2\,\text{Csc}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\,\text{Sin}[\beta]\right),\right.\right.$$
$$\left.\left.2\left(\pi+\sqrt{-\pi^2+\pi^2\,\text{Csc}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]^2}\,\text{Sin}[\beta]\right)\right\},\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



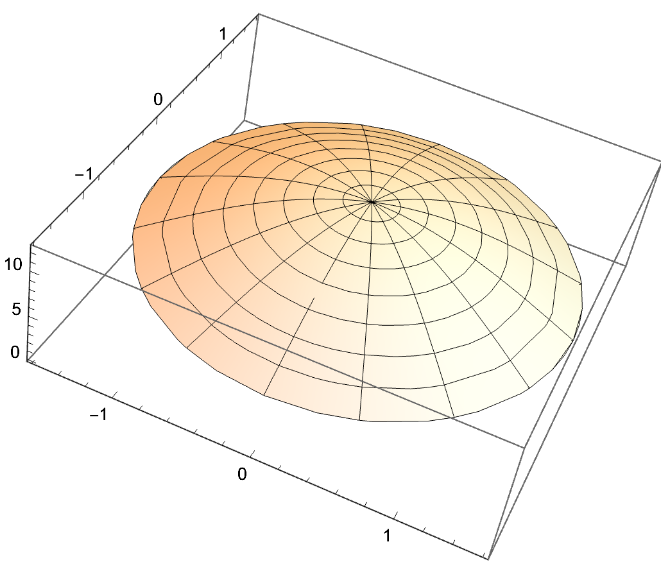
$$\text{Solve}\left[\frac{\sqrt{4\pi\theta-\theta^2}}{2\pi\,\text{Sin}[\beta]}==2\pi\,\frac{\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\theta\right]$$

$$\left\{\left\{\theta\to2\left(\pi-\sqrt{-\pi^2+\pi^2\,\text{Csc}[\beta]^2}\,\text{Sin}[\beta]\right)\right\},\left\{\theta\to2\left(\pi+\sqrt{-\pi^2+\pi^2\,\text{Csc}[\beta]^2}\,\text{Sin}[\beta]\right)\right\}\right\}$$

```
RevolutionPlot3D[
 {2 (π - Sqrt[-π^2 + π^2 Csc[β]^2] Sin[β]), 2 (π + Sqrt[-π^2 + π^2 Csc[β]^2] Sin[β])}, {β, -π / 2, π / 2}]
```




```
RevolutionPlot3D[2 (π + Sqrt[-π^2 + π^2 Csc[β]^2] Sin[β]), {β, -π / 2, π / 2}]
```



```
Solve[
 r == (√(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
            8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 +
           80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) - (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 +
           1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
         (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
        (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
         (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
           32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10))) (2 π Sin[β]) / √(4 π θ - θ^2), θ]
```

Solve::verif : Potential solution $\{\theta \to 4\,\pi\}$ (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

Solve::verif : Potential solution $\{\theta \to \text{ComplexInfinity}\}$ (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\{\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 1]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 2]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 3]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 4]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 5]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 6]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 7]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 8]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 9]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 10]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 11]\},$$

$$\{\theta \to \text{Root}[4096 \pi^{12} \eta^4 \text{Sin}[\beta]^4 + 512 \pi^8 r^2 \eta^2 \text{Sin}[\beta]^2 \#1^4 + (-1024 \pi^7 r^4 - 512 \pi^7 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^5 + (1280 \pi^6 r^4 + 128 \pi^6 r^2 \eta^2 \text{Sin}[\beta]^2) \#1^6 - 512 \pi^5 r^4 \#1^7 + 80 \pi^4 r^4 \#1^8 - 32 \pi^3 r^4 \#1^9 + 24 \pi^2 r^4 \#1^{10} - 8 \pi r^4 \#1^{11} + r^4 \#1^{12} \&, 12]\}\}$$

```
Solve[
 r == √(-(256 π^7 η^2 θ^3) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 -
          8 π θ^9 + θ^10) + (320 π^6 η^2 θ^4) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) -
     (128 π^5 η^2 θ^5) / (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 -
         32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) + (16 π^4 η^2 θ^6) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10) +
     (128 π^6 √(256 π^5 η^4 θ^3 - 448 π^4 η^4 θ^4 + 304 π^3 η^4 θ^5 - 100 π^2 η^4 θ^6 + 16 π η^4 θ^7 - η^4 θ^8)) /
      (-1024 π^7 θ^3 + 1280 π^6 θ^4 - 512 π^5 θ^5 + 80 π^4 θ^6 - 32 π^3 θ^7 + 24 π^2 θ^8 - 8 π θ^9 + θ^10)), θ]
```

$$\{\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,1]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,2]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,3]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,4]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,5]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,6]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,7]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,8]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,9]\},$$

$$\{\theta \to \text{Root}[4096\,\pi^{10}\,\eta^4 - 2048\,\pi^9\,\eta^4\,\sharp1 + 256\,\pi^8\,\eta^4\,\sharp1^2 + (-1024\,\pi^7\,r^4 + 512\,\pi^7\,r^2\,\eta^2)\,\sharp1^3 + (1280\,\pi^6\,r^4 - 640\,\pi^6\,r^2\,\eta^2)\,\sharp1^4 + (-512\,\pi^5\,r^4 + 256\,\pi^5\,r^2\,\eta^2)\,\sharp1^5 + (80\,\pi^4\,r^4 - 32\,\pi^4\,r^2\,\eta^2)\,\sharp1^6 - 32\,\pi^3\,r^4\,\sharp1^7 + 24\,\pi^2\,r^4\,\sharp1^8 - 8\,\pi\,r^4\,\sharp1^9 + r^4\,\sharp1^{10}\,\&,\,10]\}\}$$

$$\text{Solve}\left[\frac{2\,\pi\left(2\,\pi\,r - 2\,\pi\,\sqrt{r^2 - (r\,\text{Sin}[\beta])^2}\right)}{\theta^2} == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\right]$$

$$\text{Solve}\left[\frac{2\,\pi\left(2\,\pi\,r - 2\,\pi\,\sqrt{r^2 - (r\,\text{Sin}[\beta])^2}\right)}{\theta^2} == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\,\beta\right]$$

Solve::verif : Potential solution {$\beta \to$ ComplexInfinity} (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\sqrt{\left(\frac{4}{3}+\frac{2\times 2^{2/3}}{3\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{2\,i\,2^{2/3}}{\sqrt{3}\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{\left(-13+3\sqrt{33}\right)^{1/3}}{3\times 2^{2/3}}-\frac{i\left(-13+3\sqrt{33}\right)^{1/3}}{2^{2/3}\sqrt{3}}\right)}\right]\right\},\right.$$

$$\left\{\beta \to \text{ArcSin}\left[\sqrt{\left(\frac{4}{3}+\frac{2\times 2^{2/3}}{3\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{2\,i\,2^{2/3}}{\sqrt{3}\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{\left(-13+3\sqrt{33}\right)^{1/3}}{3\times 2^{2/3}}-\frac{i\left(-13+3\sqrt{33}\right)^{1/3}}{2^{2/3}\sqrt{3}}\right)}\right]\right\},$$

$$\left\{\beta \to -\text{ArcSin}\left[\sqrt{\left(\frac{4}{3}+\frac{2\times 2^{2/3}}{3\left(-13+3\sqrt{33}\right)^{1/3}}+\frac{2\,i\,2^{2/3}}{\sqrt{3}\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{\left(-13+3\sqrt{33}\right)^{1/3}}{3\times 2^{2/3}}+\frac{i\left(-13+3\sqrt{33}\right)^{1/3}}{2^{2/3}\sqrt{3}}\right)}\right]\right\},$$

$$\left\{\beta \to \text{ArcSin}\left[\sqrt{\left(\frac{4}{3}+\frac{2\times 2^{2/3}}{3\left(-13+3\sqrt{33}\right)^{1/3}}+\frac{2\,i\,2^{2/3}}{\sqrt{3}\left(-13+3\sqrt{33}\right)^{1/3}}-\frac{\left(-13+3\sqrt{33}\right)^{1/3}}{3\times 2^{2/3}}+\frac{i\left(-13+3\sqrt{33}\right)^{1/3}}{2^{2/3}\sqrt{3}}\right)}\right]\right\},$$

$$\left\{\beta \to -\text{ArcSin}\left[\frac{1}{\sqrt{\frac{3}{4-\frac{4\times 2^{2/3}}{\left(-13+3\sqrt{33}\right)^{1/3}}+\left(2\left(-13+3\sqrt{33}\right)\right)^{1/3}}}}\right]\right\},$$

$$\left\{\beta \to \text{ArcSin}\left[\frac{1}{\sqrt{\frac{3}{4-\frac{4\times 2^{2/3}}{\left(-13+3\sqrt{33}\right)^{1/3}}+\left(2\left(-13+3\sqrt{33}\right)\right)^{1/3}}}}\right]\right\},$$

$$\left\{\beta \to -\text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,1\right]}\right]\right\},$$

$$\left\{\beta \to \text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,1\right]}\right]\right\},$$

$$\left\{\beta \to -\text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,2\right]}\right]\right\},$$

$$\left\{\beta \to \text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,2\right]}\right]\right\},$$

$$\left\{\beta \to -\text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,3\right]}\right]\right\},$$

$$\left\{\beta \to \text{ArcSin}\left[\sqrt{\text{Root}\left[-64+160\,\#1-132\,\#1^2+40\,\#1^3-4\,\#1^4+\#1^5\,\&,3\right]}\right]\right\},$$

$\{\beta \to -\text{ArcSin}[\sqrt{\text{Root}[-64 + 160 \#1 - 132 \#1^2 + 40 \#1^3 - 4 \#1^4 + \#1^5 \&, 4]}]\}$,
$\{\beta \to \text{ArcSin}[\sqrt{\text{Root}[-64 + 160 \#1 - 132 \#1^2 + 40 \#1^3 - 4 \#1^4 + \#1^5 \&, 4]}]\}$,
$\{\beta \to -\text{ArcSin}[\sqrt{\text{Root}[-64 + 160 \#1 - 132 \#1^2 + 40 \#1^3 - 4 \#1^4 + \#1^5 \&, 5]}]\}$,
$\{\beta \to \text{ArcSin}[\sqrt{\text{Root}[-64 + 160 \#1 - 132 \#1^2 + 40 \#1^3 - 4 \#1^4 + \#1^5 \&, 5]}]\}\}$

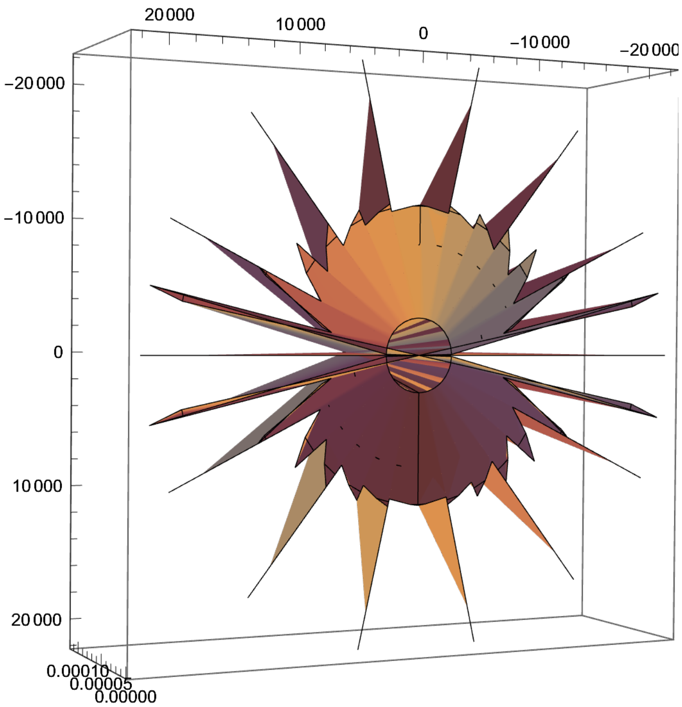
$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\Big[\Big(\sqrt{(-1.1294090667581471\text{`}*\hat{}18\ \theta + 8.987551787368176\text{`}*\hat{}16\ \theta^2 + 3.5481432270250993\text{`}*\hat{}18\ \text{Sin}[\beta]^2)}\Big) \Big/ \left(\sqrt{-12.566370614359172\text{`}\ \theta + \theta^2 + 39.47841760435743\text{`}\ \text{Sin}[\beta]^2}\right) == \frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2 - (\eta)^2}\right)}{\theta^2}, \eta\Big]$$

$$\Big\{\Big\{\eta \to -2.72115\times10^{-40}\sqrt{\left(-6.46917\times10^{80} - 7.1268\times10^{79}\,\theta + 2.05109\times10^{86}\,\theta^2 - 1.99702\times10^{77}\,\theta^3 - 7.78783\times10^{92}\,\theta^4 + \frac{2.55393\times10^{82}}{39.4784 - 12.5664\,\theta + \theta^2} - \frac{5.31585\times10^{81}\,\theta}{39.4784 - 12.5664\,\theta + \theta^2}\right)}\Big\},$$

$$\Big\{\eta \to 2.72115\times10^{-40}\sqrt{\left(-6.46917\times10^{80} - 7.1268\times10^{79}\,\theta + 2.05109\times10^{86}\,\theta^2 - 1.99702\times10^{77}\,\theta^3 - 7.78783\times10^{92}\,\theta^4 + \frac{2.55393\times10^{82}}{39.4784 - 12.5664\,\theta + \theta^2} - \frac{5.31585\times10^{81}\,\theta}{39.4784 - 12.5664\,\theta + \theta^2}\right)}\Big\}\Big\}$$

```
RevolutionPlot3D[
 2.721151924565645`*^-40 √(-6.469169321605211`*^80 - 7.126799553878162`*^79 θ +
    2.0510927872792508`*^86 θ^2 - 1.9970231960605707`*^77 θ^3 -
    7.787828037754042`*^92 θ^4 + 2.553925680316153`*^82 / (39.47841760435544` - 12.566370614359172` θ + θ^2) -
    5.315850236527997`*^81 θ / (39.47841760435544` - 12.566370614359172` θ + θ^2)), {θ, -200 000 000 π, 200 000 000 π}]
```




```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  2 π (2 π r - 2 π √(r^2 - (η)^2)) / θ^2, θ]
```

$\{\{\theta \to \text{Root}[-2.3660156990981718457587888744587 \times 10^{62} +$
$1.1830081875514010531471013760726 \times 10^{62}\ \eta^2 +$
$2.3660160371004628601123505349738 \times 10^{62} \sqrt{(0.99999971428573469387609329456 48 -}$
$1.0000000000000000000000000000000\ \eta^2) +$
$(7.5312618788903902008800864567887 \times 10^{61} - 3.7656320153399796902269758400894 \times$
$10^{61}\ \eta^2 - 7.5312629547850980273281510484872 \times 10^{61}$

$\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)\ \sharp 1 + \Big(-5.99318777872480393702412307318 81\times 10^{60} + 2.99659474553226803978470687857 05\times 10^{60}\,\eta^2 + 5.99318863489460892197262299716 56\times 10^{60}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)$

$\sharp 1^2 + 6.82196807661628346424506373681 41\times 10^{75}\ \sharp 1^4 - 2.17149988201729175895764163164 75\times 10^{75}\ \sharp 1^5 + 1.72802470073259751780570906334 59\times 10^{74}\ \sharp 1^6\ \&,\ 1\Big]\Big\},$

$\Big\{\theta \to \text{Root}\Big[-2.36601569909817184575878887445 87\times 10^{62} + 1.18300818755140105314710137607 26\times 10^{62}\,\eta^2 + 2.36601603710046286011235053497 38\times 10^{62}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)} + \Big(7.53126187889039020088008645678 87\times 10^{61} - 3.76563201533997969022697584008 94\times 10^{61}\,\eta^2 - 7.53126295478509802732815104848 72\times 10^{61}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)\ \sharp 1 + \Big(-5.99318777872480393702412307318 81\times 10^{60} + 2.99659474553226803978470687857 05\times 10^{60}\,\eta^2 + 5.99318863489460892197262299716 56\times 10^{60}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)$

$\sharp 1^2 + 6.82196807661628346424506373681 41\times 10^{75}\ \sharp 1^4 - 2.17149988201729175895764163164 75\times 10^{75}\ \sharp 1^5 + 1.72802470073259751780570906334 59\times 10^{74}\ \sharp 1^6\ \&,\ 2\Big]\Big\},$

$\Big\{\theta \to \text{Root}\Big[-2.36601569909817184575878887445 87\times 10^{62} + 1.18300818755140105314710137607 26\times 10^{62}\,\eta^2 + 2.36601603710046286011235053497 38\times 10^{62}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)} + \Big(7.53126187889039020088008645678 87\times 10^{61} - 3.76563201533997969022697584008 94\times 10^{61}\,\eta^2 - 7.53126295478509802732815104848 72\times 10^{61}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)\ \sharp 1 + \Big(-5.99318777872480393702412307318 81\times 10^{60} + 2.99659474553226803978470687857 05\times 10^{60}\,\eta^2 + 5.99318863489460892197262299716 56\times 10^{60}\sqrt{(0.99999971428573469387609329456448 - 1.000000000000000000000000000000\ \eta^2)}\Big)$

$\sharp 1^2 + 6.82196807661628346424506373681\,41 \times 10^{75}\, \sharp 1^4 -$
$2.17149988201729175895764163164\,75 \times 10^{75}\, \sharp 1^5 +$
$1.72802470073259751780570906334\,59 \times 10^{74}\, \sharp 1^6\ \&,\ 3\Big]\Big\}$,

$\Big\{\theta \to \text{Root}\Big[-2.3660156990981718457587888744587 \times 10^{62} +$
$1.1830081875514010531471013760726 \times 10^{62}\, \eta^2 +$
$2.3660160371004628601123505349738 \times 10^{62}$
$\sqrt{(0.99999971428573469387609329456\,48 -}$
$1.0000000000000000000000000000000\, \eta^2) +$
$\Big(7.5312618788903902008800864567887 \times 10^{61} - 3.7656320153399796902269758400894 \times$
$10^{61}\, \eta^2 - 7.5312629547850980273281510484872 \times 10^{61}$
$\sqrt{(0.99999971428573469387609329456\,48 - 1.0000000000000000000000000000000}$
$\eta^2)\Big)\, \sharp 1 + \Big(-5.9931877787248039370241230731881 \times 10^{60} +$
$2.9965947455322680397847068785705 \times 10^{60}\, \eta^2 +$
$5.9931886348946089219726229971656 \times 10^{60}$
$\sqrt{(0.99999971428573469387609329456\,48 -}$
$1.0000000000000000000000000000000\, \eta^2)\Big)$
$\sharp 1^2 + 6.8219680766162834642450637368141 \times 10^{75}\, \sharp 1^4 -$
$2.1714998820172917589576416316475 \times 10^{75}\, \sharp 1^5 +$
$1.7280247007325975178057090633459 \times 10^{74}\, \sharp 1^6\ \&,\ 4\Big]\Big\}$,

$\Big\{\theta \to \text{Root}\Big[-2.3660156990981718457587888744587 \times 10^{62} +$
$1.1830081875514010531471013760726 \times 10^{62}\, \eta^2 +$
$2.3660160371004628601123505349738 \times 10^{62}$
$\sqrt{(0.99999971428573469387609329456\,48 -}$
$1.0000000000000000000000000000000\, \eta^2) +$
$\Big(7.5312618788903902008800864567887 \times 10^{61} - 3.7656320153399796902269758400894 \times$
$10^{61}\, \eta^2 - 7.5312629547850980273281510484872 \times 10^{61}$
$\sqrt{(0.99999971428573469387609329456\,48 - 1.0000000000000000000000000000000}$
$\eta^2)\Big)\, \sharp 1 + \Big(-5.9931877787248039370241230731881 \times 10^{60} +$
$2.9965947455322680397847068785705 \times 10^{60}\, \eta^2 +$
$5.9931886348946089219726229971656 \times 10^{60}$
$\sqrt{(0.99999971428573469387609329456\,48 -}$
$1.0000000000000000000000000000000\, \eta^2)\Big)$
$\sharp 1^2 + 6.8219680766162834642450637368141 \times 10^{75}\, \sharp 1^4 -$
$2.1714998820172917589576416316475 \times 10^{75}\, \sharp 1^5 +$
$1.7280247007325975178057090633459 \times 10^{74}\, \sharp 1^6\ \&,\ 5\Big]\Big\}$,

$\Big\{\theta \to \text{Root}\Big[-2.3660156990981718457587888744587 \times 10^{62} +$
$1.1830081875514010531471013760726 \times 10^{62}\, \eta^2 +$

$2.36601603710046286011235053497 38 \times 10^{62}$
$\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)} + (7.53126187889039020088008645678 87 \times 10^{61} - 3.76563201533997969022697584008 94 \times 10^{61}\,\eta^2 - 7.53126295478509802732815104848 72 \times 10^{61}\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)})\,\sharp 1 + (-5.99318777872480393702412307318 81 \times 10^{60} + 2.99659474553226803978470687857 05 \times 10^{60}\,\eta^2 + 5.99318863489460892197262299716 56 \times 10^{60}\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)})$
$\sharp 1^2 + 6.82196807661628346424506373681 41 \times 10^{75}\,\sharp 1^4 - 2.17149988201729175895764163164 75 \times 10^{75}\,\sharp 1^5 + 1.72802470073259751780570906334 59 \times 10^{74}\,\sharp 1^6\,\&, 6]\}\}$

Solve[
$\left(\sqrt{\left(-1.1294090667581471`*^18 \times 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2}\right) == \frac{2\pi\left(2\pi r - 2\pi\sqrt{r^2 - (\eta)^2}\right)}{\theta^2}, \theta]$

$\{\{\theta \to \text{Root}[-8.62986200135796117168416096656 9 \times 10^{60} + 4.31493223351667343188874654862 81 \times 10^{60}\,\eta^2 + 8.62986323419556605677131620784 3 \times 10^{60}\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)} + (2.74697039143421128370743247723 67 \times 10^{60} - 1.37348558814153133478572574096 00 \times 10^{60}\,\eta^2 - 2.74697078385860897779643147073 57 \times 10^{60}\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)})\,\sharp 1 + (-2.18596958161916674440857083789 91 \times 10^{59} + 1.09298510309101906734580268506 34 \times 10^{59}\,\eta^2 + 2.18596989390058015877875822178 15 \times 10^{59}\sqrt{(0.99999971428573469387609329456 48 - 1.000000000000000000000000000000\,\eta^2)})$
$\sharp 1^2 - 2.48826199816787280789798837013 90 \times 10^{74}\,\sharp 1^4 + 6.30283844183463494599469552241 53 \times 10^{72}\,\sharp 1^6\,\&, 1]\},$

$\{\theta \to \text{Root}[-8.629862001357961171684160966569 \times 10^{60} +$
$4.3149322335166734318887465486281 \times 10^{60}\, \eta^2 +$
$8.629863234195566056771316207843 \times 10^{60} \sqrt{(0.9999997142857346938760932945648 -}$
$1.000000000000000000000000000000\, \eta^2)} +$
$(2.7469703914342112837074324772367 \times 10^{60} - 1.3734855881415313347857257409600 \times$
$10^{60}\, \eta^2 - 2.7469707838586089777964314707357 \times 10^{60}$
$\sqrt{(0.9999997142857346938760932945648 - 1.000000000000000000000000000000}$
$\eta^2)})\ \#1 + (-2.1859695816191667444085708378991 \times 10^{59} +$
$1.0929851030910190673458026850634 \times 10^{59}\, \eta^2 +$
$2.1859698939005801587787582217815 \times 10^{59}$
$\sqrt{(0.9999997142857346938760932945648 -}$
$1.000000000000000000000000000000\, \eta^2)})$
$\#1^2 - 2.4882619981678728078979883701390 \times 10^{74}\, \#1^4 +$
$6.3028384418346349459946955224153 \times 10^{72}\, \#1^6\ \&,\ 2]\},$

$\{\theta \to \text{Root}[-8.629862001357961171684160966569 \times 10^{60} +$
$4.3149322335166734318887465486281 \times 10^{60}\, \eta^2 +$
$8.629863234195566056771316207843 \times 10^{60}$
$\sqrt{(0.9999997142857346938760932945648 -}$
$1.000000000000000000000000000000\, \eta^2)} +$
$(2.7469703914342112837074324772367 \times 10^{60} - 1.3734855881415313347857257409600 \times$
$10^{60}\, \eta^2 - 2.7469707838586089777964314707357 \times 10^{60}$
$\sqrt{(0.9999997142857346938760932945648 - 1.000000000000000000000000000000}$
$\eta^2)})\ \#1 + (-2.1859695816191667444085708378991 \times 10^{59} +$
$1.0929851030910190673458026850634 \times 10^{59}\, \eta^2 +$
$2.1859698939005801587787582217815 \times 10^{59}$
$\sqrt{(0.9999997142857346938760932945648 -}$
$1.000000000000000000000000000000\, \eta^2)})$
$\#1^2 - 2.4882619981678728078979883701390 \times 10^{74}\, \#1^4 +$
$6.3028384418346349459946955224153 \times 10^{72}\, \#1^6\ \&,\ 3]\},$

$\{\theta \to \text{Root}[-8.629862001357961171684160966569 \times 10^{60} +$
$4.3149322335166734318887465486281 \times 10^{60}\, \eta^2 +$
$8.629863234195566056771316207843 \times 10^{60}$
$\sqrt{(0.9999997142857346938760932945648 -}$
$1.000000000000000000000000000000\, \eta^2)} +$
$(2.7469703914342112837074324772367 \times 10^{60} - 1.3734855881415313347857257409600 \times$
$10^{60}\, \eta^2 - 2.7469707838586089777964314707357 \times 10^{60}$
$\sqrt{(0.9999997142857346938760932945648 - 1.000000000000000000000000000000}$

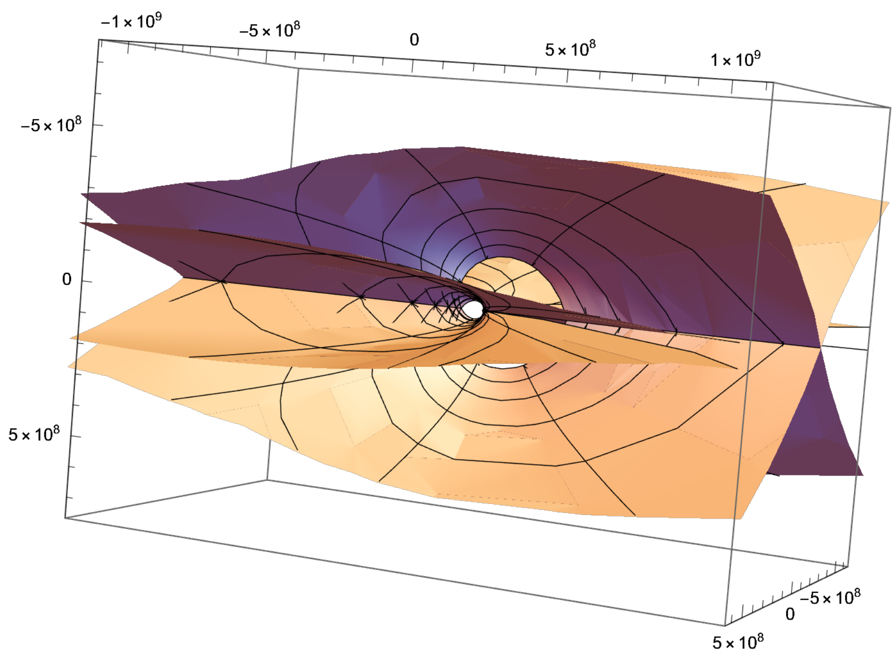
$\eta^2)\big)\ \sharp 1 + \big(-2.18596958161916674440857083789 91\times 10^{59} +$
$1.09298510309101906734580268506 34\times 10^{59}\,\eta^2 +$
$2.18596989390058015877875822178 15\times 10^{59}$
$\sqrt{(0.99999971428573469387609329456 48 -}$
$1.00000000000000000000000000000 00\,\eta^2)\big)$
$\sharp 1^2 - 2.48826199816787280789798837013 90\times 10^{74}\,\sharp 1^4 +$
$6.30283844183463494599469552241 53\times 10^{72}\,\sharp 1^6\ \&,\ 4\big]\big\}$,
$\big\{\theta \to \mathrm{Root}\big[-8.62986200135796117168416096656 9\times 10^{60} +$
$4.31493223351667343188874654862 81\times 10^{60}\,\eta^2 +$
$8.62986323419556605677131620784 3\times 10^{60}$
$\sqrt{(0.99999971428573469387609329456 48 -}$
$1.00000000000000000000000000000 00\,\eta^2) +$
$\big(2.74697039143421128370743247723 67\times 10^{60} - 1.37348558814153133478572574096 00\times$
$10^{60}\,\eta^2 - 2.74697078385860897779643147073 57\times 10^{60}$
$\sqrt{(0.99999971428573469387609329456 48 - 1.00000000000000000000000000000 00}$
$\eta^2)\big)\ \sharp 1 + \big(-2.18596958161916674440857083789 91\times 10^{59} +$
$1.09298510309101906734580268506 34\times 10^{59}\,\eta^2 +$
$2.18596989390058015877875822178 15\times 10^{59}$
$\sqrt{(0.99999971428573469387609329456 48 -}$
$1.00000000000000000000000000000 00\,\eta^2)\big)$
$\sharp 1^2 - 2.48826199816787280789798837013 90\times 10^{74}\,\sharp 1^4 +$
$6.30283844183463494599469552241 53\times 10^{72}\,\sharp 1^6\ \&,\ 5\big]\big\}$,
$\big\{\theta \to \mathrm{Root}\big[-8.62986200135796117168416096656 9\times 10^{60} +$
$4.31493223351667343188874654862 81\times 10^{60}\,\eta^2 +$
$8.62986323419556605677131620784 3\times 10^{60}$
$\sqrt{(0.99999971428573469387609329456 48 -}$
$1.00000000000000000000000000000 00\,\eta^2) +$
$\big(2.74697039143421128370743247723 67\times 10^{60} - 1.37348558814153133478572574096 00\times$
$10^{60}\,\eta^2 - 2.74697078385860897779643147073 57\times 10^{60}$
$\sqrt{(0.99999971428573469387609329456 48 - 1.00000000000000000000000000000 00}$
$\eta^2)\big)\ \sharp 1 + \big(-2.18596958161916674440857083789 91\times 10^{59} +$
$1.09298510309101906734580268506 34\times 10^{59}\,\eta^2 +$
$2.18596989390058015877875822178 15\times 10^{59}$
$\sqrt{(0.99999971428573469387609329456 48 -}$
$1.00000000000000000000000000000 00\,\eta^2)\big)$
$\sharp 1^2 - 2.48826199816787280789798837013 90\times 10^{74}\,\sharp 1^4 +$

$6.30283844183463494599469552241\,53 \times 10^{72}\, \#1^6\, \&,\ 6\big]\big\}\big\}$

```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (2 π (2 π r - 2 π √(r^2 - (r Sin[β])^2)))/θ^2, r]
```

$\{\{r \to 5.28956 \times 10^{-16} \operatorname{Csc}[\beta]^2 (1.43563 \times 10^{22} \theta^2 - 1.43563 \times 10^{22} \theta^2 \sqrt{1. - 1. \operatorname{Sin}[\beta]^2})\},$
$\{r \to 5.28956 \times 10^{-16} \operatorname{Csc}[\beta]^2 (1.43563 \times 10^{22} \theta^2 + 1.43563 \times 10^{22} \theta^2 \sqrt{1. - 1. \operatorname{Sin}[\beta]^2})\}\}$

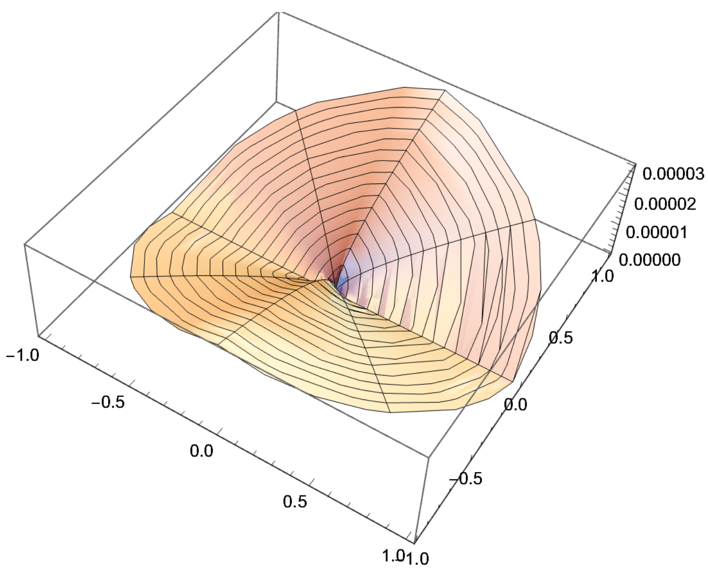
```
SphericalPlot3D[5.289560600043053`*^-16 Csc[β]^2
  (1.4356261790137446`*^22 θ^2 + 1.4356261790137446`*^22 θ^2 √(1.` - 1.` Sin[β]^2)),
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  2 π (2 π r - 2 π √(r^2 - (r Sin[β])^2)) / θ^2, θ]
```

$$\left\{\left\{\theta \to -6.54458\times 10^{-8}\sqrt{3.07451\times 10^{7}\, r - 3.07451\times 10^{7}\sqrt{1.\ r^2 + 0.\ r^2 \mathrm{Sin}[\beta] - 1.\ r^2 \mathrm{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{\theta \to 6.54458\times 10^{-8}\sqrt{3.07451\times 10^{7}\, r - 3.07451\times 10^{7}\sqrt{1.\ r^2 + 0.\ r^2 \mathrm{Sin}[\beta] - 1.\ r^2 \mathrm{Sin}[\beta]^2}}\right\}\right\}$$

```
RevolutionPlot3D[
 .54458 × 10^-8 √(3.074505`*^7 r - 3.074505`*^7 √(1.` r^2 + 0.` r^2 Sin[β] - 1.` r^2 Sin[β]^2)),
 {r, -1, 1}, {β, -2 π, 2 π}]
```




```
RevolutionPlot3D[
 .54458 × 10^-8 √(3.074505`*^7 r - 3.074505`*^7 √(1.` r^2 + 0.` r^2 Sin[β] - 1.` r^2 Sin[β]^2)),
 {r, -1, 1}, {β, -2 π, 2 π}]
```

$$\text{Solve}\Big[5.289560600043053`*^{\wedge}-16\,\text{Csc}[\beta]^2\left(1.4356261790137446`*^{\wedge}22\,\theta^2+1.4356261790137446`*^{\wedge}22\,\theta^2\sqrt{1.`-1.`\,\text{Sin}[\beta]^2}\right)==\sqrt{}\Big(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(128\,\pi^6\sqrt{}\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)\right)\Big/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\Big),\Big]$$

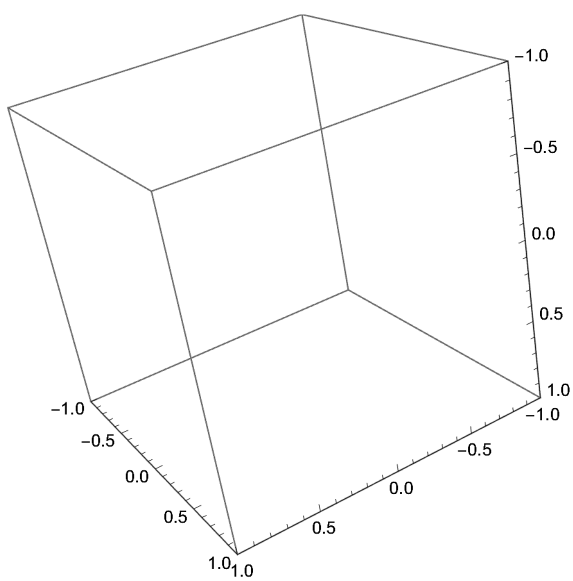
$$\text{Solve}\left[\left(2\,\pi\,r-r\,\theta-2\,\pi\sqrt{r^2-\frac{4\,\pi\,r^2\,\theta-r^2\,\theta^2}{4\,\pi^2}}\right)==\left(2\,\pi\,r-r\,\theta-2\,\pi\sqrt{r^2-\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}}\right),v\right]$$

{}

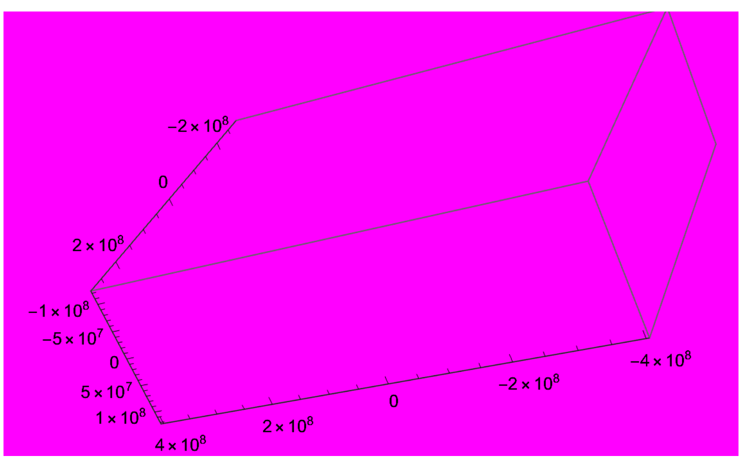
$$r:=\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

In[∘]:=
```
SphericalPlot3D[{-(1.` √(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 ×
      2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.691706869652085`*^34 r^2 θ -
      1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
       9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 6.124123459454841`*^15 r^2 θ^3)),
  (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 × 2 (π + √(π^2 - π^2 Sin[β]^2)) +
       8.691706869652085`*^34 r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 +
       5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
       9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
       6.124123459454841`*^15 r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3))},
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle →
  Opacity[.75]]
```

Out[∘]=



```
SphericalPlot3D[{-(1.` √(-2.7305802448854928`*^35 +
      2.1729267174130213`*^34 × 2 (π + √(π^2 - π^2 Sin[β]^2)) +
      8.691706869652085`*^34 r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 +
      5.504087674408674`*^32 r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3))/
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 6.124123459454841`*^15 r^2 θ^3)),
  (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 × 2 (π + √(π^2 - π^2 Sin[β]^2)) +
      8.691706869652085`*^34 r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 +
      5.504087674408674`*^32 r^2 θ^3))/
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
      6.124123459454841`*^15 r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3))},
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle →
  Opacity[.75]]
```



```
SphericalPlot3D[{-(1.` √(-2.7305802448854928`*^35 +
      2.1729267174130213`*^34 × 2 (π + √(π^2 - π^2 Sin[β]^2)) +
      8.691706869652085`*^34 r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 +
      5.504087674408674`*^32 r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 6.124123459454841`*^15 r^2 θ^3)),
  (√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 × 2 (π + √(π^2 - π^2 Sin[β]^2)) +
      8.691706869652085`*^34 r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 +
      5.504087674408674`*^32 r^2 θ^3)) /
   (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
      6.124123459454841`*^15 r^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3))},
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle →
  Opacity[.75]]
```

$$\text{Solve}\left[\frac{(\theta r - (2\pi r - 2\pi x))}{(\theta r - (2\pi r - 2\pi x))} == \frac{\frac{r\theta}{\pi(r-x)}\pi \,\text{Sin}[\beta]}{\sqrt[\frac{r\theta}{\pi(r-x)}]{\frac{r\theta}{\pi(r-x)}\frac{r\theta}{\pi(r-x)}\pi\theta - \theta^2}}, \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

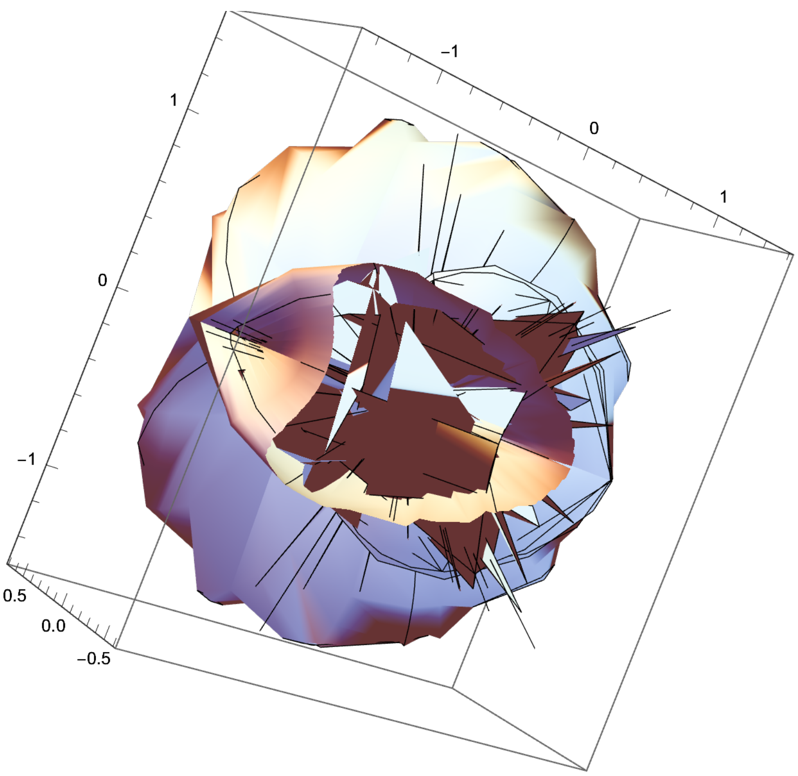
$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\left(1-\frac{x}{r}\right)\left(-\theta^2+\frac{r^2\theta^3}{\pi(r-x)^2}\right)^{\frac{\pi(r-x)}{r\theta}}}{\theta}\right]\right\}\right\}$$

(θ r - (2 π r - 2 π x))

$$x := \frac{2\pi r - r\theta}{2\pi}$$

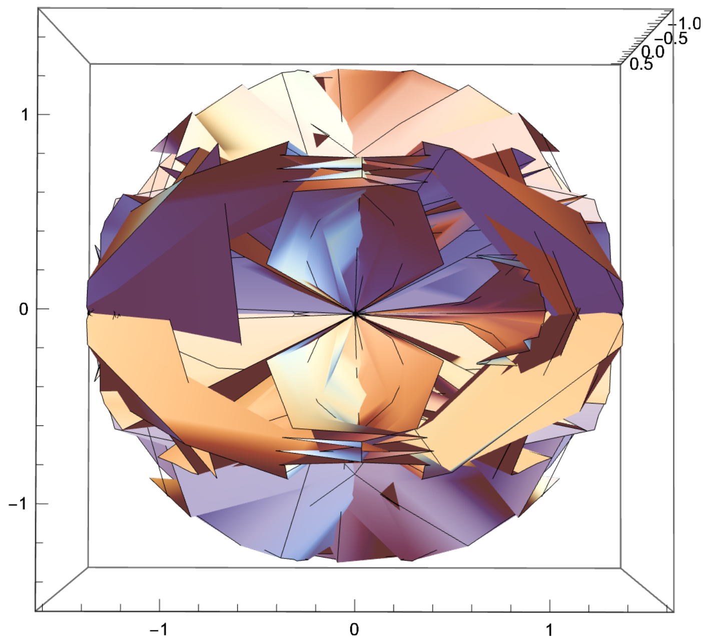
$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\left(1-\frac{x}{r}\right)\left(-\theta^2+\frac{r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^3}{\pi\,(r-x)^2}\right)^{\frac{\pi\,(r-x)}{r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right],\right.$$

$$\left.\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$

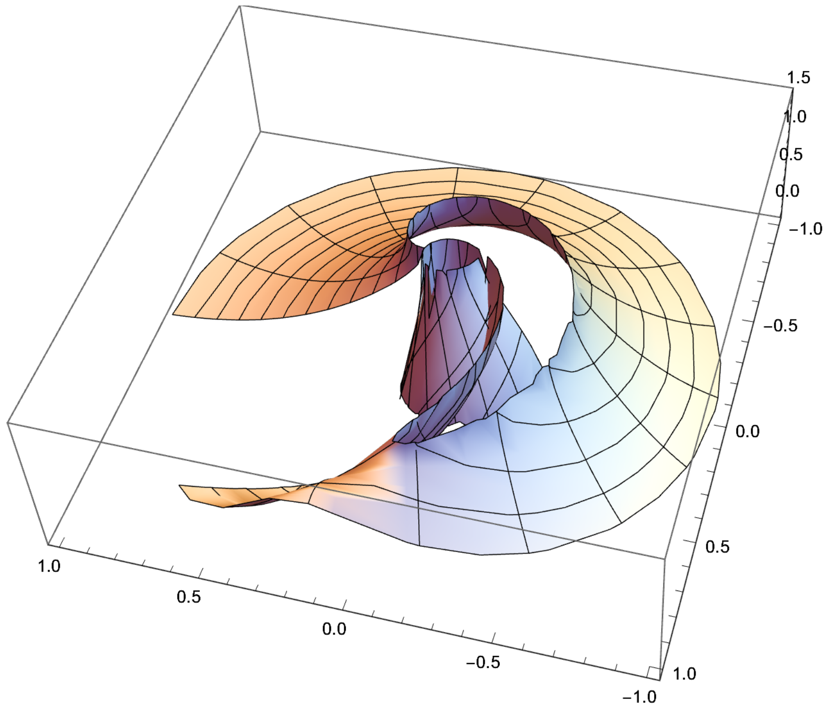


$$\text{SphericalPlot3D}\left[\text{ArcSin}\left[\frac{\left(1-\frac{x}{r}\right)\left(-\theta^2+\frac{r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^3}{\pi\,(r-x)^2}\right)^{\frac{\pi\,(r-x)}{r\,\theta}}}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right],\right.$$

$$\left.\{\theta, -4\,\pi, 4\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\frac{\left(1-\frac{x}{r}\right)\left(-\theta^2+\frac{r^2\,\theta^3}{\pi\,(r-x)^2}\right)^{\frac{\pi\,(r-x)}{r\,\theta}}}{\theta}\right],\ \{x,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{Solve}\left[\frac{1}{4\,\pi^2}\left(\sqrt{\left(64\,\pi^4\,r^2-\frac{256\,\pi^5\,r^2}{4\,\pi-\theta}+16\,\pi^3\,r^2\,\theta+4\,\pi^2\,r^2\,\theta^2+r^2\,\theta^4+16\,\pi^3\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-\frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+8\,\pi^2\,r\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\right)}\right)==\frac{\sqrt{4\,\pi\,r^2\,\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}-r^2\,\theta^2}}{2\,\pi},\ r\right]$$

{{r → 0}}

$$\text{Solve}\left[r\,\text{Sin}[\beta]==\frac{2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}}{\sqrt{4\,\pi\,\theta-\theta^2}},\ r\right]$$

{{r → 0}}

$$\text{Solve}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta} == \frac{2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\sqrt{4\pi\theta-\theta^2}},\ r\right]$$

$$\left\{\left\{r\to -\frac{2\pi}{\sqrt{4\pi\theta-\theta^2}}\right\},\ \left\{r\to \frac{2\pi}{\sqrt{4\pi\theta-\theta^2}}\right\}\right\}$$

$$\frac{2\pi}{\sqrt{4\pi\theta-\theta^2}}$$

$$\text{Solve}\left[r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right] == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ \theta\right]$$

$$\{\{\theta\to 0\},\ \{\theta\to 3\pi\}\}$$

$$\text{Solve}\left[r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\right]\right] == \frac{1}{2\pi}\left(\sqrt{\left(4\pi r^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-r^2\theta^2\right)}\right),\ \theta\right]$$

Solve::verif : Potential solution $\{\theta\to\text{ComplexInfinity}\}$ (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\left\{\left\{\theta\to\frac{1}{81+180\,\text{Sin}[\beta]^2}\left(144\pi+672\pi\,\text{Sin}[\beta]^2-\right.\right.\right.$$

$$\frac{56\pi^6}{\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}}+$$

$$\frac{504\pi^6\,\text{Sin}[\beta]^2}{\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}}-$$

$$\frac{1512\pi^6\,\text{Sin}[\beta]^4}{\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}}+$$

$$\frac{1512\pi^6\,\text{Sin}[\beta]^6}{\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}}+$$

$$\frac{16\pi^5}{\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{4/3}}-$$

$$\frac{144\,\pi^5\,\mathrm{Sin}[\beta]^2}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{4/3}}+$$

$$\frac{432\,\pi^5\,\mathrm{Sin}[\beta]^4}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{4/3}}-$$

$$\frac{432\,\pi^5\,\mathrm{Sin}[\beta]^6}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{4/3}}-$$

$$\frac{128\,\pi^3}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}}+$$

$$\frac{2112\,\pi^3\,\mathrm{Sin}[\beta]^2}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}}-$$

$$\frac{144\,\pi^3\,\mathrm{Sin}[\beta]^4}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}}+$$

$$\frac{88\,\pi^2}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}}-$$

$$\left.\frac{744\,\pi^2\,\mathrm{Sin}[\beta]^2}{\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}}\right)\Big\}\Big\}$$

$$\mathrm{Solve}\left[\frac{\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\mathrm{Abs}[z]}{2\,\pi}==\mathrm{Abs}[z]\,\mathrm{Sin}[\beta],\,\theta\right]$$

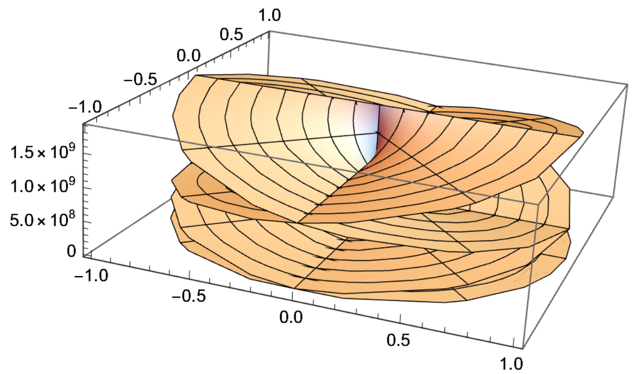
$$\left\{\left\{\theta\to 2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right\},\,\left\{\theta\to 2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\mathrm{Solve}\left[\frac{2\,\pi\,\left(2\,\pi\,r-2\,\pi\,\sqrt{r^2-\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}\right)}{\theta^2}==\right.$$
$$\Big(\sqrt{}\,\big(-2.7305802448854928`*^{\wedge}35+2.1729267174130213`*^{\wedge}34\,\theta+8.691706869652085`*^{\wedge}34\,r^2\,\theta-1.3833281122109134`*^{\wedge}34\,r^2\,\theta^2+5.504087674408674`*^{\wedge}32\,r^2\,\theta^3\big)\Big)\Big/$$
$$\left.\Big(\sqrt{}\,\big(-3.038180262530747`*^{\wedge}18+2.4177070339300032`*^{\wedge}17\,\theta+9.670828135720014`*^{\wedge}17\,r^2\,\theta-1.5391601015920192`*^{\wedge}17\,r^2\,\theta^2+6.124123459454841`*^{\wedge}15\,r^2\,\theta^3\big)\Big),\right]$$

$$\{\{\}\}$$

```
(√(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
     r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
 (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ + 9.670828135720014`*^17
     r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 + 6.124123459454841`*^15 r^2 θ^3))
```

```
RevolutionPlot3D[(0.15915494309189535` θ^2
    √(-2.7305802448854928`*^35 + 2.1729267174130213`*^34 θ + 8.691706869652085`*^34
       r^2 θ - 1.3833281122109134`*^34 r^2 θ^2 + 5.504087674408674`*^32 r^2 θ^3)) /
  (√(-3.038180262530747`*^18 + 2.4177070339300032`*^17 θ +
      9.670828135720014`*^17 r^2 θ - 1.5391601015920192`*^17 r^2 θ^2 +
      6.124123459454841`*^15 r^2 θ^3)), {r, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[(2\pi r - r\theta - 2\pi x)\,\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} ==\right.$$

$$\left(2\pi r - r\theta - 2\pi\sqrt{r^2-\left(\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi}\right)^2}\right)$$

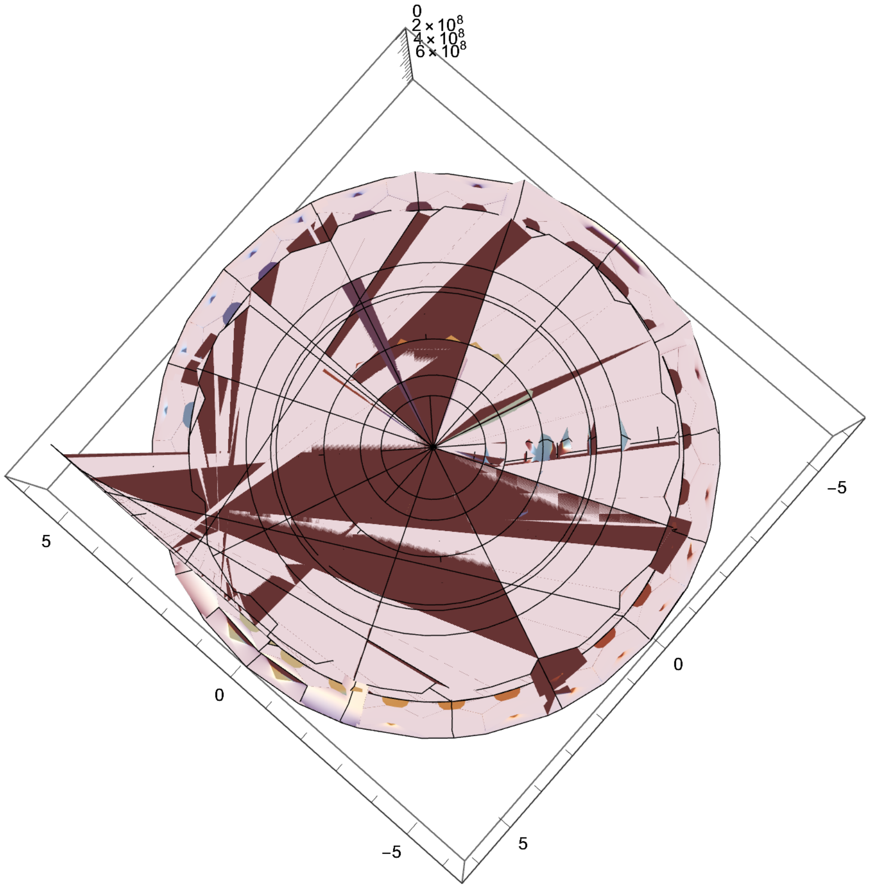
$$\left.\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi}, v\right]$$

$$\left\{\left\{v\to-\left(1.\sqrt{\left(-3.69325\times10^{35}\,r^2+3.69325\times10^{35}\,x^2+1.4695\times10^{35}\,r^2\,\theta-2.939\times10^{34}\,x^2\,\theta-1.87102\times10^{34}\,r^2\,\theta^2+7.44457\times10^{32}\,r^2\,\theta^3\right)}\right)\Big/\left(\sqrt{\left(-4.1093\times10^{18}\,r^2+4.1093\times10^{18}\,x^2+1.63504\times10^{18}\,r^2\,\theta-3.27008\times10^{17}\,x^2\,\theta-2.08179\times10^{17}\,r^2\,\theta^2+8.2832\times10^{15}\,r^2\,\theta^3\right)}\right)\right\},\right.$$

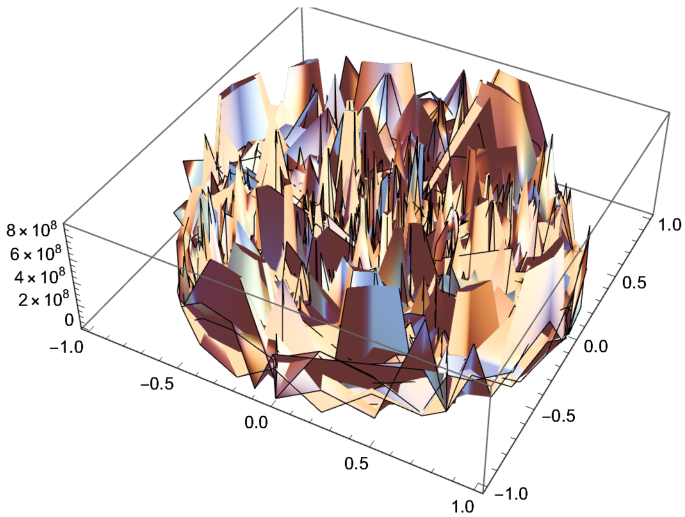
$$\left.\left\{v\to\left(\sqrt{\left(-3.69325\times10^{35}\,r^2+3.69325\times10^{35}\,x^2+1.4695\times10^{35}\,r^2\,\theta-2.939\times10^{34}\,x^2\,\theta-1.87102\times10^{34}\,r^2\,\theta^2+7.44457\times10^{32}\,r^2\,\theta^3\right)}\right)\Big/\left(\sqrt{\left(-4.1093\times10^{18}\,r^2+4.1093\times10^{18}\,x^2+1.63504\times10^{18}\,r^2\,\theta-3.27008\times10^{17}\,x^2\,\theta-2.08179\times10^{17}\,r^2\,\theta^2+8.2832\times10^{15}\,r^2\,\theta^3\right)}\right)\right\}\right\}$$

$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

```
RevolutionPlot3D[(√(-3.693252418944806`*^35 r² + 3.693252418944806`*^35 x² +
      1.4694984464029137`*^35 r² θ - 2.938996892805827`*^34 x² θ -
      1.8710235328870747`*^34 r² θ² + 7.444566097505983`*^32 r² θ³)) /
  (√(-4.109297510959101`*^18 r² + 4.1092975109591004`*^18 x² +
      1.6350375287609073`*^18 r² θ - 3.270075057521814`*^17 x² θ -
      2.081794438744443`*^17 r² θ² + 8.2831968856849`*^15 r² θ³)), {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[
 (√(-3.693252418944806`*^35 r^2 + 3.693252418944806`*^35 x^2 + 1.4694984464029137`*^35
      r^2 θ - 2.938996892805827`*^34 x^2 θ - 1.8710235328870747`*^34 r^2 θ^2 +
     7.444566097505983`*^32 r^2 θ^3)) / (√(-4.109297510959101`*^18 r^2 +
     4.1092975109591004`*^18 x^2 + 1.6350375287609073`*^18 r^2 θ -
     3.270075057521814`*^17 x^2 θ - 2.081794438744443`*^17 r^2 θ^2 +
     8.2831968856849`*^15 r^2 θ^3)), {r, -1, 1}, {θ, -2 π, 2 π}]
```



$$x := \frac{2\pi r - r\theta}{2\pi}$$

$$\text{Solve}\left[\left(2\pi r - r\theta - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\right) == \left(2\pi r - r\theta - 2\pi\sqrt{r^2 - \left(\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\theta}}}{2\pi}\right)^2}\right), v\right]$$

{{}}

$$c := 2.99792458\,(10^8)$$

$$\text{Solve}\left[\left(2\pi r - r\theta - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\right) == \left(2\pi r - r\theta - 2\pi\sqrt{r^2 - \frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\theta}}{2\pi}}\right), v\right]$$

$$\Big\{\Big\{v \to -\Big(1.\sqrt{\left(-2.73058\times10^{35} + 2.17293\times10^{34}\,\theta + 8.69171\times10^{34}\,r^2\,\theta - 1.38333\times10^{34}\,r^2\,\theta^2 + 5.50409\times10^{32}\,r^2\,\theta^3\right)}\Big) \Big/ \Big(\sqrt{\left(-3.03818\times10^{18} + 2.41771\times10^{17}\,\theta + 9.67083\times10^{17}\,r^2\,\theta - 1.53916\times10^{17}\,r^2\,\theta^2 + 6.12412\times10^{15}\,r^2\,\theta^3\right)}\Big)\Big\},$$

$$\Big\{v \to \Big(\sqrt{\left(-2.73058\times10^{35} + 2.17293\times10^{34}\,\theta + 8.69171\times10^{34}\,r^2\,\theta - 1.38333\times10^{34}\,r^2\,\theta^2 + 5.50409\times10^{32}\,r^2\,\theta^3\right)}\Big) \Big/ \Big(\sqrt{\left(-3.03818\times10^{18} + 2.41771\times10^{17}\,\theta + 9.67083\times10^{17}\,r^2\,\theta - 1.53916\times10^{17}\,r^2\,\theta^2 + 6.12412\times10^{15}\,r^2\,\theta^3\right)}\Big)\Big\}\Big\}$$

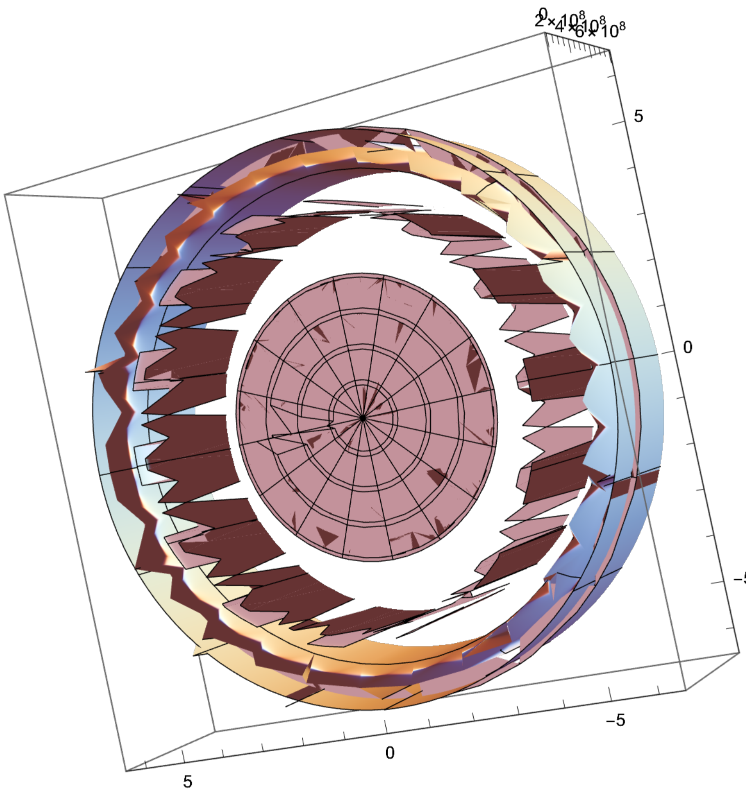
```
c := 2.99792458`*^8
```

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==\frac{r\sqrt{\pi^2-\text{ArcCos}\left[\frac{\sqrt{1+2\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+2\,i\,\text{Sin}[\theta]+2\,i\,\text{Cos}[\theta]\,\text{Sin}[\theta]-\text{Sin}[\theta]^2}}{\sqrt{4\,\text{Cos}[\theta]+4\,i\,\text{Sin}[\theta]}}\right]^2}}{\pi},v\right]$$

$$\Big\{\Big\{v\to -\Big(1.\sqrt{\Big(3.54814\times10^{18}-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2-3.59502\times10^{17}\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.+2.\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+(0.+2.\,i)\,\text{Sin}[\theta]+(0.+2.\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta]-1.\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\,\text{Cos}[\theta]+(0.+4.\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big/\Big(\sqrt{\Big(39.4784-12.5664\,\theta+1.\,\theta^2-4.\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.+2.\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+(0.+2.\,i)\,\text{Sin}[\theta]+(0.+2.\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta]-1.\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\,\text{Cos}[\theta]+(0.+4.\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big)\Big\},$$

$$\Big\{v\to\Big(\sqrt{\Big(3.54814\times10^{18}-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2-3.59502\times10^{17}\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.+2.\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+(0.+2.\,i)\,\text{Sin}[\theta]+(0.+2.\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta]-1.\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\,\text{Cos}[\theta]+(0.+4.\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big)\Big/\Big(\sqrt{\Big(39.4784-12.5664\,\theta+1.\,\theta^2-4.\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.+2.\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+(0.+2.\,i)\,\text{Sin}[\theta]+(0.+2.\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta]-1.\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\,\text{Cos}[\theta]+(0.+4.\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big)\Big\}\Big\}$$

```
RevolutionPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 -
      3.5950207149472704`*^17
       ArcCos[(√(1.`+ 2.` Cos[θ] + Cos[θ]^2 + (0.`+ 2.` ⅈ) Sin[θ] + (0.`+ 2.` ⅈ) Cos[θ]
              Sin[θ] - 1.` Sin[θ]^2)) / (√(4.` Cos[θ] + (0.`+ 4.` ⅈ) Sin[θ]))]^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2 -
      4.` ArcCos[(√(1.`+ 2.` Cos[θ] + Cos[θ]^2 + (0.`+ 2.` ⅈ)
              Sin[θ] + (0.`+ 2.` ⅈ) Cos[θ] Sin[θ] - 1.` Sin[θ]^2)) /
          (√(4.` Cos[θ] + (0.`+ 4.` ⅈ) Sin[θ]))]^2)), {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == \frac{r\sqrt{\pi^2 - \text{ArcCos}\left[\frac{\sqrt{1+2\,\text{Cos}[\theta]+\text{Cos}[\theta]^2+2\,i\,\text{Sin}[\theta]+2\,i\,\text{Cos}[\theta]\,\text{Sin}[\theta]-\text{Sin}[\theta]^2}}{\sqrt{4\,\text{Cos}[\theta]+4\,i\,\text{Sin}[\theta]}}\right]^2}}{\pi}, v\right]$$

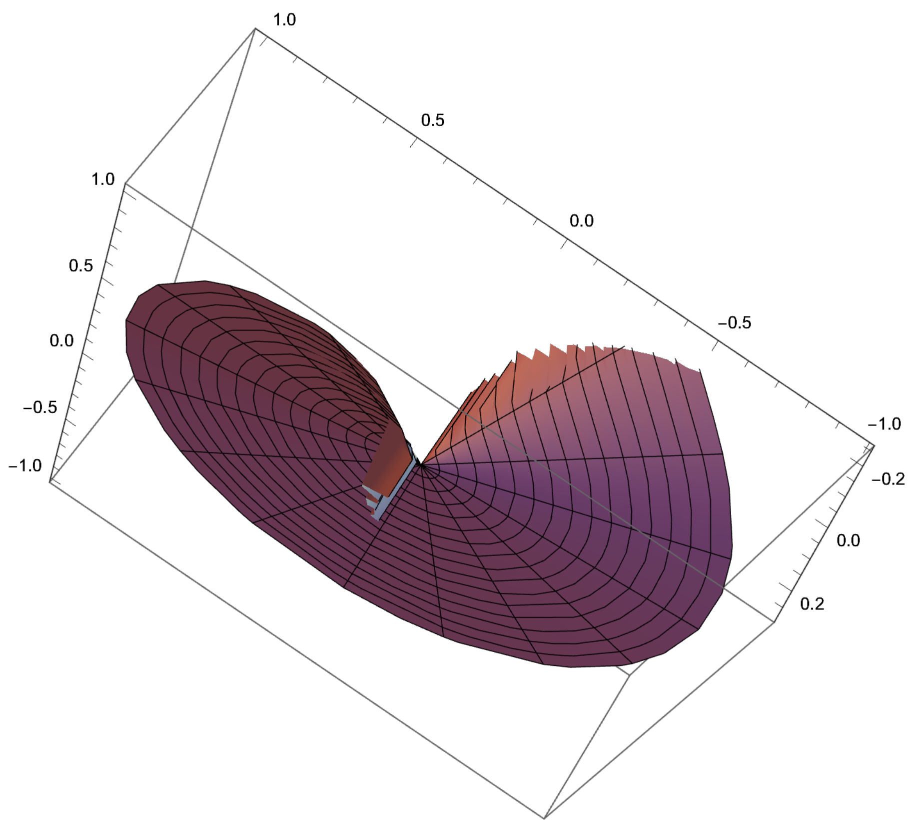
$$D\left[\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \theta\right]$$

$$\left(16\pi^3 r^2 - \frac{256\pi^5 r^2}{(4\pi-\theta)^2} + 8\pi^2 r^2\theta + 4r^2\theta^3 + 8\pi^2 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{(4\pi-\theta)^2} + \frac{8\pi^3 r\left(r^2(4\pi-\theta) - r^2\theta\right)}{\sqrt{r^2(4\pi-\theta)\theta}} - \frac{32\pi^4 r\left(r^2(4\pi-\theta) - r^2\theta\right)}{(4\pi-\theta)\sqrt{r^2(4\pi-\theta)\theta}} + \frac{4\pi^2 r\theta\left(r^2(4\pi-\theta) - r^2\theta\right)}{\sqrt{r^2(4\pi-\theta)\theta}}\right) \Big/ \left(8\pi^2\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)$$

```
RevolutionPlot3D[
```

$$\left(16\,\pi^3\,r^2 - \frac{256\,\pi^5\,r^2}{(4\,\pi-\theta)^2} + 8\,\pi^2\,r^2\,\theta + 4\,r^2\,\theta^3 + 8\,\pi^2\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta} - \frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^2} + \frac{8\,\pi^3\,r\,\left(r^2\,(4\,\pi-\theta) - r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} - \frac{32\,\pi^4\,r\,\left(r^2\,(4\,\pi-\theta) - r^2\,\theta\right)}{(4\,\pi-\theta)\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{4\,\pi^2\,r\,\theta\,\left(r^2\,(4\,\pi-\theta) - r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right) \Big/ \left(8\,\pi^2\,\sqrt{\left(64\,\pi^4\,r^2 - \frac{256\,\pi^5\,r^2}{4\,\pi-\theta} + 16\,\pi^3\,r^2\,\theta + 4\,\pi^2\,r^2\,\theta^2 + r^2\,\theta^4 + 16\,\pi^3\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta} - \frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta} + 8\,\pi^2\,r\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\right)}\right)$$

```
, {r, -1, 1}, {θ, -2 π, 2 π}]
```

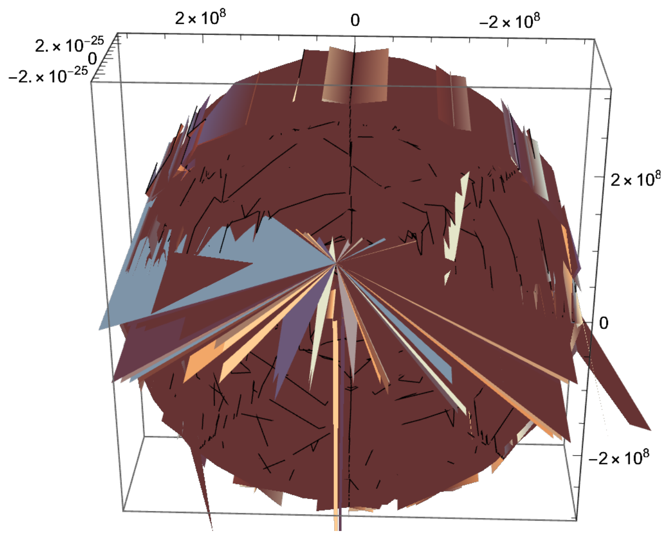


$$\left(16\,\pi^3\,r^2-\frac{256\,\pi^5\,r^2}{(4\,\pi-\theta)^2}+8\,\pi^2\,r^2\,\theta+4\,r^2\,\theta^3+8\,\pi^2\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-\frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^2}+\frac{8\,\pi^3\,r\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}-\frac{32\,\pi^4\,r\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{(4\,\pi-\theta)\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{4\,\pi^2\,r\,\theta\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)\Big/\left(8\,\pi^2\sqrt{\left(64\,\pi^4\,r^2-\frac{256\,\pi^5\,r^2}{4\,\pi-\theta}+16\,\pi^3\,r^2\,\theta+4\,\pi^2\,r^2\,\theta^2+r^2\,\theta^4+16\,\pi^3\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}-\frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+8\,\pi^2\,r\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}\right)}\right)==$$

$$D\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi},\theta,v\right]$$

$$-\frac{4.42709\times10^{-19}\,r\,v\,\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\,\theta}{\left(1-1.11265\times10^{-17}\,v^2\right)^{3/2}\sqrt{\frac{\theta}{\sqrt{1-1.11265\times10^{-17}\,v^2}}}\,\sqrt{4\,\pi\,r-r\,\theta}}+\frac{4.42709\times10^{-19}\,r^2\,v\,\sqrt{\frac{\theta}{\sqrt{1-1.11265\times10^{-17}\,v^2}}}}{\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\,\sqrt{1-1.11265\times10^{-17}\,v^2}\,\sqrt{4\,\pi\,r-r\,\theta}}-\frac{4.42709\times10^{-19}\,v\,\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\,\theta\,\sqrt{4\,\pi\,r-r\,\theta}}{\left(1-1.11265\times10^{-17}\,v^2\right)^2\left(\frac{\theta}{\sqrt{1-1.11265\times10^{-17}\,v^2}}\right)^{3/2}}+\frac{8.85419\times10^{-19}\,v\,\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\,\sqrt{4\,\pi\,r-r\,\theta}}{\left(1-1.11265\times10^{-17}\,v^2\right)^{3/2}\sqrt{\frac{\theta}{\sqrt{1-1.11265\times10^{-17}\,v^2}}}}-\frac{4.42709\times10^{-19}\,r\,v\,\sqrt{4\,\pi\,r-r\,\theta}}{\sqrt{r\,\sqrt{1-1.11265\times10^{-17}\,v^2}}\left(1-1.11265\times10^{-17}\,v^2\right)\sqrt{\frac{\theta}{\sqrt{1-1.11265\times10^{-17}\,v^2}}}}$$

$$
\begin{aligned}
&\mathbf{RevolutionPlot3D}\Big[\\
&-\left(\text{4.427093908810196`*^-19}\, r\, v\, \sqrt{r\, \sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\, \theta\right)\Big/\\
&\quad\left(\left(1-\text{1.1126500560536185`*^-17}\, v^2\right)^{3/2}\right.\\
&\qquad\left.\sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}}\, \sqrt{4\,\pi\, r-r\,\theta}\right)+\\
&\left(\text{4.427093908810196`*^-19}\, r^2\, v\, \sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}}\right)\Big/\\
&\quad\left(\sqrt{r\, \sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\right.\\
&\qquad\left.\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}\, \sqrt{4\,\pi\, r-r\,\theta}\right)-\\
&\left(\text{4.427093908810196`*^-19}\, v\, \sqrt{r\, \sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\, \theta\, \sqrt{4\,\pi\, r-r\,\theta}\right)\Big/\\
&\quad\left(\left(1-\text{1.1126500560536185`*^-17}\, v^2\right)^2 \left(\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\right)^{3/2}\right)+\\
&\left(\text{8.854187817620391`*^-19}\, v\, \sqrt{r\, \sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\, \sqrt{4\,\pi\, r-r\,\theta}\right)\Big/\\
&\quad\left(\left(1-\text{1.1126500560536185`*^-17}\, v^2\right)^{3/2} \sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}}\right)-\\
&\left(\text{4.427093908810196`*^-19}\, r\, v\, \sqrt{4\,\pi\, r-r\,\theta}\right)\Big/\\
&\quad\left(\sqrt{r\, \sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}\, \left(1-\text{1.1126500560536185`*^-17}\, v^2\right)\right.\\
&\qquad\left.\sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*^-17}\, v^2}}}\right),\ \{v,\, -c,\, c\},\ \{\theta,\, -2\,\pi,\, 2\,\pi\}\Big]
\end{aligned}
$$



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{Solve}\Big[-\Big(\text{4.427093908810196`*\^{}-19}\;r\;v\;\sqrt{r\;\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}\;\theta}\Big)\Big/$$

$$\Bigg(\left(1-\text{1.1126500560536185`*\^{}-17}\;v^2\right)^{3/2}$$

$$\sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}}\;\sqrt{4\,\pi\,r-r\,\theta}\Bigg)+$$

$$\Bigg(\text{4.427093908810196`*\^{}-19}\;r^2\;v\;\sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}}\Bigg)\Big/$$

$$\Big(\sqrt{r\;\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}$$

$$\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}\;\sqrt{4\,\pi\,r-r\,\theta}\Big)-$$

$$\Big(\text{4.427093908810196`*\^{}-19}\;v\;\sqrt{r\;\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}\;\theta\;\sqrt{4\,\pi\,r-r\,\theta}\Big)\Big/$$

$$\Bigg(\left(1-\text{1.1126500560536185`*\^{}-17}\;v^2\right)^2\left(\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}\right)^{3/2}\Bigg)+$$

$$\Big(\text{8.854187817620391`*\^{}-19}\;v\;\sqrt{r\;\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}\;\sqrt{4\,\pi\,r-r\,\theta}\Big)\Big/$$

$$\Bigg(\left(1-\text{1.1126500560536185`*\^{}-17}\;v^2\right)^{3/2}\sqrt{\frac{\theta}{\sqrt{1-\text{1.1126500560536185`*\^{}-17}\;v^2}}}\Bigg)-$$

$$\left(4.427093908810196\grave{}*\verb|^|-19\, r\, v\, \sqrt{4\pi r - r\theta}\right) \Big/ \left(\sqrt{r\sqrt{1 - 1.1126500560536185\grave{}*\verb|^|-17\, v^2}}\right.$$

$$\left.\left(1 - 1.1126500560536185\grave{}*\verb|^|-17\, v^2\right)\sqrt{\frac{\theta}{\sqrt{1 - 1.1126500560536185\grave{}*\verb|^|-17\, v^2}}}\right) ==$$

$$\left(16\pi^3 r^2 - \frac{256\pi^5 r^2}{(4\pi-\theta)^2} + 8\pi^2 r^2\theta + 4 r^2\theta^3 + 8\pi^2 r\sqrt{r^2(4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{(4\pi-\theta)^2} + \right.$$

$$\left.\frac{8\pi^3 r\left(r^2(4\pi-\theta) - r^2\theta\right)}{\sqrt{r^2(4\pi-\theta)\theta}} - \frac{32\pi^4 r\left(r^2(4\pi-\theta) - r^2\theta\right)}{(4\pi-\theta)\sqrt{r^2(4\pi-\theta)\theta}} + \frac{4\pi^2 r\theta\left(r^2(4\pi-\theta) - r^2\theta\right)}{\sqrt{r^2(4\pi-\theta)\theta}}\right) \Big/$$

$$\left(8\pi^2\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 r^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} - \right.}\right.$$

$$\left.\left.\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)\right), v]$$

$$\text{Solve}\Bigg[\Big(\sqrt{\Big(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 - 3.5950207149472704\grave{}*\hat{}17\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.\grave{} + 2.\grave{}\,\text{Cos}[\theta] + \text{Cos}[\theta]^2 + (0.\grave{} + 2.\grave{}\,i)\,\text{Sin}[\theta] + (0.\grave{} + 2.\grave{}\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta] - 1.\grave{}\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\grave{}\,\text{Cos}[\theta] + (0.\grave{} + 4.\grave{}\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big)\Big/$$

$$\Big(\sqrt{\Big(39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + 1.\grave{}\,\theta^2 - 4.\grave{}\,\text{ArcCos}\Big[\Big(\sqrt{\big(1.\grave{} + 2.\grave{}\,\text{Cos}[\theta] + \text{Cos}[\theta]^2 + (0.\grave{} + 2.\grave{}\,i)\,\text{Sin}[\theta] + (0.\grave{} + 2.\grave{}\,i)\,\text{Cos}[\theta]\,\text{Sin}[\theta] - 1.\grave{}\,\text{Sin}[\theta]^2\big)}\Big/\Big(\sqrt{4.\grave{}\,\text{Cos}[\theta] + (0.\grave{} + 4.\grave{}\,i)\,\text{Sin}[\theta]}\Big)\Big]^2\Big)}\Big) ==$$

$$\Bigg(16\,\pi^3\,r^2 - \frac{256\,\pi^5\,r^2}{(4\,\pi - \theta)^2} + 8\,\pi^2\,r^2\,\theta + 4\,r^2\,\theta^3 + 8\,\pi^2\,r\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta} - \frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)^2} + \frac{8\,\pi^3\,r\,\left(r^2\,(4\,\pi - \theta) - r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}} - \frac{32\,\pi^4\,r\,\left(r^2\,(4\,\pi - \theta) - r^2\,\theta\right)}{(4\,\pi - \theta)\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta}} + \frac{4\,\pi^2\,r\,\theta\,\left(r^2\,(4\,\pi - \theta) - r^2\,\theta\right)}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}\Bigg)\Bigg/$$

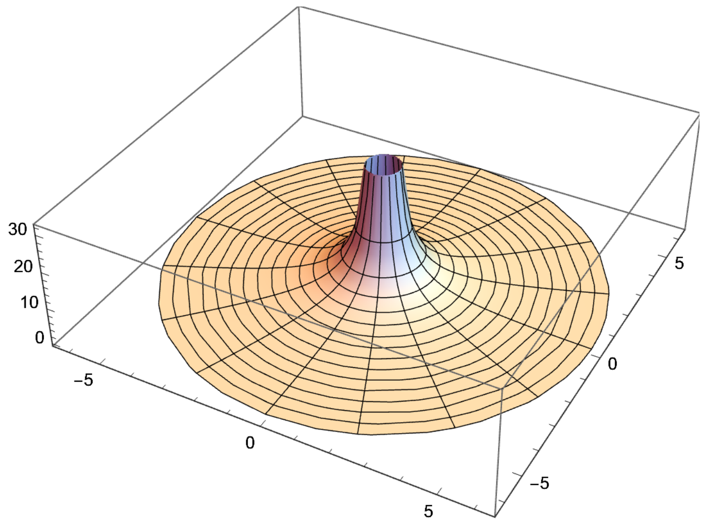
$$\Bigg(8\,\pi^2\,\sqrt{\Bigg(64\,\pi^4\,r^2 - \frac{256\,\pi^5\,r^2}{4\,\pi - \theta} + 16\,\pi^3\,r^2\,\theta + 4\,\pi^2\,r^2\,\theta^2 + r^2\,\theta^4 + 16\,\pi^3\,r\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta} - \frac{64\,\pi^4\,r\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}{4\,\pi - \theta} + 8\,\pi^2\,r\,\theta\,\sqrt{r^2\,(4\,\pi - \theta)\,\theta}\Bigg)}\Bigg),\ r\Bigg]$$

{{}}

$$\text{Solve}\left[\frac{2\,\pi\,\left(2\,\pi\,r - 2\,\pi\,\sqrt{r^2 - \left(\dfrac{\sqrt{r\,\sqrt{1 - \frac{(v)^2}{c^2}}}\,\sqrt{\dfrac{\theta}{\sqrt{1 - \frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi}\right)^2}\right)}{\theta^2} == v\ ,\ v\right]$$

$$\left\{\left\{v \to \frac{2\,\pi\,\left(\dfrac{4\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta} - 2\,\pi\,\sqrt{\dfrac{4\,\pi^2}{(4\,\pi - \theta)\,\theta} - \dfrac{\sqrt{(4\,\pi - \theta)\,\theta}\,\left(-\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{4\,\pi - \theta} + \frac{8\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\right)}{2\,\pi\,(4\,\pi - \theta)}}\right)}{\theta^2}\right\}\right\}$$

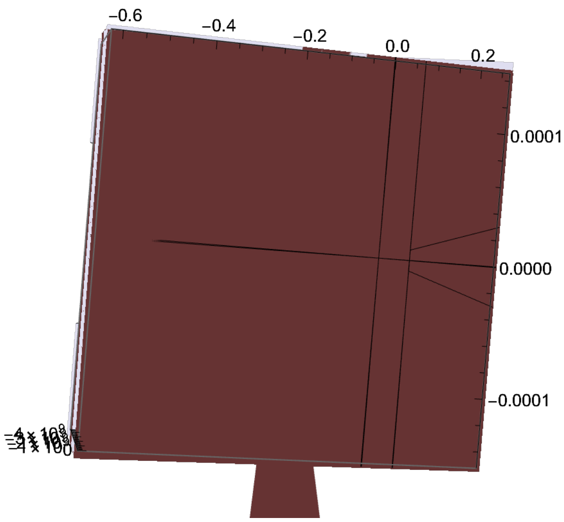
$$\texttt{RevolutionPlot3D}\left[\frac{2\pi\left(\frac{4\pi^2\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-2\pi\sqrt{\frac{4\pi^2}{(4\pi-\theta)\,\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\left(-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta}+\frac{8\pi^2\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)}{2\pi\,(4\pi-\theta)}}\right)}{\theta^2},\ \{\theta,\ -2\pi,\ 2\pi\}\right]$$



$$\texttt{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{r^2-\left(\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}\right)^2}\right)}{\theta^2}==v\ ,\ v\right]$$

$$\left\{\left\{v\to\frac{2\pi\left(2\pi r-\sqrt{r^2\,(2\pi-\theta)^2}\right)}{\theta^2}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\left(2\,\pi\,r - \sqrt{r^2\,(2\,\pi-\theta)^2}\right)}{\theta^2},\ \{r,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



$$c := 2.99792458\left(10^8\right)$$

$$\begin{aligned}&\text{Solve}\Big[\\&\Big(\sqrt{}\,\big(-1.1294090667581471\grave{}*\text{^}18\ \theta + 8.987551787368176\grave{}*\text{^}16\ \theta^2 + 3.5481432270250993\grave{}*\text{^}18\\&\qquad \text{Sin}[\beta]^2\big)\Big)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \text{Sin}[\beta]^2}\right)\Big/\\&\quad\Big(\Big(\sqrt{}\,\big(3.5481432270250993\grave{}*\text{^}18\ \eta^2 - 1.1294090667581471\grave{}*\text{^}18\ r^2\ \theta +\\&\qquad 8.987551787368176\grave{}*\text{^}16\ r^2\ \theta^2\big)\Big)\Big/\\&\quad\left(\sqrt{39.47841760435743\grave{}\ \eta^2 - 12.566370614359172\grave{}\ r^2\ \theta + r^2\ \theta^2}\right)\Big) == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \theta\Big]\end{aligned}$$

$$\begin{aligned}&\left\{\left\{\theta \to 0.5\left(12.5664 - 12.5664\sqrt{1. - 1.\ \text{Sin}[\beta]^2}\right)\right\},\right.\\&\left.\left\{\theta \to 0.5\left(12.5664 + 12.5664\sqrt{1. - 1.\ \text{Sin}[\beta]^2}\right)\right\}\right\}\end{aligned}$$

$$\text{Solve}\left[\frac{1}{\frac{\sqrt{-1.1294090667581471\text{`}*\wedge 18\,\theta+8.987551787368176\text{`}*\wedge 16\,\theta^2+3.5481432270250993\text{`}*\wedge 18\,\text{Sin}[\beta]^2}}{\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}}}\right.$$

$$\left(\left(\sqrt{}\left(3.5481432270250993\text{`}*\wedge 18\,\eta^2-1.1294090667581471\text{`}*\wedge 18\,r^2\,\theta+8.987551787368176\text{`}*\wedge 16\,r^2\,\theta^2\right)\right)\Big/\left(\sqrt{39.47841760435743\text{`}\,\eta^2-12.566370614359172\text{`}\,r^2\,\theta+r^2\,\theta^2}\right)\right)==\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\theta\Big]$$

$$\left\{\left\{\theta\to 0.5\left(12.5664-12.5664\sqrt{1.-1.\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 0.5\left(12.5664+12.5664\sqrt{1.-1.\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}==\frac{2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta],\theta\right]$$

$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\right.$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-i\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-i\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2+i\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2+i\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2+\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2+\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-(-1)^{1/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-(-1)^{1/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2+(-1)^{1/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2+(-1)^{1/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-(-1)^{3/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-(-1)^{3/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},$$
$$\left.\left\{\theta\to 2\left(\pi-\sqrt{\pi^2+(-1)^{3/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2+(-1)^{3/4}\,\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}==\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\text{Sin}[\beta],\theta\right]$$

$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\right.$$
$$\left.\left\{\theta\to 2\left(\pi-\sqrt{\pi^2+\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to 2\left(\pi+\sqrt{\pi^2+\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\text{Sin}[\beta],\,\theta\right]$$

$$\left\{\left\{\theta \to \frac{2\left(\pi\,r - \sqrt{\pi^2\,r^2 - \pi^2\,r\,\eta\,\text{Sin}[\beta]}\right)}{r}\right\},\left\{\theta \to \frac{2\left(\pi\,r + \sqrt{\pi^2\,r^2 - \pi^2\,r\,\eta\,\text{Sin}[\beta]}\right)}{r}\right\},\left\{\theta \to \frac{2\left(\pi\,r - \sqrt{\pi^2\,r^2 + \pi^2\,r\,\eta\,\text{Sin}[\beta]}\right)}{r}\right\},\left\{\theta \to \frac{2\left(\pi\,r + \sqrt{\pi^2\,r^2 + \pi^2\,r\,\eta\,\text{Sin}[\beta]}\right)}{r}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\text{Sin}[\beta],\,\theta\right]$$

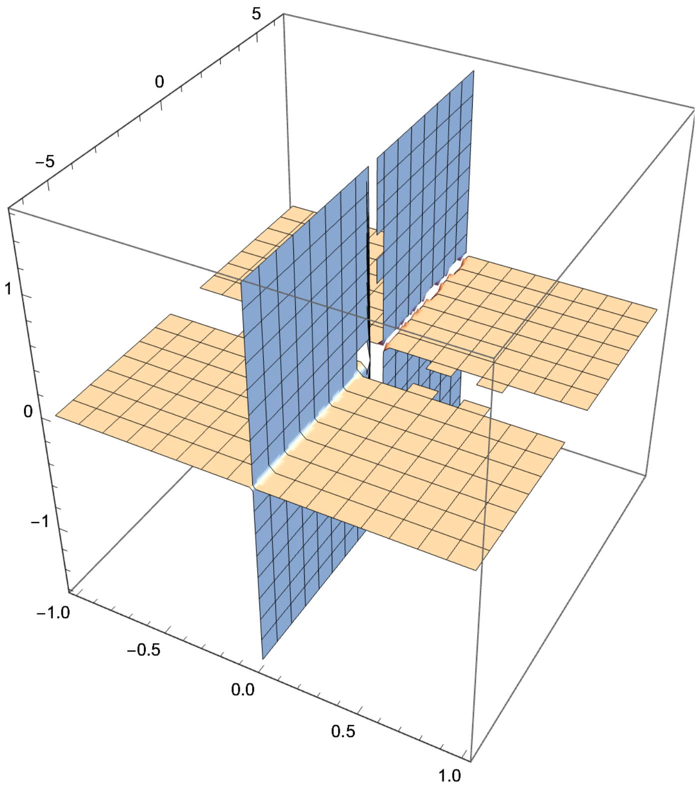
Solve::verif : Potential solution $\{\theta \to \text{ComplexInfinity}\}$ (possibly discarded by verifier) should be checked by hand. May require use of limits. ≫

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\,\text{Sin}[\beta],\,r\right]$$

$$\left\{\left\{r \to -\frac{4\,\pi^2\,\eta\,\text{Sin}[\beta]}{(4\,\pi - \theta)\,\theta}\right\},\left\{r \to \frac{4\,\pi^2\,\eta\,\text{Sin}[\beta]}{(4\,\pi - \theta)\,\theta}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{4\pi^2\,\eta\,\text{Sin}[\beta]}{(4\pi-\theta)\,\theta},\{\eta,-1,1\},\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\text{Solve}\left[\text{Abs}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right]\left(\frac{1}{\left(\frac{\theta}{2\pi}\right)}\right)==c,\ r\right]$$

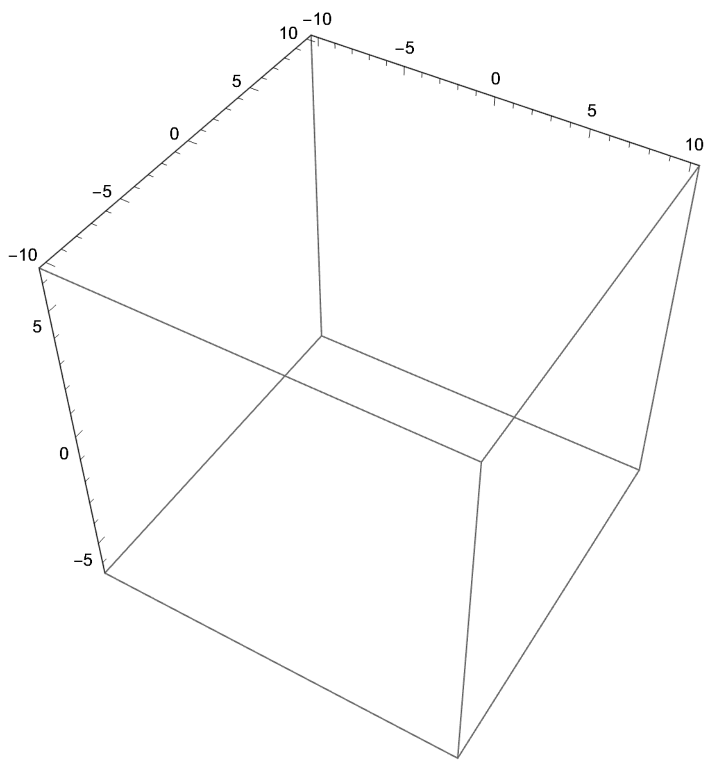
$$\text{Solve}\left[(\theta r-(2\pi r-2\pi x))\,\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r-r\theta}}{2\pi}==0,\ v\right]$$

{{}}

$$\text{Solve}\left[(\theta\, r - (2\pi r - 2\pi x))\,\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\theta}}{2\pi} == \left(\theta\, r - \left(2\pi r - 2\pi\sqrt{(r\verb|^|2-\eta\verb|^|2)}\right)\right)\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\theta}}{2\pi},\ v\right]$$

$$\left\{\left\{v \to -\left(1.\sqrt{\left(1.11468\times10^{19} - 3.54814\times10^{18}\,x^2\,\theta - 3.54814\times10^{18}\,\eta^2\,\theta + 2.82352\times10^{17}\,x^2\,\theta^2 + 2.82352\times10^{17}\,\eta^2\,\theta^2\right)}\right)\Big/\left(\sqrt{124.025 - 39.4784\,x^2\,\theta - 39.4784\,\eta^2\,\theta + 3.14159\,x^2\,\theta^2 + 3.14159\,\eta^2\,\theta^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{\left(1.11468\times10^{19} - 3.54814\times10^{18}\,x^2\,\theta - 3.54814\times10^{18}\,\eta^2\,\theta + 2.82352\times10^{17}\,x^2\,\theta^2 + 2.82352\times10^{17}\,\eta^2\,\theta^2\right)}\right)\Big/\left(\sqrt{124.025 - 39.4784\,x^2\,\theta - 39.4784\,\eta^2\,\theta + 3.14159\,x^2\,\theta^2 + 3.14159\,\eta^2\,\theta^2}\right)\right\}\right\}$$

```
ContourPlot3D[
 (√(1.1146820695906433`*^19 - 3.5481432270250993`*^18 x^2 θ - 3.5481432270250993`*^18
      η^2 θ + 2.8235226668953677`*^17 x^2 θ^2 + 2.8235226668953677`*^17 η^2 θ^2)) /
  (√(124.02510672119928` - 39.47841760435743` x^2 θ - 39.47841760435743` η^2 θ +
      3.141592653589793` x^2 θ^2 + 3.141592653589793` η^2 θ^2)),
 {η, -.1, .1}, {x, -.1, .1}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[(\theta\, r - (2\pi r - 2\pi x))\,\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\,\theta}}{2\pi} == \left(\theta\, r - \left(2\pi r - 2\pi\sqrt{\left(r\char`^2 - \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\char`^2\right)}\right)\right)\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\,\theta}}{2\pi},\, v\right]$$

$$\left\{\left\{v \to -\left(1.\,\sqrt{\left(1.11468\times10^{19} - 3.54814\times10^{18}\,\theta - 3.54814\times10^{18}\,x^2\,\theta + 2.82352\times10^{17}\,\theta^2 + 2.82352\times10^{17}\,x^2\,\theta^2\right)}\right)\Big/\left(\sqrt{124.025 - 39.4784\,\theta - 39.4784\,x^2\,\theta + 3.14159\,\theta^2 + 3.14159\,x^2\,\theta^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{\left(1.11468\times10^{19} - 3.54814\times10^{18}\,\theta - 3.54814\times10^{18}\,x^2\,\theta + 2.82352\times10^{17}\,\theta^2 + 2.82352\times10^{17}\,x^2\,\theta^2\right)}\right)\Big/\left(\sqrt{124.025 - 39.4784\,\theta - 39.4784\,x^2\,\theta + 3.14159\,\theta^2 + 3.14159\,x^2\,\theta^2}\right)\right\}\right\}$$

$$\text{Solve}\left[(\theta\, r - (2\pi r - 2\pi x))\,\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\,\theta}}{2\pi} == \left(\theta\, r - \left(2\pi r - 2\pi\sqrt{\left(r\char`^2 - \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\char`^2\right)}\right)\right)\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\,\theta}}{2\pi},\, v\right]$$

$$\text{Solve}\left[(\theta\, r - (2\pi r - 2\pi x))\,\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\pi r - r\,\theta}}{2\pi} == (\theta\, r - (2\pi r - 2\pi x)),\, v\right]$$

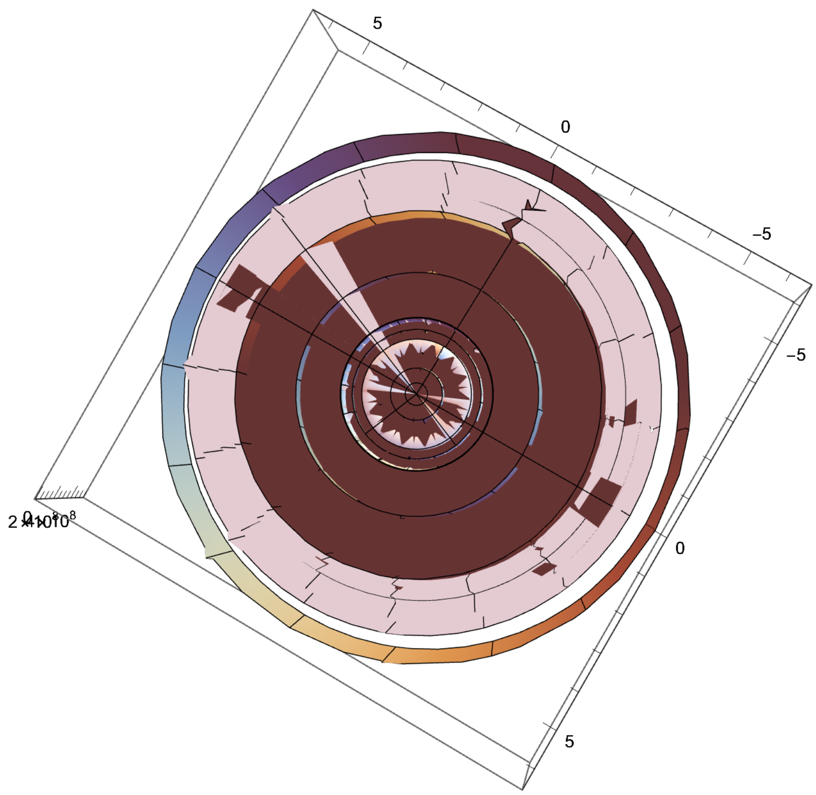
Solve[

$$(\theta\, r - (2\,\pi\, r - 2\,\pi\, x))\,\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\, r - r\,\theta}}{2\,\pi} == (\theta\, r - (2\,\pi\, r - 2\,\pi\, x)),\ v]$$

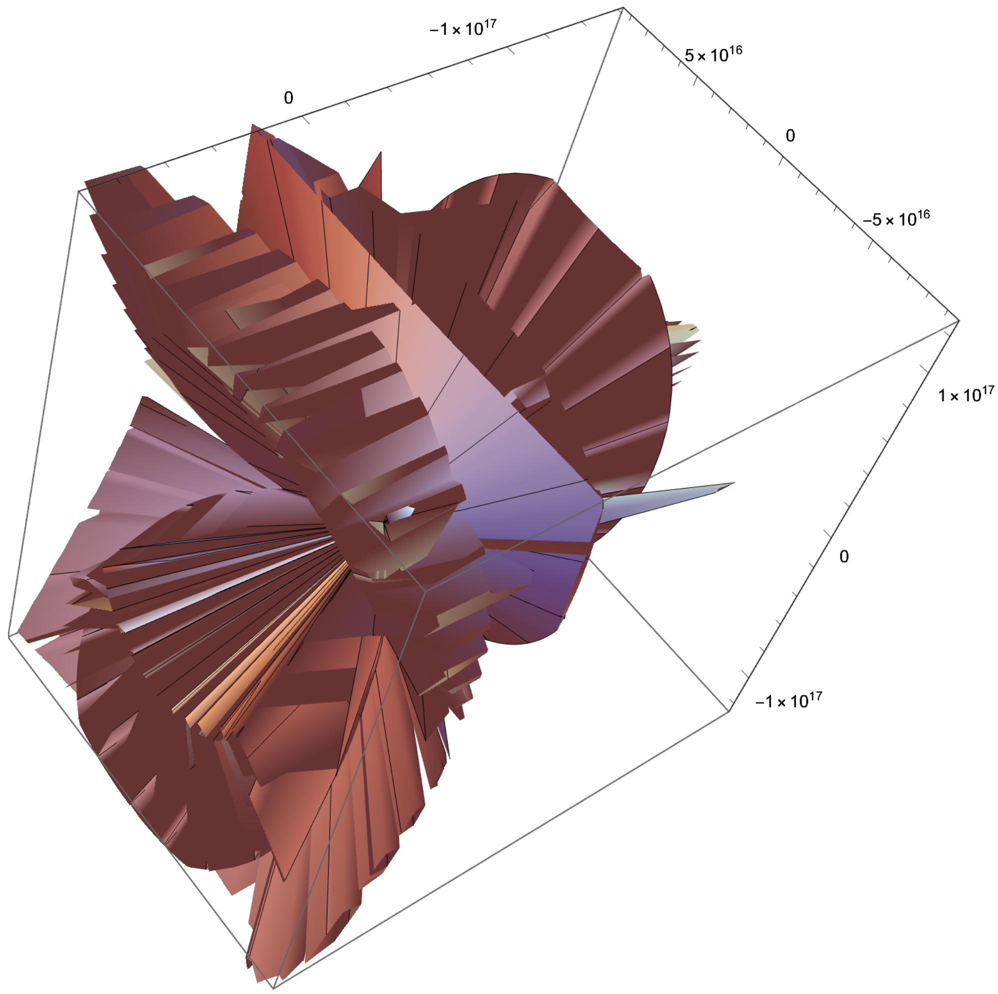
$$\Big\{\Big\{v \to -\Big(1.\,\sqrt{\big(8.57837\times10^{35}\, r^2 - 1.71567\times10^{36}\, r\, x + 8.57837\times10^{35}\, x^2 - 2.73058\times10^{35}\, r^2\,\theta - 2.73058\times10^{35}\, r^4\,\theta + 2.73058\times10^{35}\, r\, x\,\theta + 5.46116\times10^{35}\, r^3\, x\,\theta - 2.73058\times10^{35}\, r^2\, x^2\,\theta + 2.17293\times10^{34}\, r^2\,\theta^2 + 1.08646\times10^{35}\, r^4\,\theta^2 - 1.30376\times10^{35}\, r^3\, x\,\theta^2 + 2.17293\times10^{34}\, r^2\, x^2\,\theta^2 - 1.38333\times10^{34}\, r^4\,\theta^3 + 6.91664\times10^{33}\, r^3\, x\,\theta^3 + 5.50409\times10^{32}\, r^4\,\theta^4\big)}\Big) \Big/ \Big(\sqrt{\big(9.54472\times10^{18}\, r^2 - 1.90894\times10^{19}\, r\, x + 9.54472\times10^{18}\, x^2 - 3.03818\times10^{18}\, r^2\,\theta - 3.03818\times10^{18}\, r^4\,\theta + 3.03818\times10^{18}\, r\, x\,\theta + 6.07636\times10^{18}\, r^3\, x\,\theta - 3.03818\times10^{18}\, r^2\, x^2\,\theta + 2.41771\times10^{17}\, r^2\,\theta^2 + 1.20885\times10^{18}\, r^4\,\theta^2 - 1.45062\times10^{18}\, r^3\, x\,\theta^2 + 2.41771\times10^{17}\, r^2\, x^2\,\theta^2 - 1.53916\times10^{17}\, r^4\,\theta^3 + 7.6958\times10^{16}\, r^3\, x\,\theta^3 + 6.12412\times10^{15}\, r^4\,\theta^4\big)}\Big)\Big\},$$

$$\Big\{v \to \Big(\sqrt{\big(8.57837\times10^{35}\, r^2 - 1.71567\times10^{36}\, r\, x + 8.57837\times10^{35}\, x^2 - 2.73058\times10^{35}\, r^2\,\theta - 2.73058\times10^{35}\, r^4\,\theta + 2.73058\times10^{35}\, r\, x\,\theta + 5.46116\times10^{35}\, r^3\, x\,\theta - 2.73058\times10^{35}\, r^2\, x^2\,\theta + 2.17293\times10^{34}\, r^2\,\theta^2 + 1.08646\times10^{35}\, r^4\,\theta^2 - 1.30376\times10^{35}\, r^3\, x\,\theta^2 + 2.17293\times10^{34}\, r^2\, x^2\,\theta^2 - 1.38333\times10^{34}\, r^4\,\theta^3 + 6.91664\times10^{33}\, r^3\, x\,\theta^3 + 5.50409\times10^{32}\, r^4\,\theta^4\big)}\Big) \Big/ \Big(\sqrt{\big(9.54472\times10^{18}\, r^2 - 1.90894\times10^{19}\, r\, x + 9.54472\times10^{18}\, x^2 - 3.03818\times10^{18}\, r^2\,\theta - 3.03818\times10^{18}\, r^4\,\theta + 3.03818\times10^{18}\, r\, x\,\theta + 6.07636\times10^{18}\, r^3\, x\,\theta - 3.03818\times10^{18}\, r^2\, x^2\,\theta + 2.41771\times10^{17}\, r^2\,\theta^2 + 1.20885\times10^{18}\, r^4\,\theta^2 - 1.45062\times10^{18}\, r^3\, x\,\theta^2 + 2.41771\times10^{17}\, r^2\, x^2\,\theta^2 - 1.53916\times10^{17}\, r^4\,\theta^3 + 7.6958\times10^{16}\, r^3\, x\,\theta^3 + 6.12412\times10^{15}\, r^4\,\theta^4\big)}\Big)\Big\}\Big\}$$

```
RevolutionPlot3D[
 (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 - 1.3833281122109134`*^34 r^4 θ^3 +
     6.916640561054567`*^33 r^3 x θ^3 + 5.504087674408673`*^32 r^4 θ^4)) /
  (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x + 9.544724793048105`*^18
      x^2 - 3.0381802625307474`*^18 r^2 θ - 3.038180262530747`*^18 r^4 θ +
     3.0381802625307474`*^18 r x θ + 6.076360525061494`*^18 r^3 x θ -
     3.038180262530747`*^18 r^2 x^2 θ + 2.4177070339300035`*^17 r^2 θ^2 +
     1.2088535169650017`*^18 r^4 θ^2 - 1.450624220358002`*^18 r^3 x θ^2 +
     2.4177070339300032`*^17 r^2 x^2 θ^2 - 1.5391601015920192`*^17 r^4 θ^3 +
     7.695800507960096`*^16 r^3 x θ^3 + 6.124123459454841`*^15 r^4 θ^4)), {θ, -2 π, 2 π}]
```

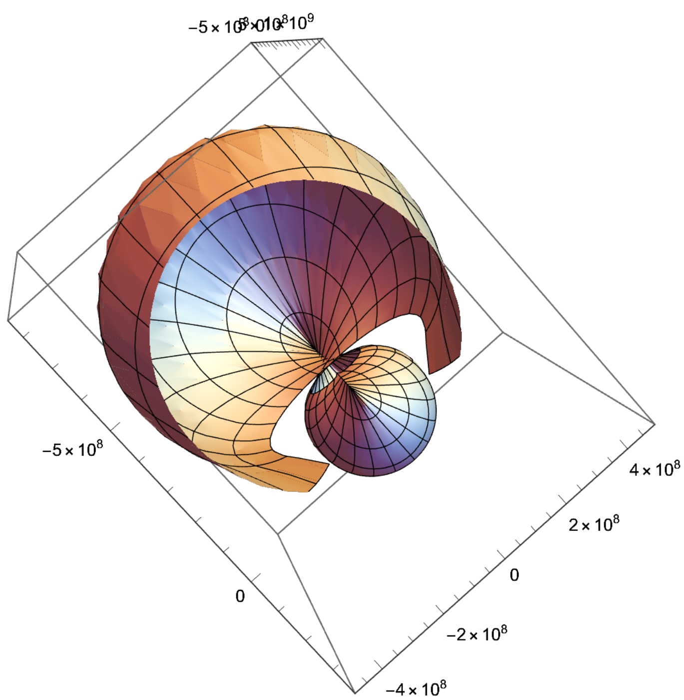


```
SphericalPlot3D[
 (√ (8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 -
     1.3833281122109134`*^34 r^4 θ^3 + 6.916640561054567`*^33 r^3 x θ^3 +
     5.504087674408673`*^32 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^4)) /
  (√ (9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 θ -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
     6.124123459454841`*^15 r^4 θ^4)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

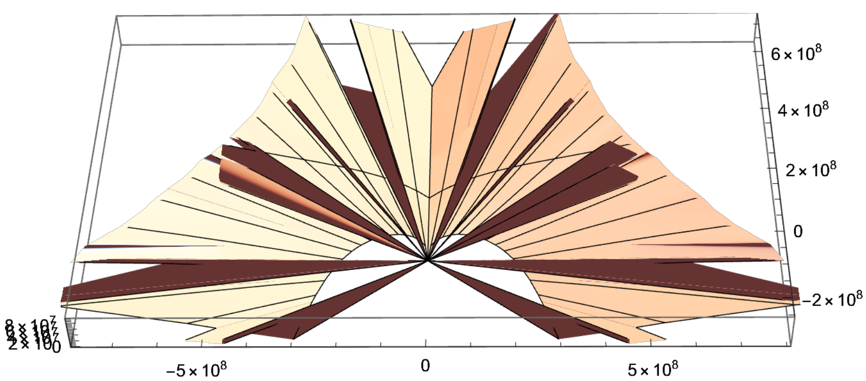


−1 × 10^17
0
5 × 10^16
0
−5 × 10^16
1 × 10^17
0
−1 × 10^17

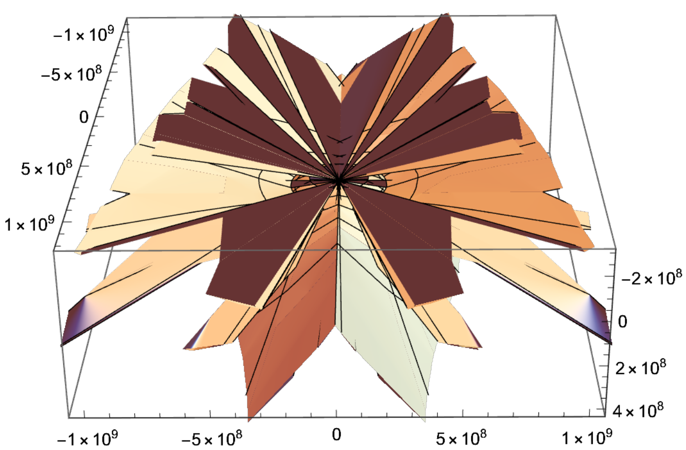
```
SphericalPlot3D[
 (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 -
     1.3833281122109134`*^34 r^4 θ^3 + 6.916640561054567`*^33 r^3 x θ^3 +
     5.504087674408673`*^32 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^4)) /
  (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 2 (π + √(π^2 - π^2 Sin[β]^2)) -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
     6.124123459454841`*^15 r^4 θ^4)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



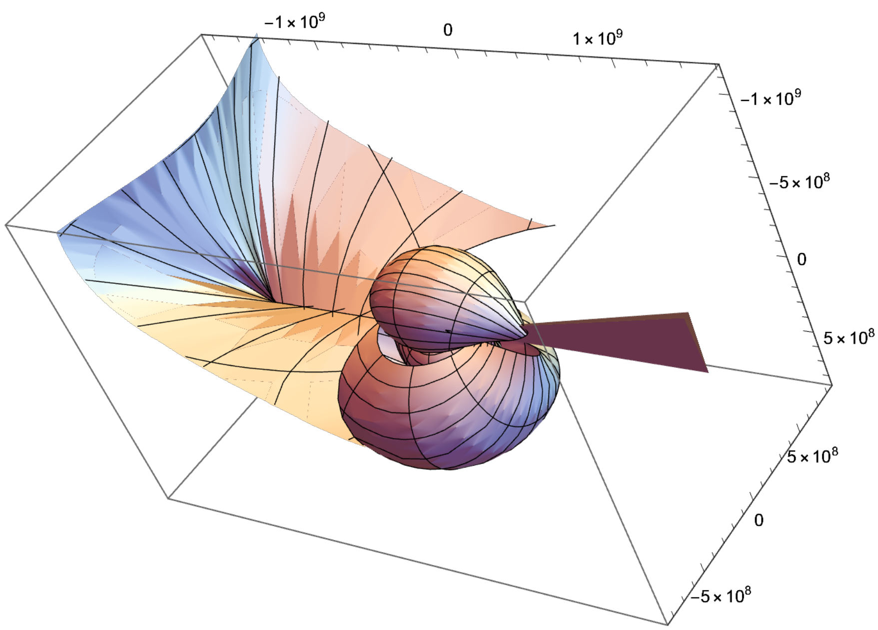
```
SphericalPlot3D[
 (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 -
     1.3833281122109134`*^34 r^4 θ^3 + 6.916640561054567`*^33 r^3 x θ^3 +
     5.504087674408673`*^32 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^4)) /
  (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 2 (π + √(π^2 - π^2 Sin[β]^2)) -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3 + 7.695800507960096`*^16
      r^3 x θ^3 + 6.124123459454841`*^15 r^4 θ^4)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (Sqrt[(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 -
     1.3833281122109134`*^34 r^4 θ^3 + 6.916640561054567`*^33 r^3 x θ^3 +
     5.504087674408673`*^32 r^4 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^4)])/
  (Sqrt[(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 +
     1.2088535169650017`*^18 r^4 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^3 + 7.695800507960096`*^16
      r^3 x θ^3 + 6.124123459454841`*^15 r^4 θ^4)]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



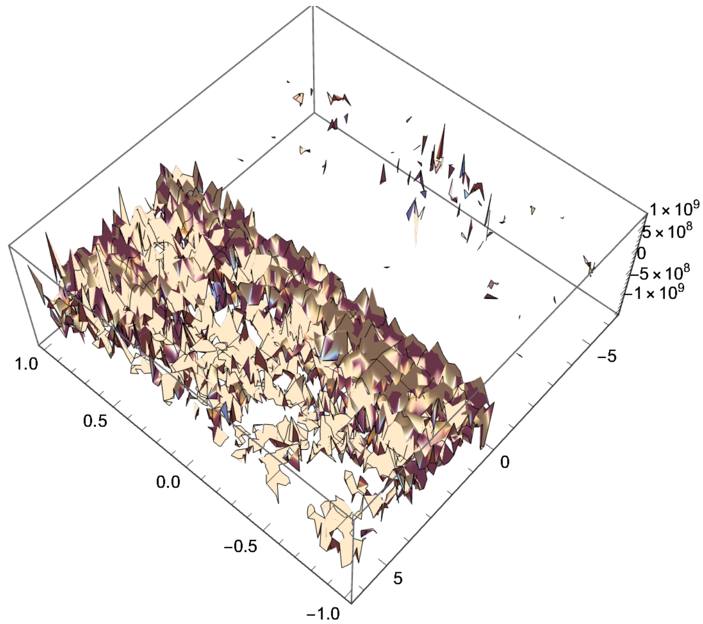
```
SphericalPlot3D[
 (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 -
     1.3833281122109134`*^34 r^4 θ^3 + 6.916640561054567`*^33 r^3 x θ^3 +
     5.504087674408673`*^32 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^4))/
  (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 2 (π + √(π^2 - π^2 Sin[β]^2)) -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 +
     1.2088535169650017`*^18 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 (2 (π + √(π^2 - π^2 Sin[β]^2)))^3 +
     7.695800507960096`*^16 r^3 x θ^3 + 6.124123459454841`*^15 r^4
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^4)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



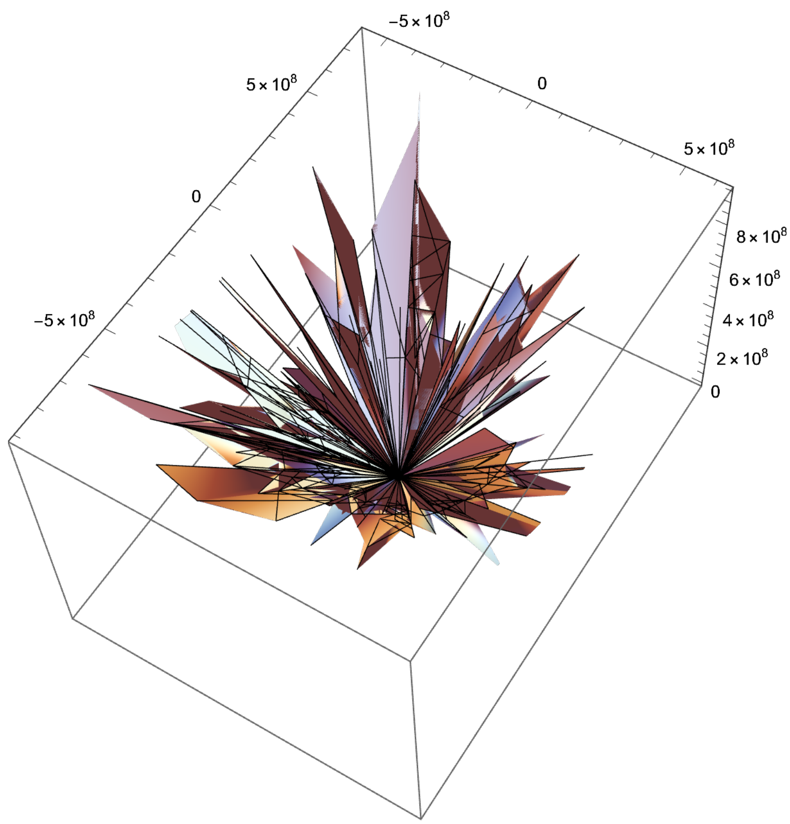
$$r := \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$x := \frac{2\,\pi\,r - r\,\theta}{2\,\pi}$$

```
Plot3D[{-(1.` √(8.578370837369684`*^35 r^2 -
          1.7156741674739368`*^36 r x + 8.578370837369684`*^35 x^2 -
          2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
          2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
          2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
          1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
          2.1729267174130213`*^34 r^2 x^2 θ^2 - 1.3833281122109134`*^34 r^4 θ^3 +
          6.916640561054567`*^33 r^3 x θ^3 + 5.504087674408673`*^32 r^4 θ^4)) /
    (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
        9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 θ -
        3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
        6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
        2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
        1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
        1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
        6.124123459454841`*^15 r^4 θ^4)),
   (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
         x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
        2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
        2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
        1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
        2.1729267174130213`*^34 r^2 x^2 θ^2 - 1.3833281122109134`*^34 r^4 θ^3 +
        6.916640561054567`*^33 r^3 x θ^3 + 5.504087674408673`*^32 r^4 θ^4)) /
    (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
        9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 θ -
        3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
        6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
        2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
        1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
        1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
        6.124123459454841`*^15 r^4 θ^4))}, {x, -1, 1}, {θ, -2 π, 2 π}]
```


1 × 10^9
5 × 10^8
0
−5 × 10^8
−1 × 10^9
1.0
0.5
0.0
−0.5
−1.0
−5
0
5

```
RevolutionPlot3D[{-(1.` √(8.578370837369684`*^35 r^2 -
      1.7156741674739368`*^36 r x + 8.578370837369684`*^35 x^2 -
      2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
      2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
      2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
      1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
      2.1729267174130213`*^34 r^2 x^2 θ^2 - 1.3833281122109134`*^34 r^4 θ^3 +
      6.916640561054567`*^33 r^3 x θ^3 + 5.504087674408673`*^32 r^4 θ^4)) /
   (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 θ -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
     6.124123459454841`*^15 r^4 θ^4)),
  (√(8.578370837369684`*^35 r^2 - 1.7156741674739368`*^36 r x + 8.578370837369684`*^35
      x^2 - 2.730580244885493`*^35 r^2 θ - 2.7305802448854928`*^35 r^4 θ +
     2.730580244885493`*^35 r x θ + 5.4611604897709856`*^35 r^3 x θ -
     2.7305802448854928`*^35 r^2 x^2 θ + 2.1729267174130213`*^34 r^2 θ^2 +
     1.0864633587065107`*^35 r^4 θ^2 - 1.3037560304478129`*^35 r^3 x θ^2 +
     2.1729267174130213`*^34 r^2 x^2 θ^2 - 1.3833281122109134`*^34 r^4 θ^3 +
     6.916640561054567`*^33 r^3 x θ^3 + 5.504087674408673`*^32 r^4 θ^4)) /
   (√(9.544724793048105`*^18 r^2 - 1.908944958609621`*^19 r x +
     9.544724793048105`*^18 x^2 - 3.0381802625307474`*^18 r^2 θ -
     3.038180262530747`*^18 r^4 θ + 3.0381802625307474`*^18 r x θ +
     6.076360525061494`*^18 r^3 x θ - 3.038180262530747`*^18 r^2 x^2 θ +
     2.4177070339300035`*^17 r^2 θ^2 + 1.2088535169650017`*^18 r^4 θ^2 -
     1.450624220358002`*^18 r^3 x θ^2 + 2.4177070339300032`*^17 r^2 x^2 θ^2 -
     1.5391601015920192`*^17 r^4 θ^3 + 7.695800507960096`*^16 r^3 x θ^3 +
     6.124123459454841`*^15 r^4 θ^4))}, {x, -1, 1}, {θ, -2 π, 2 π}]
```



$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}\text{^}2 == r\,\text{Sin}[\beta]\text{^}2,\ v\right]$$

{{}}

$$\text{Solve}\left[\text{Abs}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\;\sqrt{4\pi r - r\theta}}{2\pi}\right] == \text{Abs}[r\,\text{Sin}[\beta]],\ v\right]$$

InverseFunction::ifun : Inverse functions are being used. Values may be lost for multivalued inverses. ≫

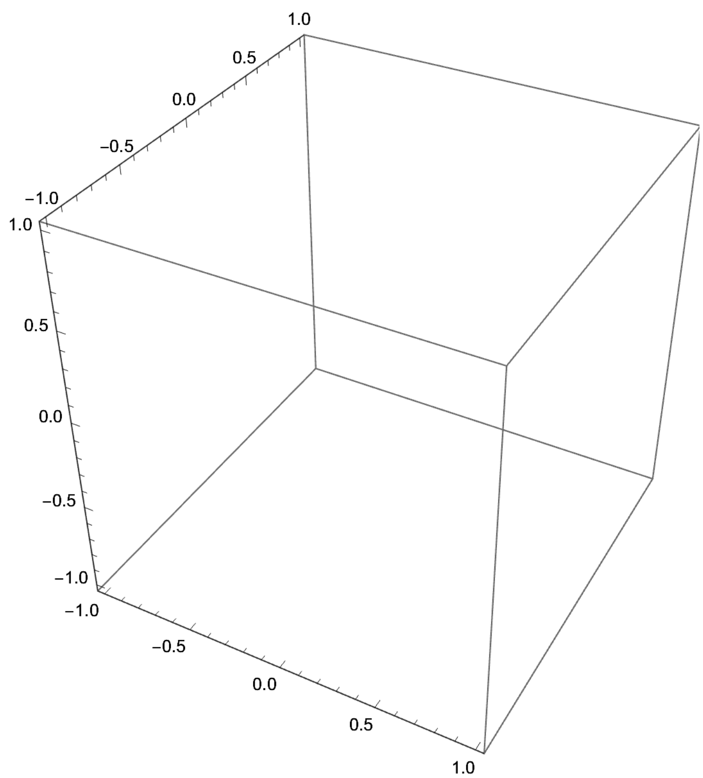
$$\Big\{\Big\{v \to -\Big(1.\sqrt{\Big(-1.12941\times10^{18}\,r^2\,\theta + 8.98755\times10^{16}\,r^2\,\theta^2 + 8.98755\times10^{16}\,\text{Abs}^{(-1)}[6.283185307179586476925286766559\,\text{Abs}[r\,\text{Sin}[\beta]]]^2\Big)}\Big)\Big/\Big(\sqrt{\Big(-12.5664\,r^2\,\theta + r^2\,\theta^2 + \text{Abs}^{(-1)}[6.283185307179586476925286766559\,\text{Abs}[r\,\text{Sin}[\beta]]]^2\Big)}\Big)\Big\},$$

$$\Big\{v \to \Big(\sqrt{\Big(-1.12941\times10^{18}\,r^2\,\theta + 8.98755\times10^{16}\,r^2\,\theta^2 + 8.98755\times10^{16}\,\text{Abs}^{(-1)}[6.283185307179586476925286766559\,\text{Abs}[r\,\text{Sin}[\beta]]]^2\Big)}\Big)\Big/\Big(\sqrt{\Big(-12.5664\,r^2\,\theta + r^2\,\theta^2 + \text{Abs}^{(-1)}[6.283185307179586476925286766559\,\text{Abs}[r\,\text{Sin}[\beta]]]^2\Big)}\Big)\Big\}\Big\}$$

```
SphericalPlot3D[
 {-(1.` √(-1.1294090667581471`*^18 r² θ + 8.987551787368176`*^16 r² θ² +
         8.987551787368176`*^16 Abs^(-1)[
           6.283185307179586476925286766559005768394338798750211641593731.608
             149544718028 Abs[r Sin[β]]]²)) /
    (√(-12.566370614359172` r² θ + r² θ² + Abs^(-1)[
         6.283185307179586476925286766559005768394338798750211641593731.608149
           544718028 Abs[r Sin[β]]]²)), (√(-1.1294090667581471`*^18 r² θ +
        8.987551787368176`*^16 r² θ² + 8.987551787368176`*^16 Abs^(-1)[
          6.28318530717958647692528676655900576839433879875021164159373`31.60814
            9544718028 Abs[r Sin[β]]]²)) /
    (√(-12.566370614359172` r² θ + r² θ² + Abs^(-1)[
         6.28318530717958647692528676655900576839433879875021164159373`31.608149
           544718028 Abs[r Sin[β]]]²))}, {θ, -2 π, 2}, {β, -π / 2, π / 2}]
```

SphericalPlot3D::exclul : {≪1≫} must be a list of equalities or real−valued functions. ≫

SphericalPlot3D::exclul : {≪1≫} must be a list of equalities or real−valued functions. ≫

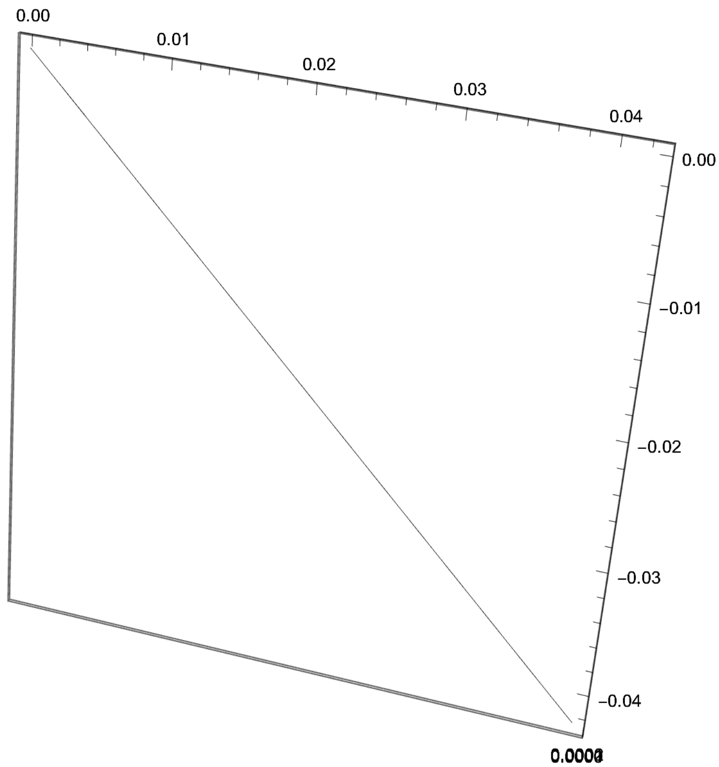


$$r := \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

```
Solve[(Sqrt[4π - θ] Sqrt[θ] Abs[x + ⅈ y])/(2 π) == y, y]
```

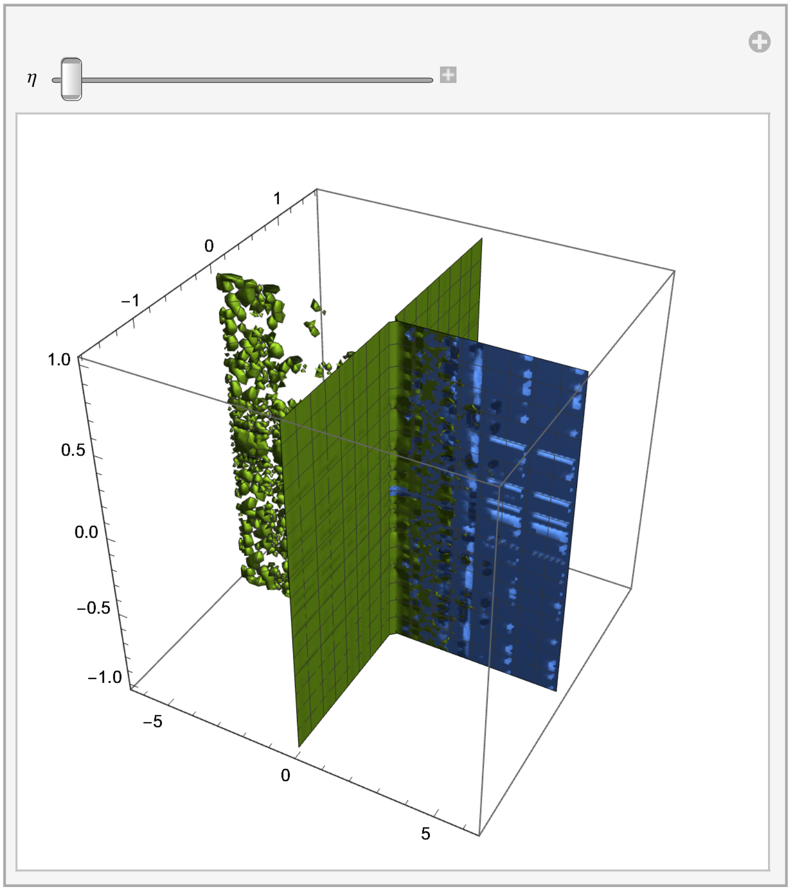
$$\left\{\left\{y\to\frac{-4\,i\,\pi\,x\,\theta+i\,x\,\theta^2-2\,\pi\,\sqrt{4\,\pi\,x^2\,\theta-x^2\,\theta^2}}{-4\,\pi^2-4\,\pi\,\theta+\theta^2}\right\},\left\{y\to\frac{-4\,i\,\pi\,x\,\theta+i\,x\,\theta^2+2\,\pi\,\sqrt{4\,\pi\,x^2\,\theta-x^2\,\theta^2}}{-4\,\pi^2-4\,\pi\,\theta+\theta^2}\right\}\right\}$$

```
RevolutionPlot3D[{(-4 ⅈ π x θ + ⅈ x θ^2 - 2 π Sqrt[4 π x^2 θ - x^2 θ^2])/(-4 π^2 - 4 π θ + θ^2),
  (-4 ⅈ π x θ + ⅈ x θ^2 + 2 π Sqrt[4 π x^2 θ - x^2 θ^2])/(-4 π^2 - 4 π θ + θ^2)}, {x, -1, 1}, {θ, -2 π, 2 π}]
```



In[1]:= $\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}-\frac{\left(\theta\,r-\left(2\,\pi\,r-2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\right)}{\theta\,r-\left(\left(2\,\pi\,r-2\,\pi\,\sqrt{r^2-(\eta)^2}\right)\right)},\right.\right.$
$\left.\left.\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\},\{r,-1,1\}\right],\{\eta,-1,1\}\right]$

Out[1]=



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. π ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. π ComplexInfinity encountered.

Infinity: Indeterminate expression 0. π ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{Solve}\left[\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} == \frac{\left(\theta\,r - \left(2\pi r - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\right)\right)}{\theta\,r - \left(\left(2\pi r - 2\pi\,\sqrt{r^2-(\eta)^2}\right)\right)},\,\eta\right]$$

{{}}

$$\text{Solve}\left[\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} == \frac{\theta\,r - \left(\left(2\pi r - 2\pi\,\sqrt{r^2-(\eta)^2}\right)\right)}{\left(\theta\,r - \left(2\pi r - 2\pi\,\frac{2\pi r - r\theta}{2\pi}\right)\right)},\,\theta\right]$$

Power::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

{}

$(\theta\,r - (2\pi r - 2\pi x))$

$$\text{Solve}\left[(4/3)\,\pi\,(r)\wedge 3 - (4/3)\,\pi\left(\frac{2\pi r - r\theta}{2\pi}\right)\wedge 3 == (4/3)\,\pi\,(r)\wedge 3 - (4/3)\,\pi\left(\frac{2\pi\,\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta} - r\,\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}{2\pi}\right)\wedge 3,\,\theta\right]$$

$$\left\{\{\theta\to 2\pi\},\,\left\{\theta\to 2\pi-\sqrt{2\left(3-i\sqrt{3}\right)}\,\pi\right\},\,\left\{\theta\to 2\pi+\sqrt{2\left(3-i\sqrt{3}\right)}\,\pi\right\},\,\left\{\theta\to 2\pi-\sqrt{2\left(3+i\sqrt{3}\right)}\,\pi\right\},\,\left\{\theta\to 2\pi+\sqrt{2\left(3+i\sqrt{3}\right)}\,\pi\right\}\right\}$$

$$(4/3)\,\pi\,(r)\wedge 3 - (4/3)\,\pi\left(\frac{2\pi r - r\,\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}{2\pi}\right)\wedge 3$$

$$(4/3)\,\pi\,(r)\wedge 3 - (4/3)\,\pi\left(\frac{2\pi\,\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta} - r\,\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}{2\pi}\right)\wedge 3$$

$$(4/3)\,\pi\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)\wedge 3 - (4/3)\,\pi\left(\frac{2\pi r - r\theta}{2\pi}\right)\wedge 3$$

$$\text{ContourPlot3D}\Big[\Big\{-\Big(2\sqrt{2}\sqrt{\Big(2\pi^4\eta^2\,\text{Sin}[\beta]^2+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}+\frac{4\pi^5\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)}\Big)\Big/\Big(\sqrt{-4\pi\theta^3+\theta^4+64\pi^4\,\text{Sin}[\beta]^2}\Big),$$

$$\Big(2\sqrt{2}\sqrt{\Big(2\pi^4\eta^2\,\text{Sin}[\beta]^2+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}+\frac{4\pi^5\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)}\Big)\Big/$$

$$\Big(\sqrt{-4\pi\theta^3+\theta^4+64\pi^4\,\text{Sin}[\beta]^2}\Big)\Big\},\ \{\eta,-1,1\},\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}\Big]$$

$$\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\text{Solve}\Big[\frac{r\sqrt{4\pi+i\,\text{ArcSinh}\big[e^{i\theta}-\text{Cos}[\theta]\big]}\sqrt{-i\,\text{ArcSinh}\big[e^{i\theta}-\text{Cos}[\theta]\big]}}{2\pi}==$$

$$\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi},\ v\Big]$$

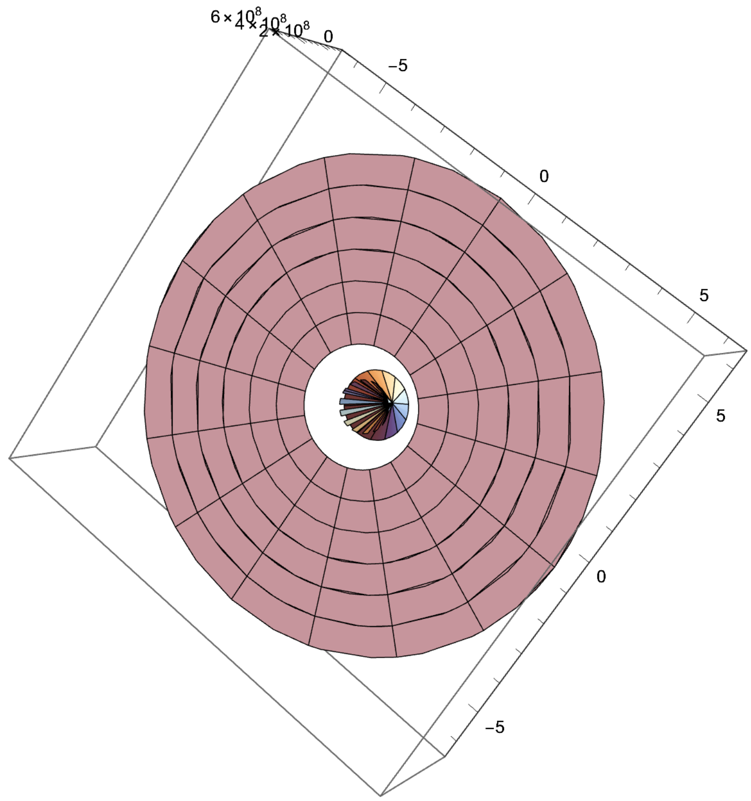
$$\Big\{\Big\{v\to-\Big(1.\sqrt{\Big(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+8.98755\times10^{16}\,\text{ArcSinh}\big[e^{i\theta}-1.\,\text{Cos}[\theta]\big]^2-(0.+1.12941\times10^{18}\,i)\,\text{ArcSinh}\big[e^{(0.+1.\,i)\,\theta}-1.\,\text{Cos}[\theta]\big]\Big)}\Big)\Big/$$

$$\Big(\sqrt{\Big(-12.5664\,\theta+\theta^2+\text{ArcSinh}\big[e^{i\theta}-1.\,\text{Cos}[\theta]\big]^2-(0.+12.5664\,i)\,\text{ArcSinh}\big[e^{(0.+1.\,i)\,\theta}-1.\,\text{Cos}[\theta]\big]\Big)}\Big)\Big\},$$

$$\Big\{v\to\Big(\sqrt{\Big(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+8.98755\times10^{16}\,\text{ArcSinh}\big[e^{i\theta}-1.\,\text{Cos}[\theta]\big]^2-(0.+1.12941\times10^{18}\,i)\,\text{ArcSinh}\big[e^{(0.+1.\,i)\,\theta}-1.\,\text{Cos}[\theta]\big]\Big)}\Big)\Big/$$

$$\Big(\sqrt{\Big(-12.5664\,\theta+\theta^2+\text{ArcSinh}\big[e^{i\theta}-1.\,\text{Cos}[\theta]\big]^2-(0.+12.5664\,i)\,\text{ArcSinh}\big[e^{(0.+1.\,i)\,\theta}-1.\,\text{Cos}[\theta]\big]\Big)}\Big)\Big\}\Big\}$$

```
RevolutionPlot3D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 8.987551787368176`*^16 ArcSinh[e^(ⅈ θ) - 1.` Cos[θ]]^2 -
      (0.`+1.1294090667581472`*^18 ⅈ) ArcSinh[e^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` θ + θ^2 + ArcSinh[e^(ⅈ θ) - 1.` Cos[θ]]^2 -
      (0.`+12.566370614359172` ⅈ) ArcSinh[e^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]])), {θ, -2 π, 2 π}]
```



```
Export["splat.3ds",
 SphericalPlot3D[1/c^2 √(1 - (((√(-1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
            8.987551787368176`*^16 θ^2 +
            8.987551787368176`*^16 ArcSinh[ⅇ^(ⅈ θ) - 1.` Cos[θ]]^2 -
            (0.` + 1.1294090667581472`*^18 ⅈ) ArcSinh[ⅇ^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]]))/
        (√(-12.566370614359172` θ + θ^2 + ArcSinh[ⅇ^(ⅈ θ) - 1.` Cos[θ]]^2 -
            (0.` + 12.566370614359172` ⅈ) ArcSinh[ⅇ^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]]))) ^
        2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]]
```

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0.\,i}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

ComputationalGeometry\`Methods\`SpatialSearch::spoutbounds : –– Message text not found ––
({–9.93738, –1.4586})

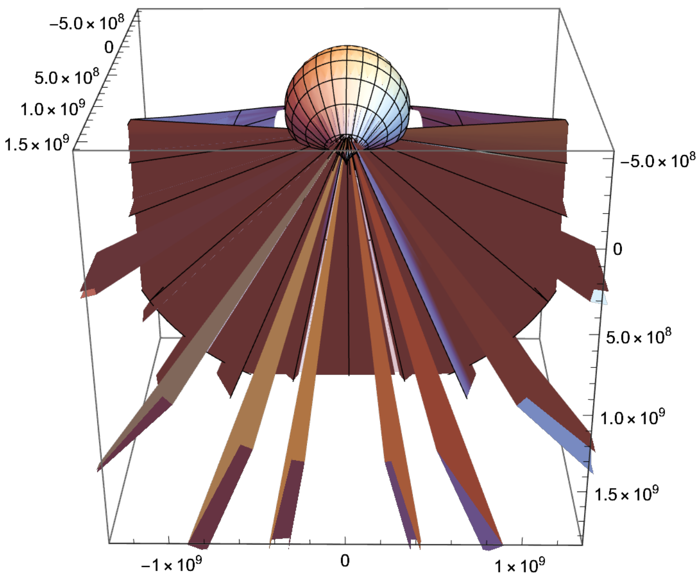
ComputationalGeometry\`Methods\`SpatialSearch::spoutbounds : –– Message text not found ––
({–9.49652, 0.915534})

ComputationalGeometry\`Methods\`SpatialSearch::spoutbounds : –– Message text not found ––
({–10.6043, –1.4025})

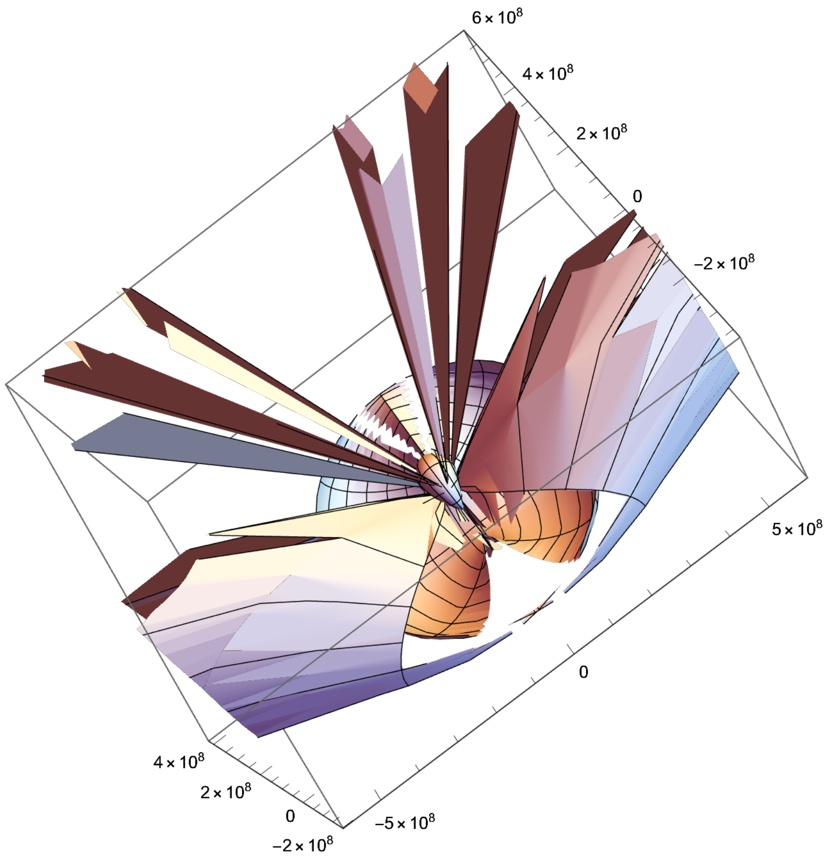
General::stop : Further output of ComputationalGeometry\`Methods\`SpatialSearch::spoutbounds will be suppressed during this calculation. ≫

```
splat.3ds
```

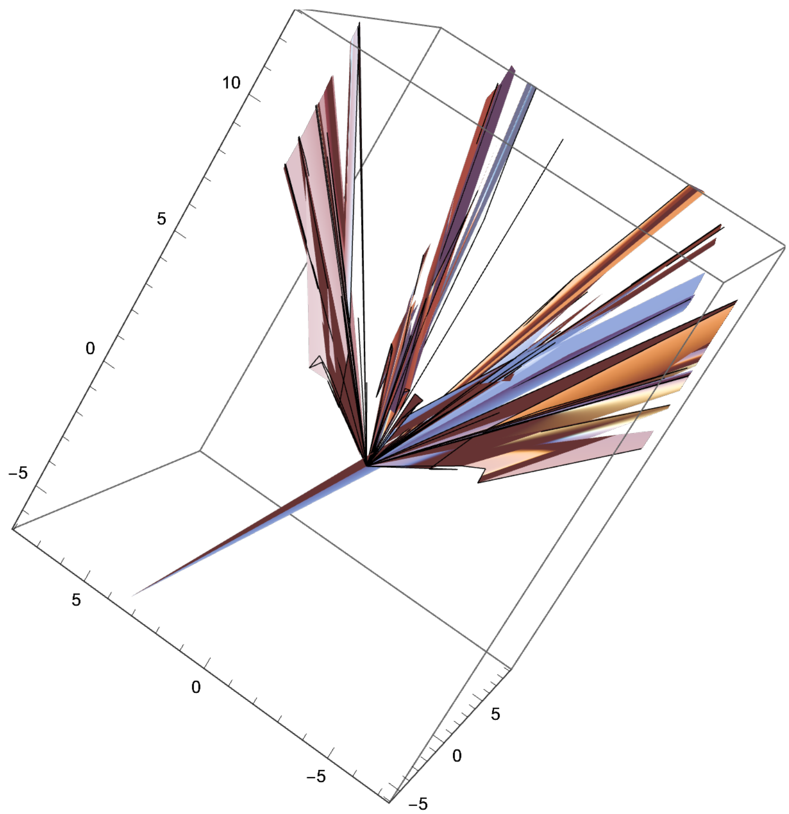
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) + 8.987551787368176`*^16 θ^2 +
     8.987551787368176`*^16 ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
     (0.` + 1.1294090667581472`*^18 i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` θ + θ^2 + ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
     (0.` + 12.566370614359172` i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



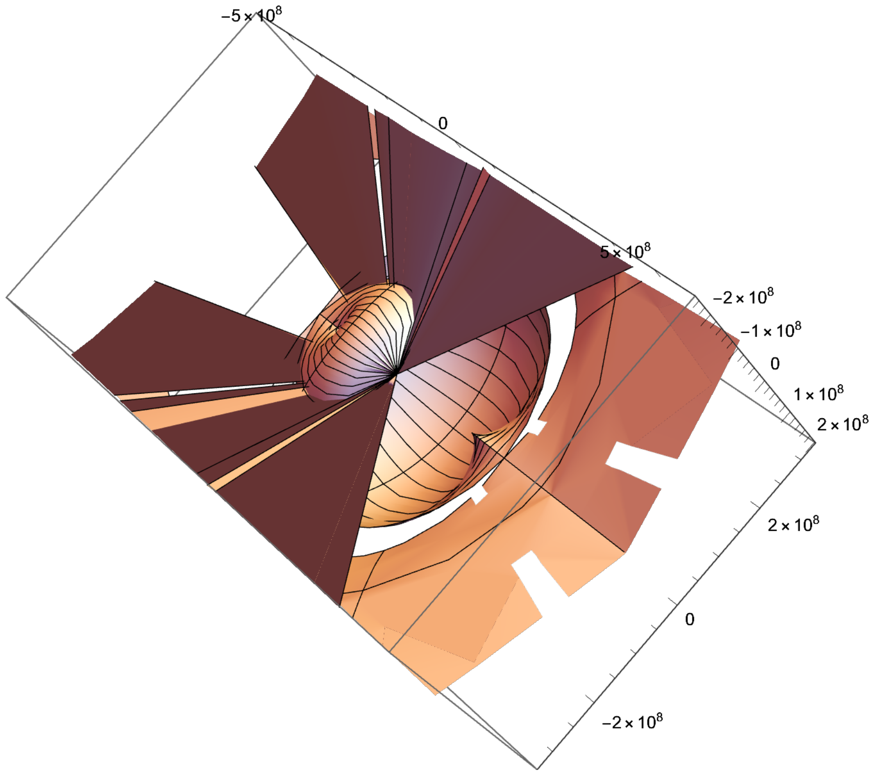
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) + 8.987551787368176`*^16
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 8.987551787368176`*^16 ArcSinh[ⅇ^(ⅈ θ) - 1.` Cos[θ]]^2 -
       (0.` + 1.1294090667581472`*^18 ⅈ) ArcSinh[ⅇ^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` θ + θ^2 + ArcSinh[ⅇ^(ⅈ θ) - 1.` Cos[θ]]^2 -
       (0.` + 12.566370614359172` ⅈ) ArcSinh[ⅇ^((0.`+1.` ⅈ) θ) - 1.` Cos[θ]])),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



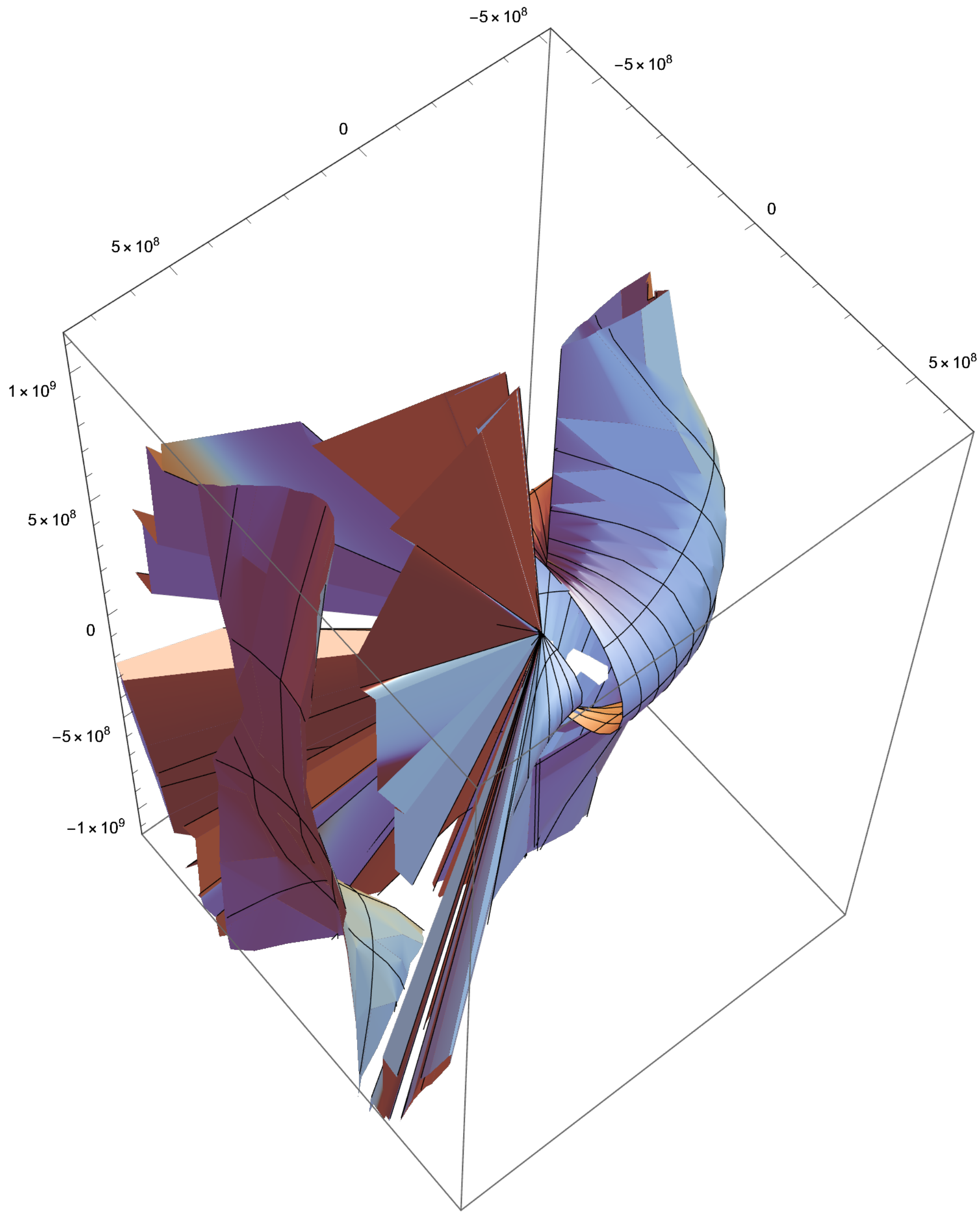
```
SphericalPlot3D[(√(-1.1294090667581471`*^18 (θ) +
      8.987551787368176`*^16 (θ)^2 + 8.987551787368176`*^16 ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
      (0.` + 1.1294090667581472`*^18 i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` θ + θ^2 + ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
      (0.` + 12.566370614359172` i) ArcSinh[e^((0.`+1.` i) θ) -
        1.` Cos[2 (π + √(π^2 - π^2 Sin[β]^2))]])), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[((√(-1.1294090667581471`*^18 (θ) +
      8.987551787368176`*^16 (θ)^2 + 8.987551787368176`*^16 ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
      (0.` + 1.1294090667581472`*^18 i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` θ + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
      (0.` + 12.566370614359172` i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]]))),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[((√(-1.1294090667581471`*^18 (θ) +
      8.987551787368176`*^16 (θ)^2 + 8.987551787368176`*^16 ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 -
      (0.` + 1.1294090667581472`*^18 i) ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])) /
  (√(-12.566370614359172` × 2 (π + √(π^2 - π^2 Sin[β]^2)) + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      ArcSinh[e^(i θ) - 1.` Cos[θ]]^2 - (0.` + 12.566370614359172` i)
       ArcSinh[e^((0.`+1.` i) θ) - 1.` Cos[θ]])), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



-5×10^8
-5×10^8
0
0
5×10^8
5×10^8
1×10^9
5×10^8
0
-5×10^8
-1×10^9

$$\text{Solve}\left[\left(\sqrt{\left(-1.1294090667581471`*^18\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}+8.987551787368176`*^16\ \left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172`\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}+\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2+39.47841760435743`\ \text{Sin}[\beta]^2\right)}\right)==(99.0*(10^8)),\ r\right]$$

$$\text{Solve}\left[\eta==\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3\ \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\ \sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2\ \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\,\theta\,\sqrt{r^2(4\pi-\theta)\theta}\right)}\right),\ r\right]$$

$$\text{Solve}\left[\eta==\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2 r^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2\ \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\,\theta\,\sqrt{r^2(4\pi-\theta)\theta}\right)}\right),\ r\right]$$

$$\left\{\left\{r\to-\frac{\pi^6(2048\pi-512\theta)\sqrt{(4\pi-\theta)\theta}}{4\theta\left(-1024\pi^7+256\pi^6\theta+16\pi^4\theta^3-32\pi^3\theta^4+24\pi^2\theta^5-8\pi\theta^6+\theta^7\right)}-\right.\right.$$
$$\frac{1}{2}\sqrt{\left(-\frac{512\pi^7\eta^2}{1024\pi^7-256\pi^6\theta-16\pi^4\theta^3+32\pi^3\theta^4-24\pi^2\theta^5+8\pi\theta^6-\theta^7}+\right.}$$
$$\frac{640\pi^6\eta^2\theta}{1024\pi^7-256\pi^6\theta-16\pi^4\theta^3+32\pi^3\theta^4-24\pi^2\theta^5+8\pi\theta^6-\theta^7}-$$
$$\frac{256\pi^5\eta^2\theta^2}{1024\pi^7-256\pi^6\theta-16\pi^4\theta^3+32\pi^3\theta^4-24\pi^2\theta^5+8\pi\theta^6-\theta^7}+$$
$$\frac{32\pi^4\eta^2\theta^3}{1024\pi^7-256\pi^6\theta-16\pi^4\theta^3+32\pi^3\theta^4-24\pi^2\theta^5+8\pi\theta^6-\theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)-$$

$$\frac{1}{2}\sqrt{\left(\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{3\,\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}-$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\Big(2\,\pi^4\,\big(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-640\,\pi^2\,\eta^2\,\theta^2+$$
$$256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\big)\Big)\Big/\Big(\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-$$
$$32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)\Big)-\Bigg(\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\Bigg(-\frac{\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$
$$\Big(4\,\pi^4\,\big(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-$$
$$640\,\pi^2\,\eta^2\,\theta^2+256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\big)\Big)\Big/$$
$$\Big(\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)\Big)\Bigg)\Bigg)\Big/$$

$$\Bigg(4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)$$

$$\sqrt{\Bigg(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$
$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$
$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$
$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$
$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$
$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$
$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$
$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\left.\left.\left.\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)\right)\right)\right\},$$

$$\left\{r\to-\frac{\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}-\right.$$
$$\frac{1}{2}$$
$$\sqrt{\left(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)+$$

$$\frac{1}{2}\sqrt{\left(\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{3\,\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}-$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\left(2\,\pi^4\,\left(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-640\,\pi^2\,\eta^2\,\theta^2+256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\right)\right)\Big/\left(\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)\right)-\Bigg(\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\Bigg(-\frac{\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\left(4\,\pi^4\,\left(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-640\,\pi^2\,\eta^2\,\theta^2+256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\right)\right)\Big/$$

$$\left.\left.\left(\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)\right)\right)\right)\Big/$$

$$\left(4\,\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)\right.$$

$$\sqrt{\left(\left(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}+\right.\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\Theta}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\Theta^2}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\Theta^3}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\Theta}{\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\Theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}+$$

$$\frac{4096\,\pi^8}{\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)}+$$

$$\frac{256\,\pi^6\,\Theta}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\Theta}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\Theta^2}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}+$$

$$\left.\left.\left.\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)\right)\right)\right\},$$

$$\left\{r\to-\frac{\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+\right.$$

$$\frac{1}{2}$$

$$\sqrt{\left(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)-$$

$$\frac{1}{2}\sqrt{\left(\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{3\,\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}-$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\Big(2\,\pi^4\,\big(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-640\,\pi^2\,\eta^2\,\theta^2+$$
$$256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\big)\Big)\Big/\Big(\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-$$
$$32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)\Big)+\Bigg(\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}$$
$$\Bigg(-\frac{\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)^2}+$$
$$\Big(4\,\pi^4\,\big(-4096\,\pi^4+2048\,\pi^3\,\theta+512\,\pi^3\,\eta^2\,\theta-256\,\pi^2\,\theta^2-$$
$$640\,\pi^2\,\eta^2\,\theta^2+256\,\pi\,\eta^2\,\theta^3-32\,\eta^2\,\theta^4\big)\Big)\Big/$$
$$\Big(\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)\Big)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(4\,\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)$$
$$\sqrt{\Bigg(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+}$$
$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$
$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{3\,145\,728\,\pi^{14}}{\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)^2}+$$
$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)^2}+$$
$$\frac{786\,432\,\pi^{13}\,\theta}{\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)^2}-$$
$$\frac{65\,536\,\pi^{12}\,\theta^2}{\big(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\big)^2}-$$
$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$
$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\left.\left.\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)\right)\right)\right\},$$

$$\left\{r\to-\frac{\pi^6\,(2048\,\pi-512\,\theta)\,\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+\right.$$

$$\frac{1}{2}$$

$$\sqrt{\left(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)+$$

$$\frac{1}{2}\sqrt{\left(\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{3\,\pi^{12}\,(2048\,\pi-512\,\theta)^2\,(4\,\pi-\theta)}{4\,\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}-$$

$$\frac{256\,\pi^6\,\Theta}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}-$$

$$\frac{640\,\pi^6\,\eta^2\,\Theta}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}+$$

$$\frac{256\,\pi^5\,\eta^2\,\Theta^2}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\Theta^3}{-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7}-$$

$$\left(2\,\pi^4\,\left(-4096\,\pi^4+2048\,\pi^3\,\Theta+512\,\pi^3\,\eta^2\,\Theta-256\,\pi^2\,\Theta^2-640\,\pi^2\,\eta^2\,\Theta^2+\right.\right.$$
$$\left.\left.256\,\pi\,\eta^2\,\Theta^3-32\,\eta^2\,\Theta^4\right)\right)\Big/\left(\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-\right.\right.$$
$$\left.\left.32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)\right)+\left(\pi^6\,(2048\,\pi-512\,\Theta)\,\sqrt{(4\,\pi-\Theta)\,\Theta}\right.$$

$$\left(-\frac{\pi^{12}\,(2048\,\pi-512\,\Theta)^2\,(4\,\pi-\Theta)}{\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}+\right.$$
$$\left(4\,\pi^4\,\left(-4096\,\pi^4+2048\,\pi^3\,\Theta+512\,\pi^3\,\eta^2\,\Theta-256\,\pi^2\,\Theta^2-\right.\right.$$
$$\left.\left.640\,\pi^2\,\eta^2\,\Theta^2+256\,\pi\,\eta^2\,\Theta^3-32\,\eta^2\,\Theta^4\right)\right)\Big/$$
$$\left.\left.\left(\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)\right)\right)\right)\Big/$$

$$\left(4\,\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)\right.$$

$$\sqrt{\left(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}+\right.}$$

$$\frac{640\,\pi^6\,\eta^2\,\Theta}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\Theta^2}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\Theta^3}{1024\,\pi^7-256\,\pi^6\,\Theta-16\,\pi^4\,\Theta^3+32\,\pi^3\,\Theta^4-24\,\pi^2\,\Theta^5+8\,\pi\,\Theta^6-\Theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\Theta\,\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\Theta}{\left(-1024\,\pi^7+256\,\pi^6\,\Theta+16\,\pi^4\,\Theta^3-32\,\pi^3\,\Theta^4+24\,\pi^2\,\Theta^5-8\,\pi\,\Theta^6+\Theta^7\right)^2}-$$

$$\frac{65536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

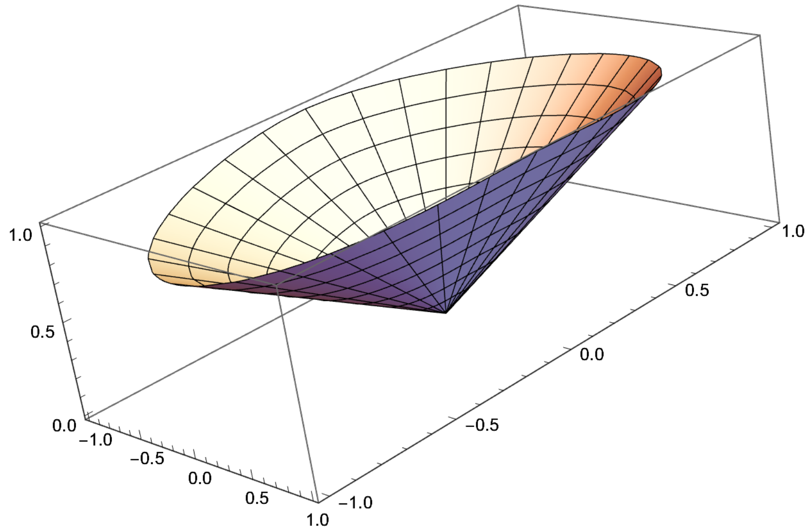
$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\left.\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)\right)\right)\}\}$$

```
RevolutionPlot3D[1/(2 π) (√(4 π r^2 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
        (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
       2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
     r^2 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
              3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
         (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2)),
 {r, -1, 1}, {β, -π / 2, π / 2}]
```



$$\frac{2\pi r - r\theta}{2\pi}$$

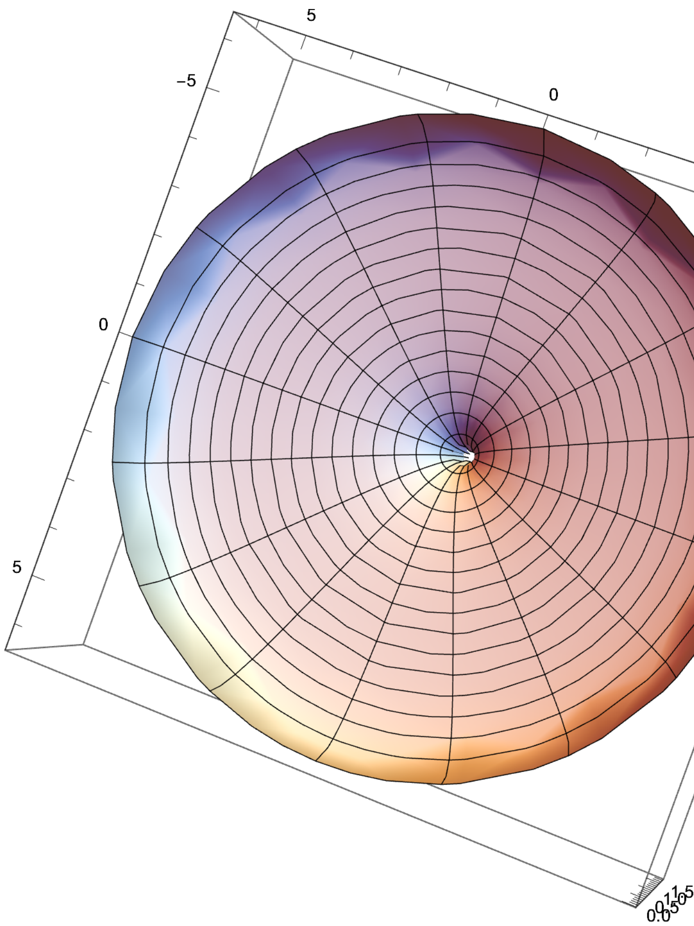
$$\text{Solve}\left[\frac{2\pi\left(2\pi\,\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta} - 2\pi\,\sqrt{\left(\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2 - \left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2}\right)}{\theta^2} == \frac{4\pi\left(\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2 - 2\left(\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta}{2\,\sqrt{4\pi\left(\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta - \left(\frac{2\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}},\ r\right]$$

$$\left\{\left\{r \to -\frac{1}{2}\sqrt{\left(4 - \frac{64\pi^3}{(4\pi-\theta)^3} + \frac{80\pi^2}{(4\pi-\theta)^2} - \frac{32\pi}{4\pi-\theta} - \frac{16\pi^2\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^3} + \frac{4\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2} + \frac{\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta} + \frac{\sqrt{(4\pi-\theta)\,\theta}}{\theta}\right)}\right\},\right.$$

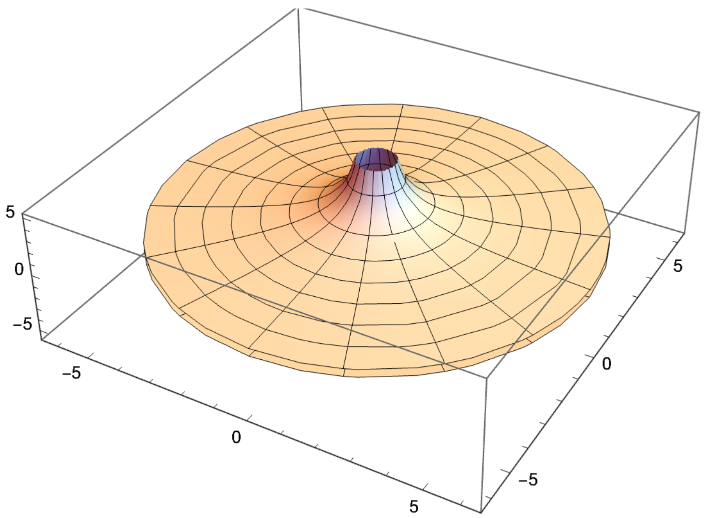
$$\left.\left\{r \to \frac{1}{2}\sqrt{\left(4 - \frac{64\pi^3}{(4\pi-\theta)^3} + \frac{80\pi^2}{(4\pi-\theta)^2} - \frac{32\pi}{4\pi-\theta} - \frac{16\pi^2\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^3} + \frac{4\pi\,\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2} + \frac{\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta} + \frac{\sqrt{(4\pi-\theta)\,\theta}}{\theta}\right)}\right\}\right\}$$

RevolutionPlot3D[

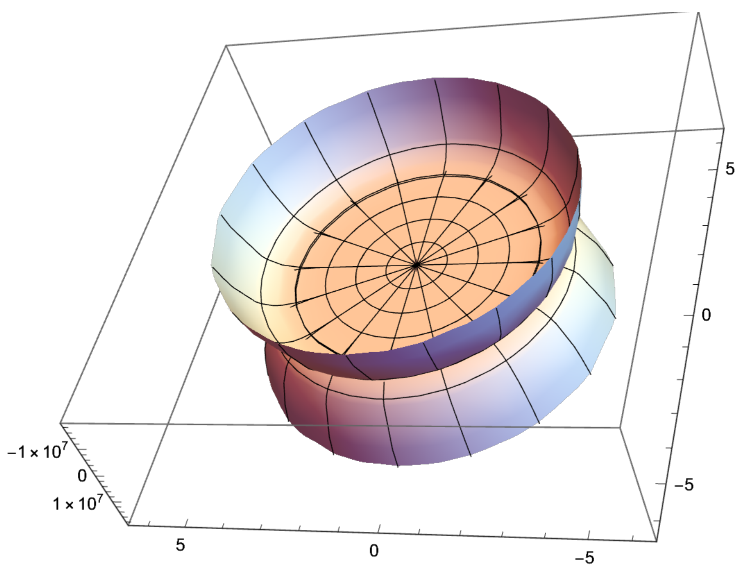
$$\frac{1}{2}\sqrt{\left(4-\frac{64\,\pi^3}{(4\,\pi-\theta)^3}+\frac{80\,\pi^2}{(4\,\pi-\theta)^2}-\frac{32\,\pi}{4\,\pi-\theta}-\frac{16\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^3}+\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^2}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\theta}\right)}, \{\theta, -2\,\pi, 2\,\pi\}]$$



$$\text{RevolutionPlot3D}\left[\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2-2\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta}{2\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\theta^{11},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi\left(2\pi r-2\pi\sqrt{(r)^2-(\eta)^2}\right)}{\theta^2}==\frac{4\pi(r)^2-2(r)^2\theta}{2\sqrt{4\pi(r)^2\theta-(r)^2\theta^2}},r\right]$$

$$\Big\{\Big\{r\to-\sqrt{\Big(-\left(256\pi^7\eta^2\theta^3\right)/}$$

$$\left(-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}\right)+$$

$$\frac{320\pi^6\eta^2\theta^4}{-1024\pi^7\theta^3+1280\pi^6\theta^4-512\pi^5\theta^5+80\pi^4\theta^6-32\pi^3\theta^7+24\pi^2\theta^8-8\pi\theta^9+\theta^{10}}-$$

$$\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$

$$\Big(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\,\Big)\Big/$$

$$\Big(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\Big)\Bigg)\Bigg\},$$

$$\Bigg\{r\to\sqrt{}\Bigg(-\frac{256\,\pi^7\,\eta^2\,\theta^3}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{320\,\pi^6\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$

$$\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$

$$\Big(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\,\Big)\Big/$$

$$\Big(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\Big)\Bigg)\Bigg\},$$

$$\Bigg\{r\to-\sqrt{}\Bigg(-\Big(256\,\pi^7\,\eta^2\,\theta^3\Big)\Big/\Big(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+$$

$$80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\Big)+$$

$$\frac{320\,\pi^6\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$

$$\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\Big(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\,\Big)\Big/$$

$$\Big(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\Big)\Bigg)\Bigg\},$$

$$\Bigg\{r\to\sqrt{}\Bigg(-\frac{256\,\pi^7\,\eta^2\,\theta^3}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{320\,\pi^6\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$

$$\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$

$$\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\left(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\right)\Big/$$
$$\left.\left.\left.\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)\right\}\right\}$$

$$\left(\sqrt{\left(-\frac{256\,\pi^7\,\eta^2\,\theta^3}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+\right.}\right.$$
$$\frac{320\,\pi^6\,\eta^2\,\theta^4}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$
$$\frac{128\,\pi^5\,\eta^2\,\theta^5}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\frac{16\,\pi^4\,\eta^2\,\theta^6}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\left(128\,\pi^6\,\sqrt{256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8}\right)\Big/$$
$$\left.\left.\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)\right)\text{^}2$$

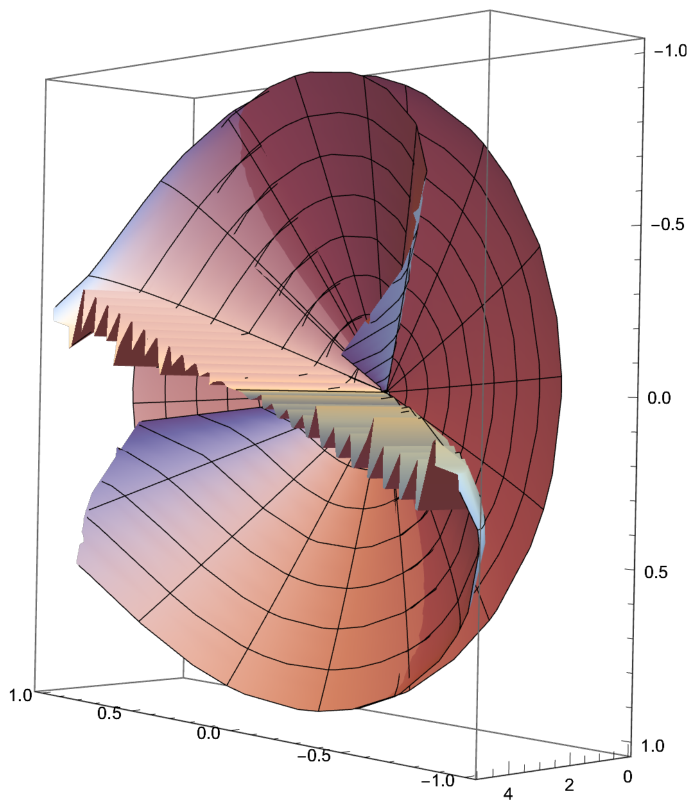
$$-\frac{64\,\pi^5\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\frac{80\,\pi^4\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$
$$\frac{32\,\pi^3\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\frac{4\,\pi^2\,\theta^6\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\left(128\,\pi^6\,\sqrt{\left(16\,\pi\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2-28\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2+\frac{19\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi}-\right.}\right.$$
$$\left.\left.\frac{25\,\theta^6\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{4\,\pi^2}+\frac{\theta^7\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi^3}-\frac{\theta^8\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{16\,\pi^4}\right)\right)\Big/$$
$$\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\Big/\,(\theta)$$

$$-\frac{64\,\pi^5\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\frac{80\,\pi^4\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}-$$
$$\frac{32\,\pi^3\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\frac{4\,\pi^2\,\theta^6\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)}{-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}}+$$
$$\left(128\,\pi^6\,\sqrt{\left(16\,\pi\,\theta^3\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2-28\,\theta^4\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2+\frac{19\,\theta^5\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi}-\right.}\right.$$
$$\left.\left.\frac{25\,\theta^6\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{4\,\pi^2}+\frac{\theta^7\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{\pi^3}-\frac{\theta^8\,\left(\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}\right)^2}{16\,\pi^4}\right)\right)\Big/$$
$$\left(\theta\,\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)$$

$$\text{Solve}\left[\frac{2\,\pi\left(2\,\pi\,\text{r}-2\,\pi\,\sqrt{(\text{r})^2-(\eta)^2}\right)}{\theta^2}==\frac{4\,\pi\,(\text{r})^2-2\,(\text{r})^2\,\theta}{2\,\sqrt{4\,\pi\,(\text{r})^2\,\theta-(\text{r})^2\,\theta^2}},\ \text{r}\right]$$

$$\left\{\left\{\text{r}\to-\frac{\sqrt{\frac{4\,\pi^2\,\sqrt{-\eta^2+\frac{4\,\pi^2}{(4\,\pi-\theta)\,\theta}}}{\theta^2}-\frac{8\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta^3}}}{\sqrt{-\frac{2\,\pi}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}+\frac{\theta}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}}}\right\},\ \left\{\text{r}\to\frac{\sqrt{\frac{4\,\pi^2\,\sqrt{-\eta^2+\frac{4\,\pi^2}{(4\,\pi-\theta)\,\theta}}}{\theta^2}-\frac{8\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta^3}}}{\sqrt{-\frac{2\,\pi}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}+\frac{\theta}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}}}\right\}\right\}$$

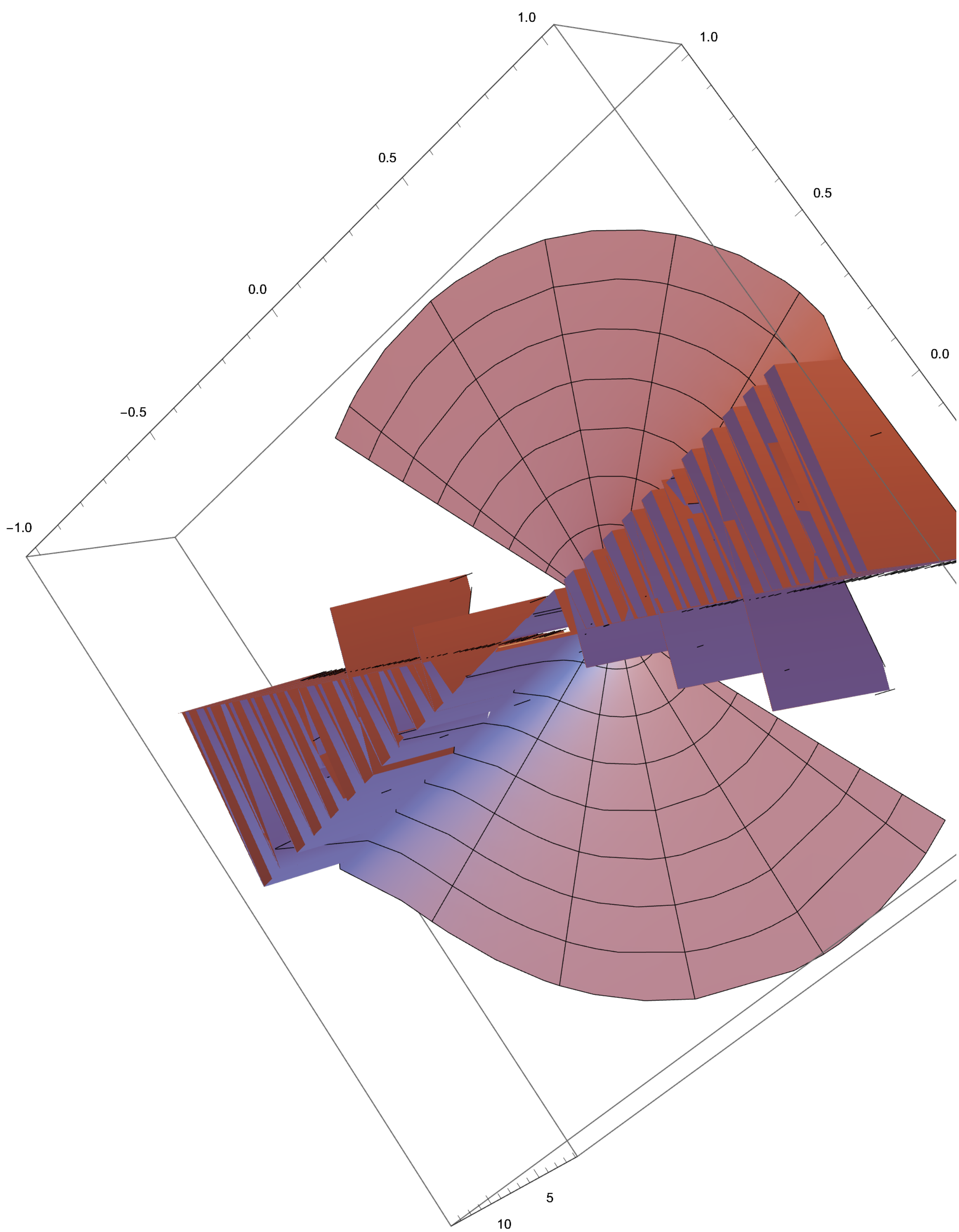
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{4\,\pi^2\,\sqrt{-\eta^2+\frac{4\,\pi^2}{(4\,\pi-\theta)\,\theta}}}{\theta^2}-\frac{8\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta^3}}}{\sqrt{-\frac{2\,\pi}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}+\frac{\theta}{\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}}},\ \{\eta,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



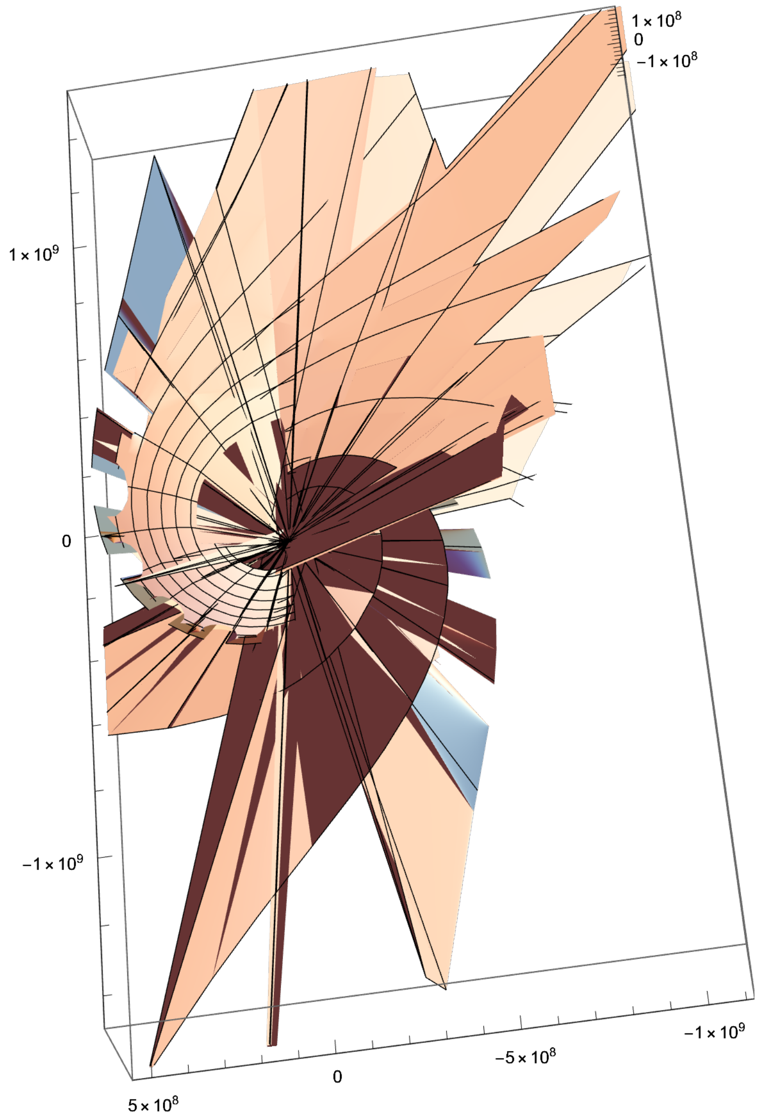
$$\text{Solve}\left[\frac{2\,\pi\left(2\,\pi\,r-2\,\pi\,\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}-(\eta)^{2}}\right)}{\theta^{2}}==\frac{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}-2\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}\theta}{2\,\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}\theta^{2}}},\ r\right]$$

$$\left\{\left\{r\to\frac{\theta^{2}\left(\frac{4\,\pi^{2}\,\sqrt{-\eta^{2}+\frac{4\,\pi^{2}}{(4\,\pi-\theta)\,\theta}}}{\theta^{2}}+\frac{-\frac{8\,\pi^{2}}{4\,\pi-\theta}+\frac{16\,\pi^{3}}{(4\,\pi-\theta)\,\theta}}{2\,\sqrt{\frac{16\,\pi^{3}}{4\,\pi-\theta}-\frac{4\,\pi^{2}\,\theta}{4\,\pi-\theta}}}\right)}{4\,\pi^{2}}\right\}\right\}$$

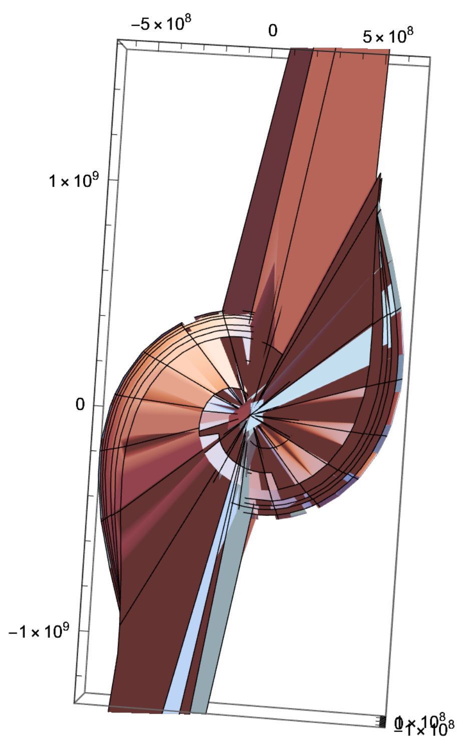
$$\text{RevolutionPlot3D}\left[\frac{\theta^{2}\left(\frac{4\,\pi^{2}\,\sqrt{-\eta^{2}+\frac{4\,\pi^{2}}{(4\,\pi-\theta)\,\theta}}}{\theta^{2}}+\frac{-\frac{8\,\pi^{2}}{4\,\pi-\theta}+\frac{16\,\pi^{3}}{(4\,\pi-\theta)\,\theta}}{2\,\sqrt{\frac{16\,\pi^{3}}{4\,\pi-\theta}-\frac{4\,\pi^{2}\,\theta}{4\,\pi-\theta}}}\right)}{4\,\pi^{2}},\ \{\eta,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\}\right]$$


1.0
1.0
0.5
0.5
0.0
0.0
−0.5
−1.0
5
10

```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (4 π/3 + ((1 - ⅈ √3) (-4 π^2 + 12 π^2 Sin[β]^2))/
          (12 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
        1/3 (1 + ⅈ √3)
         (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
     8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2))/
  (√(-12.566370614359172` θ + (4 π/3 + ((1 - ⅈ √3) (-4 π^2 + 12 π^2 Sin[β]^2))/
          (12 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
        1/3 (1 + ⅈ √3) (-π^3 + 18 π^3 Sin[β]^2 + 3 √3
            √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
     39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```


1 × 10^8
0
−1 × 10^8
1 × 10^9
0
−1 × 10^9
5 × 10^8
0
−5 × 10^8
−1 × 10^9

$$\text{SphericalPlot3D}\Big[\Bigg(\sqrt{\Bigg(-1.1294090667581471\text{`}*\text{^}18\left(\frac{4\pi}{3}+\left(\left(1-i\sqrt{3}\right)\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\right)\Big/\left(12\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\Bigg)}\Bigg)\Big/\left(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right),\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



$$\text{RevolutionPlot3D}\Big[-\frac{\pi^6\,(2048\pi-512\,\theta)\,\sqrt{(4\pi-\theta)\,\theta}}{4\,\theta\left(-1024\pi^7+256\pi^6\,\theta+16\pi^4\,\theta^3-32\pi^3\,\theta^4+24\pi^2\,\theta^5-8\pi\,\theta^6+\theta^7\right)}-$$

$$\frac{1}{2}\sqrt{\Bigg(\Bigg(-\frac{512\,\pi^7\,\eta^2}{1024\pi^7-256\pi^6\,\theta-16\pi^4\,\theta^3+32\pi^3\,\theta^4-24\pi^2\,\theta^5+8\pi\,\theta^6-\theta^7}+}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$
$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$
$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$
$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$
$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$
$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$
$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$
$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$
$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$
$$\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)-$$
$$\frac{1}{2}\sqrt{\left(\left(\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-\right.\right.}$$
$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$
$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7 - 256\,\pi^6\,\theta - 16\,\pi^4\,\theta^3 + 32\,\pi^3\,\theta^4 - 24\,\pi^2\,\theta^5 + 8\,\pi\,\theta^6 - \theta^7} +$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} -$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\,\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} +$$

$$\frac{3\,\pi^{12}\,(2048\,\pi - 512\,\theta)^2\,(4\,\pi - \theta)}{4\,\theta\,\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} -$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} +$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} +$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} +$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} -$$

$$\frac{4096\,\pi^8}{\theta\,\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)} -$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} -$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} +$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} -$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7} - \Big(2\,\pi^4$$

$$\left(-4096\,\pi^4 + 2048\,\pi^3\,\theta + 512\,\pi^3\,\eta^2\,\theta - 256\,\pi^2\,\theta^2 - 640\,\pi^2\,\eta^2\,\theta^2 + 256\,\pi\,\eta^2\,\theta^3 - 32\,\eta^2\,\theta^4\right)\Big) \Big/$$

$$\left(\theta\,\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)\right) - \Bigg(\pi^6\,(2048\,\pi - 512\,\theta)$$

$$\sqrt{(4\,\pi - \theta)\,\theta}\,\Bigg(-\frac{\pi^{12}\,(2048\,\pi - 512\,\theta)^2\,(4\,\pi - \theta)}{\theta\,\left(-1024\,\pi^7 + 256\,\pi^6\,\theta + 16\,\pi^4\,\theta^3 - 32\,\pi^3\,\theta^4 + 24\,\pi^2\,\theta^5 - 8\,\pi\,\theta^6 + \theta^7\right)^2} +$$

$$\Big(4\,\pi^4\,\Big(-4096\,\pi^4 + 2048\,\pi^3\,\theta + 512\,\pi^3\,\eta^2\,\theta - 256\,\pi^2\,\theta^2 -$$

$$640\,\pi^2\,\eta^2\,\theta^2 + 256\,\pi\,\eta^2\,\theta^3 - 32\,\eta^2\,\theta^4\Big)\Big) \Big/$$

$$\left(\theta\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)\right)\Bigg)\Bigg)\Big/$$

$$\Bigg(4\,\theta\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)$$

$$\sqrt{\Bigg(-\frac{512\,\pi^7\,\eta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+}$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}+$$

$$\frac{32\,\pi^4\,\eta^2\,\theta^3}{1024\,\pi^7-256\,\pi^6\,\theta-16\,\pi^4\,\theta^3+32\,\pi^3\,\theta^4-24\,\pi^2\,\theta^5+8\,\pi\,\theta^6-\theta^7}-$$

$$\frac{3\,145\,728\,\pi^{14}}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{4\,194\,304\,\pi^{15}}{\theta\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}+$$

$$\frac{786\,432\,\pi^{13}\,\theta}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{65\,536\,\pi^{12}\,\theta^2}{\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)^2}-$$

$$\frac{2048\,\pi^7}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{512\,\pi^7\,\eta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{4096\,\pi^8}{\theta\left(-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7\right)}+$$

$$\frac{256\,\pi^6\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\frac{640\,\pi^6\,\eta^2\,\theta}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}-$$

$$\frac{256\,\pi^5\,\eta^2\,\theta^2}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}+$$

$$\left.\left.\left.\frac{32\,\pi^4\,\eta^2\,\theta^3}{-1024\,\pi^7+256\,\pi^6\,\theta+16\,\pi^4\,\theta^3-32\,\pi^3\,\theta^4+24\,\pi^2\,\theta^5-8\,\pi\,\theta^6+\theta^7}\right)\right)\right),$$

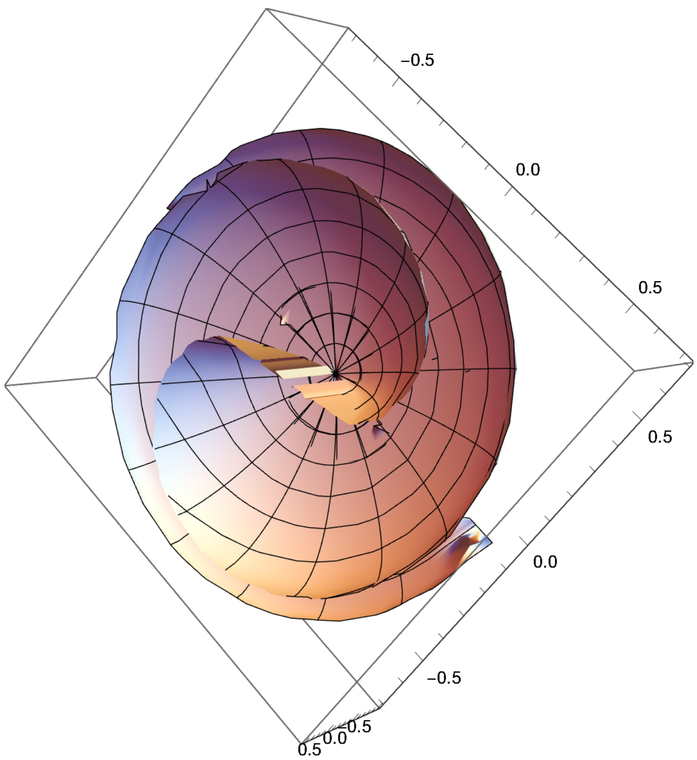
$\{\eta,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}]$

Power::infy : Infinite expression $\frac{1}{\sqrt{0.}}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{\sqrt{0.}}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{\sqrt{0.}}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫



$$
\begin{aligned}
&\text{Solve}\Big[\Big(\big(\sqrt{}\,(-1.1294090667581471\text{\`{}*\^{}}18\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,\theta^2 + 3.5481432270250993\text{\`{}*\^{}}18\,\text{Sin}[\beta]^2)\big)\Big/ \\
&\quad \Big(\sqrt{-12.566370614359172\text{\`{}}\,\theta + \theta^2 + 39.47841760435743\text{\`{}}\,\text{Sin}[\beta]^2}\Big)\Big) - \\
&\quad \big(\sqrt{}\,(3.5481432270250993\text{\`{}*\^{}}18\,h^2 - 1.1294090667581471\text{\`{}*\^{}}18\,r\,z\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,z^2\,\theta^2)\big)\Big/ \\
&\quad \Big(\sqrt{39.47841760435743\text{\`{}}\,h^2 - 12.566370614359172\text{\`{}}\,r\,z\,\theta + z^2\,\theta^2}\Big) == \\
&\quad \Big(\big(\sqrt{}\,(8.987551787368176\text{\`{}*\^{}}16\,r^2\,\alpha^2 - 8.987551787368176\text{\`{}*\^{}}16\,r^2\,\delta^2 - \\
&\qquad 1.7975103574736352\text{\`{}*\^{}}17\,r\,z\,\alpha\,\theta + 8.987551787368176\text{\`{}*\^{}}16\,z\,\delta^2\,\eta^2\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,z^2\,\theta^2)\big)\Big/ \\
&\quad \Big(\sqrt{r^2\,\alpha^2 - 1.\text{\`{}}\,r^2\,\delta^2 - 2.\text{\`{}}\,r\,z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\Big)\Big),\ h\Big]
\end{aligned}
$$

$$
\begin{aligned}
&\text{Solve}\Big[\Big(\big(\sqrt{}\,(-1.1294090667581471\text{\`{}*\^{}}18\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,\theta^2 + 3.5481432270250993\text{\`{}*\^{}}18\,\text{Sin}[\beta]^2)\big)\Big/ \\
&\quad \Big(\sqrt{-12.566370614359172\text{\`{}}\,\theta + \theta^2 + 39.47841760435743\text{\`{}}\,\text{Sin}[\beta]^2}\Big)\Big) - \\
&\quad \big(\sqrt{}\,(3.5481432270250993\text{\`{}*\^{}}18\,h^2 - 1.1294090667581471\text{\`{}*\^{}}18\,r\,z\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,z^2\,\theta^2)\big)\Big/ \\
&\quad \Big(\sqrt{39.47841760435743\text{\`{}}\,h^2 - 12.566370614359172\text{\`{}}\,r\,z\,\theta + z^2\,\theta^2}\Big) == \\
&\quad \Big(\big(\sqrt{}\,(8.987551787368176\text{\`{}*\^{}}16\,r^2\,\alpha^2 - 8.987551787368176\text{\`{}*\^{}}16\,r^2\,\delta^2 - \\
&\qquad 1.7975103574736352\text{\`{}*\^{}}17\,r\,z\,\alpha\,\theta + 8.987551787368176\text{\`{}*\^{}}16\,z\,\delta^2\,\eta^2\,\theta + \\
&\qquad 8.987551787368176\text{\`{}*\^{}}16\,z^2\,\theta^2)\big)\Big/ \\
&\quad \Big(\sqrt{r^2\,\alpha^2 - 1.\text{\`{}}\,r^2\,\delta^2 - 2.\text{\`{}}\,r\,z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\Big)\Big),\ h\Big]
\end{aligned}
$$

$$
\begin{aligned}
&\Big\{\Big\{h \to -\Big(\Big(1.\,\sqrt{}\,\big(1.19252\times10^{104}\,r\,z\,\theta^3 - 1.89795\times10^{103}\,r\,z\,\theta^4 - 9.48973\times10^{102}\,z^2\,\theta^4 + \\
&\qquad 7.55169\times10^{101}\,r\,z\,\theta^5 + 1.51034\times10^{102}\,z^2\,\theta^5 - 6.00944\times10^{100}\,z^2\,\theta^6 - \\
&\qquad 7.49279\times10^{104}\,r\,z\,\theta^2\,\text{Sin}[\beta]^2 + 5.96258\times10^{103}\,r\,z\,\theta^3\,\text{Sin}[\beta]^2 + \\
&\qquad 5.96258\times10^{103}\,z^2\,\theta^3\,\text{Sin}[\beta]^2 - 4.74487\times10^{102}\,z^2\,\theta^4\,\text{Sin}[\beta]^2 + \\
&\qquad 1.17697\times10^{105}\,r\,z\,\theta\,\text{Sin}[\beta]^4 - 9.36599\times10^{103}\,z^2\,\theta^2\,\text{Sin}[\beta]^4 + \\
&\qquad \big(3.01504\times10^{69}\,r\,z\,\theta^2\,\sqrt{}\,\big(8.98755\times10^{16}\,r^2\,\alpha^2 - 8.98755\times10^{16}\,r^2\,\delta^2 - \\
&\qquad\qquad 1.79751\times10^{17}\,r\,z\,\alpha\,\theta + 8.98755\times10^{16}\,z\,\delta^2\,\eta^2\,\theta + 8.98755\times10^{16} \\
&\qquad\qquad z^2\,\theta^2\big)\ \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2} \\
&\qquad\quad \sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}\big)\Big/ \\
&\qquad \Big(\sqrt{r^2\,\alpha^2 - 1.\,r^2\,\delta^2 - 2.\,r\,z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\Big) -
\end{aligned}
$$

$$\left(2.3993\times 10^{68}\, r\, z\, \theta^3 \sqrt{\left(8.98755\times 10^{16}\, r^2\, \alpha^2 - 8.98755\times 10^{16}\, r^2\, \delta^2 - 1.79751\times 10^{17}\, r\, z\, \alpha\, \theta + 8.98755\times 10^{16}\, z\, \delta^2\, \eta^2\, \theta + 8.98755\times 10^{16}\, z^2\, \theta^2\right)} \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2} \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{r^2\,\alpha^2 - 1.\, r^2\,\delta^2 - 2.\, r\, z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\right) -$$

$$\left(4.57582\times 10^{68}\, z^2\, \theta^3 \sqrt{\left(8.98755\times 10^{16}\, r^2\, \alpha^2 - 8.98755\times 10^{16}\, r^2\, \delta^2 - 1.79751\times 10^{17}\, r\, z\, \alpha\, \theta + 8.98755\times 10^{16}\, z\, \delta^2\, \eta^2\, \theta + 8.98755\times 10^{16}\, z^2\, \theta^2\right)} \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2} \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{r^2\,\alpha^2 - 1.\, r^2\,\delta^2 - 2.\, r\, z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\right) +$$

$$\left(3.64132\times 10^{67}\, z^2\, \theta^4 \sqrt{\left(8.98755\times 10^{16}\, r^2\, \alpha^2 - 8.98755\times 10^{16}\, r^2\, \delta^2 - 1.79751\times 10^{17}\, r\, z\, \alpha\, \theta + 8.98755\times 10^{16}\, z\, \delta^2\, \eta^2\, \theta + 8.98755\times 10^{16}\, z^2\, \theta^2\right)} \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2} \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{r^2\,\alpha^2 - 1.\, r^2\,\delta^2 - 2.\, r\, z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\right) -$$

$$\left(9.47204\times 10^{69}\, r\, z\, \theta \sqrt{\left(8.98755\times 10^{16}\, r^2\, \alpha^2 - 8.98755\times 10^{16}\, r^2\, \delta^2 - 1.79751\times 10^{17}\, r\, z\, \alpha\, \theta + 8.98755\times 10^{16}\, z\, \delta^2\, \eta^2\, \theta + 8.98755\times 10^{16}\, z^2\, \theta^2\right)}\, \mathrm{Sin}[\beta]^2 \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2} \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{r^2\,\alpha^2 - 1.\, r^2\,\delta^2 - 2.\, r\, z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\right) +$$

$$\left(1.43754\times 10^{69}\, z^2\, \theta^2 \sqrt{\left(8.98755\times 10^{16}\, r^2\, \alpha^2 - 8.98755\times 10^{16}\, r^2\, \delta^2 - 1.79751\times 10^{17}\, r\, z\, \alpha\, \theta + 8.98755\times 10^{16}\, z\, \delta^2\, \eta^2\, \theta + 8.98755\times 10^{16}\, z^2\, \theta^2\right)}\, \mathrm{Sin}[\beta]^2 \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2} \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\sqrt{r^2\,\alpha^2 - 1.\, r^2\,\delta^2 - 2.\, r\, z\,\alpha\,\theta + z\,\delta^2\,\eta^2\,\theta + z^2\,\theta^2}\right)\Big)\Big) \Big/$$

$$\left(\sqrt{\left(3.7464\times 10^{104}\,\theta^2 - 5.96258\times 10^{103}\,\theta^3 + 2.37243\times 10^{102}\,\theta^4 - 2.35393\times 10^{105}\,\theta\,\mathrm{Sin}[\beta]^2 + 1.8732\times 10^{104}\,\theta^2\,\mathrm{Sin}[\beta]^2 + 3.69755\times 10^{105}\,\mathrm{Sin}[\beta]^4\right)}\right)\Big)\Big\},$$

$$\Big\{h \to \Big(\sqrt{\Big(1.19252\times 10^{104}\, r\, z\,\theta^3 - 1.89795\times 10^{103}\, r\, z\,\theta^4 -}$$
$$9.48973\times 10^{102}\, z^2\,\theta^4 +$$
$$7.55169\times 10^{101}\, r\, z\,\theta^5 +$$
$$1.51034\times 10^{102}\, z^2\,\theta^5 -$$
$$6.00944\times 10^{100}\, z^2\,\theta^6 -$$
$$7.49279\times 10^{104}\, r\, z\,\theta^2\,\mathrm{Sin}[\beta]^2 +$$
$$5.96258\times 10^{103}\, r\, z\,\theta^3\,\mathrm{Sin}[\beta]^2 +$$

$$5.96258\times10^{103}\ z^2\ \theta^3\ \mathrm{Sin}[\beta]^2 - 4.74487\times10^{102}\ z^2\ \theta^4\ \mathrm{Sin}[\beta]^2 + 1.17697\times10^{105}\ r\ z\ \theta\ \mathrm{Sin}[\beta]^4 - 9.36599\times10^{103}\ z^2\ \theta^2\ \mathrm{Sin}[\beta]^4 +$$

$$\Big(3.01504\times10^{69}\ r\ z\ \theta^2 \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right) -$$

$$\Big(2.3993\times10^{68}\ r\ z\ \theta^3 \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right) -$$

$$\Big(4.57582\times10^{68}\ z^2\ \theta^3 \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right) +$$

$$\Big(3.64132\times10^{67}\ z^2\ \theta^4 \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right) -$$

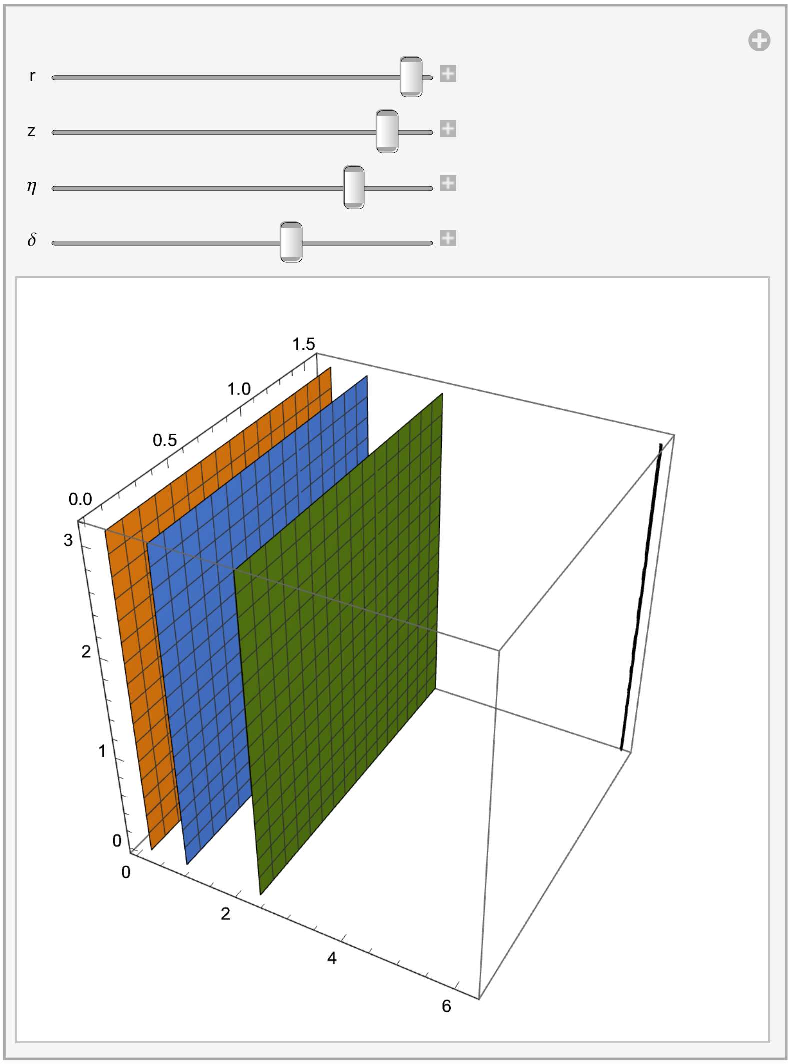
$$\Big(9.47204\times10^{69}\ r\ z\ \theta \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \mathrm{Sin}[\beta]^2\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right) +$$

$$\Big(1.43754\times10^{69}\ z^2\ \theta^2 \sqrt{\left(8.98755\times10^{16}\ r^2\ \alpha^2 - 8.98755\times10^{16}\ r^2\ \delta^2 - 1.79751\times10^{17}\ r\ z\ \alpha\ \theta + 8.98755\times10^{16}\ z\ \delta^2\ \eta^2\ \theta + 8.98755\times10^{16}\ z^2\ \theta^2\right)}\ \mathrm{Sin}[\beta]^2\ \sqrt{-12.5664\ \theta + \theta^2 + 39.4784\ \mathrm{Sin}[\beta]^2}\ \sqrt{-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \mathrm{Sin}[\beta]^2}\Big) \Big/ \left(\sqrt{r^2\ \alpha^2 - 1.\ r^2\ \delta^2 - 2.\ r\ z\ \alpha\ \theta + z\ \delta^2\ \eta^2\ \theta + z^2\ \theta^2}\right)\Big)\Big) \Big/$$

$$\Big(\sqrt{\Big(3.7464\times10^{104}\ \theta^2 - 5.96258\times10^{103}\ \theta^3 + 2.37243\times10^{102}\ \theta^4 - 2.35393\times10^{105}\ \theta\ \mathrm{Sin}[\beta]^2 + 1.8732\times10^{104}\ \theta^2\ \mathrm{Sin}[\beta]^2 +}$$

```
      3.69755 × 10^105 Sin[β]^4))}}

Manipulate[
 ContourPlot3D[(√(1.1925151910444093`*^104 r z θ^3 - 1.8979468736689365`*^103 r z θ^4 -
        9.489734368344682`*^102 z^2 θ^4 + 7.551690666755506`*^101 r z θ^5 +
        1.5103381333511015`*^102 z^2 θ^5 - 6.009444491575349`*^100 z^2 θ^6 -
        7.49279392695869`*^104 r z θ^2 Sin[β]^2 + 5.9625759552220465`*^103 r z θ^3 Sin[β]^2 +
        5.9625759552220465`*^103 z^2 θ^3 Sin[β]^2 - 4.744867184172341`*^102 z^2 θ^4 Sin[β]^2 +
        1.1769653177897818`*^105 r z θ Sin[β]^4 - 9.365992408698362`*^103 z^2 θ^2 Sin[β]^4 +
        (3.015044494171173`*^69 r z θ^2 √(8.987551787368176`*^16 r^2 α^2 -
              8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
              8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
           √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
           √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
         (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)) -
        (2.3992961744467273`*^68 r z θ^3 √(8.987551787368176`*^16 r^2 α^2 -
              8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
              8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
           √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
           √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
         (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)) -
        (4.575816320644992`*^68 z^2 θ^3 √(8.987551787368176`*^16 r^2 α^2 -
              8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
              8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
           √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
           √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
              3.5481432270250993`*^18 Sin[β]^2)) /
         (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)) +
        (3.641318930556098`*^67 z^2 θ^4 √(8.987551787368176`*^16 r^2 α^2 -
              8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
              8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
           √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
```

```
        √ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
      (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)) -
     (9.472041633134512`*^69 r z θ √ (8.987551787368176`*^16 r^2 α^2 -
            8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
            8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
        Sin[β]^2 √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
        √ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
      (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)) +
     (1.4375350937114585`*^69 z^2 θ^2 √ (8.987551787368176`*^16 r^2 α^2 -
            8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
            8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)
        Sin[β]^2 √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)
        √ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
      (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)))) /
  (√ (3.746396963479345`*^104 θ^2 - 5.9625759552220465`*^103 θ^3 +
       2.3724335920861706`*^102 θ^4 -
       2.3539306355795636`*^105 θ Sin[β]^2 +
       1.8731984817396724`*^104 θ^2 Sin[β]^2 +
       3.697545595898355`*^105 Sin[β]^4)),
 {θ, 0, 2 π}, {β, 0, π / 2}, {α, 0, π}],
{r,
 -1,
 1},
{z,
 -1,
 1},
{η,
 -1,
 1},
{δ,
 -1,
 1}]
```



Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

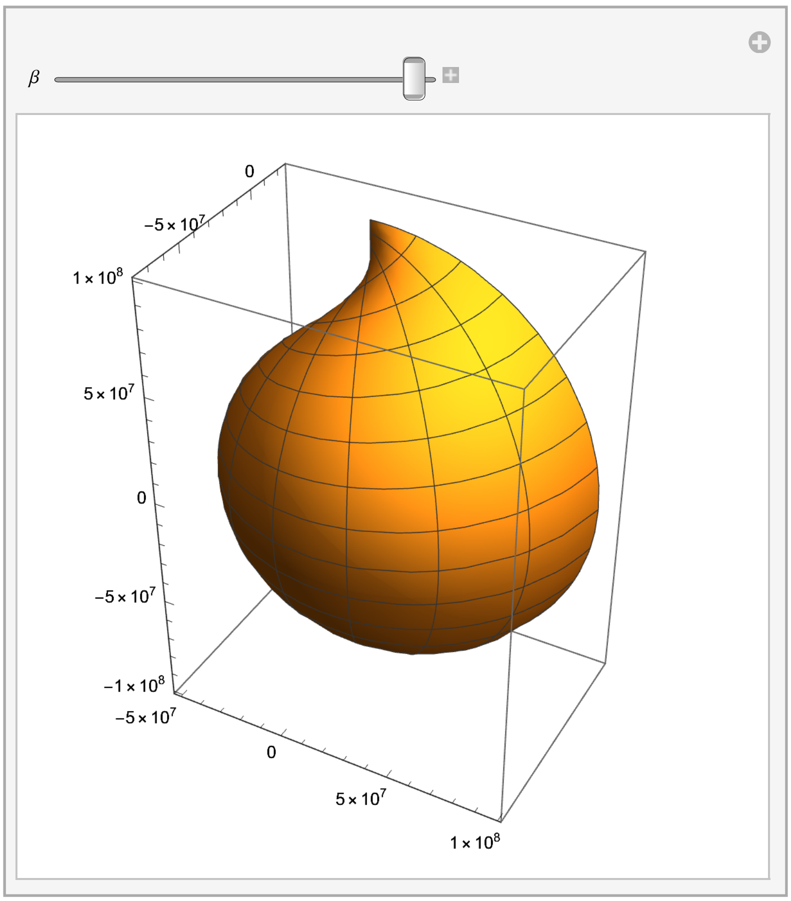
General: Further output of Power::infy will be suppressed during this calculation.

```
Solve[(√(1.0870275225442393`*^50 η² +
        3.4601160697970476`*^49 η² γ - 3.4601160697970476`*^49 r² γ +
        2.7534728808995085`*^48 η² γ² - 2.7534728808995085`*^48 r² γ²)) /
    (√(1.209481233890674`*^33 η² + 3.849898339011711`*^32 η² γ -
        3.849898339011711`*^32 r² γ + 3.0636517552749564`*^31 η² γ² -
        3.0636517552749564`*^31 r² γ²)) -
   (√(3.5481432270250993`*^18 η² - 1.1294090667581471`*^18 r² θ +
        8.987551787368176`*^16 r² θ²)) /
    (√(39.47841760435743` η² - 12.566370614359172` r² θ + r² θ²)) ==
  (√(8.987551787368176`*^16 l² α² - 8.987551787368176`*^16 l² δ² -
      1.7975103574736352`*^17 l z α κ + 8.987551787368176`*^16 z δ² x² κ +
      8.987551787368176`*^16 z² κ²)) /
   (√(l² α² - 1.` l² δ² - 2.` l z α κ + z δ² x² κ + z² κ²)), r]

{}

(√(1.0870275225442393`*^50 η² +
      3.4601160697970476`*^49 η² γ - 3.4601160697970476`*^49 r² γ +
      2.7534728808995085`*^48 η² γ² - 2.7534728808995085`*^48 r² γ²)) /
  (√(1.209481233890674`*^33 η² + 3.849898339011711`*^32 η² γ - 3.849898339011711`*^32
      r² γ + 3.0636517552749564`*^31 η² γ² - 3.0636517552749564`*^31 r² γ²)) -
 (√(3.5481432270250993`*^18 η² - 1.1294090667581471`*^18 r² θ +
      8.987551787368176`*^16 r² θ²)) /
  (√(39.47841760435743` η² - 12.566370614359172` r² θ + r² θ²))
```

```
Solve[(√(-3.4601160697970476`*^49 r^2 γ -
      2.7534728808995085`*^48 r^2 γ^2 + 1.0870275225442393`*^50 η^2 +
      3.4601160697970476`*^49 γ η^2 + 2.7534728808995085`*^48 γ^2 η^2)) /
   (√(-3.849898339011711`*^32 r^2 γ - 3.0636517552749564`*^31 r^2 γ^2 +
      1.209481233890674`*^33 η^2 + 3.849898339011711`*^32 γ η^2 +
      3.0636517552749564`*^31 γ^2 η^2)) -
  (√(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
      8.987551787368176`*^16 r^2 θ^2)) /
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)) == η, θ]
```

$$\left(\sqrt{\left(r^2\left(-3.46012\times10^{49}-2.75347\times10^{48}\,\gamma\right)\gamma+\left(1.08703\times10^{50}+3.46012\times10^{49}\,\gamma+2.75347\times10^{48}\,\gamma^2\right)\eta^2\right)}\right)\Big/\left(\sqrt{\left(r^2\left(-3.8499\times10^{32}-3.06365\times10^{31}\,\gamma\right)\gamma+\left(1.20948\times10^{33}+3.8499\times10^{32}\,\gamma+3.06365\times10^{31}\,\gamma^2\right)\eta^2\right)}\right)-\frac{\sqrt{3.54814\times10^{18}\,\eta^2+r^2\,\theta\left(-1.12941\times10^{18}+8.98755\times10^{16}\,\theta\right)}}{\sqrt{39.4784\,\eta^2+r^2\left(-12.5664+\theta\right)\theta}}$$

```
Manipulate[
 SphericalPlot3D[(√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
    1.0747647608787885`*^-12 Csc[β]^2 √(-7.780626516783903`*^40 -
        1.2126460106799624`*^44/(6.283185307179586` + γ)^4 + 6.143336457062639`*^42/(6.283185307179586` + γ)^2 +
        7.780626516783903`*^40 Sin[β]^4), {θ, 0, π}, {γ, 0, 2 π}], {β, 0, π / 2}]
```



```
Simplify[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
  1.0747647608787885`*^-12 Csc[β]^2
   √(-7.780626516783903`*^40 - 1.2126460106799624`*^44/(6.283185307179586` + γ)^4 +
      6.143336457062639`*^42/(6.283185307179586` + γ)^2 + 7.780626516783903`*^40 Sin[β]^4)]
```

$$\frac{\sqrt{\theta\,\left(-1.12941\times10^{18}+8.98755\times10^{16}\,\theta\right)+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}}{\sqrt{(-12.5664+\theta)\,\theta+39.4784\,\mathrm{Sin}[\beta]^2}}-1.07476\times10^{-12}\,\mathrm{Csc}[\beta]^2\sqrt{-7.78063\times10^{40}-\frac{1.21265\times10^{44}}{(6.28319+\gamma)^4}+\frac{6.14334\times10^{42}}{(6.28319+\gamma)^2}+7.78063\times10^{40}\,\mathrm{Sin}[\beta]^4}$$

```
Solve[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
        Sin[β]^2)) / (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
   (1.0747647608787885`*^-12 Csc[β]^2 √(-7.780626516783903`*^40 -
        1.2126460106799624`*^44/(6.283185307179586` + γ)^4 + 6.143336457062639`*^42/(6.283185307179586` + γ)^2 +
        7.780626516783903`*^40 Sin[β]^4)) == v, θ]
```

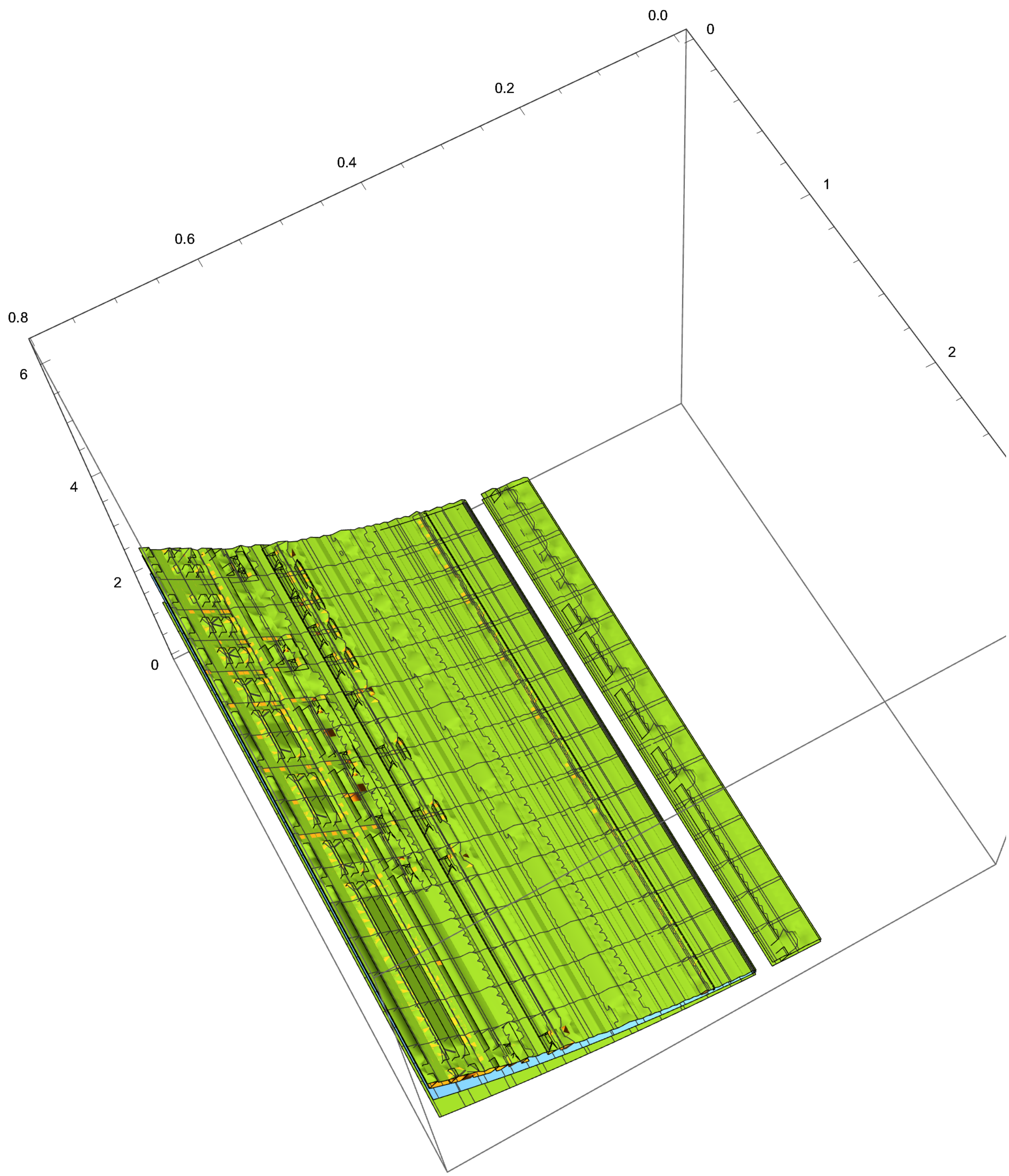
$$\text{Solve}\Big[\Big(1.0747647608787885\grave{}*\hat{}-12\ \text{Csc}[\beta]^2 \sqrt{(-1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2 + 3.5481432270250993\grave{}*\hat{}18\ \text{Sin}[\beta]^2)} \sqrt{\left(-7.780626516783903\grave{}*\hat{}40 - \frac{1.2126460106799624\grave{}*\hat{}44}{(6.283185307179586\grave{} + \gamma)^4} + \frac{6.143336457062639\grave{}*\hat{}42}{(6.283185307179586\grave{} + \gamma)^2} + 7.780626516783903\grave{}*\hat{}40\ \text{Sin}[\beta]^4\right)}\Big) \Big/ \left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \text{Sin}[\beta]^2}\right) == v^2, v\Big]$$

$$\Big\{\Big\{v \to -\Big(\Big(1.03671\times10^{-6}\ \text{Csc}[\beta]\ \left(-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \text{Sin}[\beta]^2\right)^{1/4} \left(-7.78063\times10^{40} - \frac{1.21265\times10^{44}}{(6.28319+\gamma)^4} + \frac{6.14334\times10^{42}}{(6.28319+\gamma)^2} + 7.78063\times10^{40}\ \text{Sin}[\beta]^4\right)^{1/4}\Big) \Big/ \left(-12.5664\ \theta + \theta^2 + 39.4784\ \text{Sin}[\beta]^2\right)^{1/4}\Big)\Big\},$$

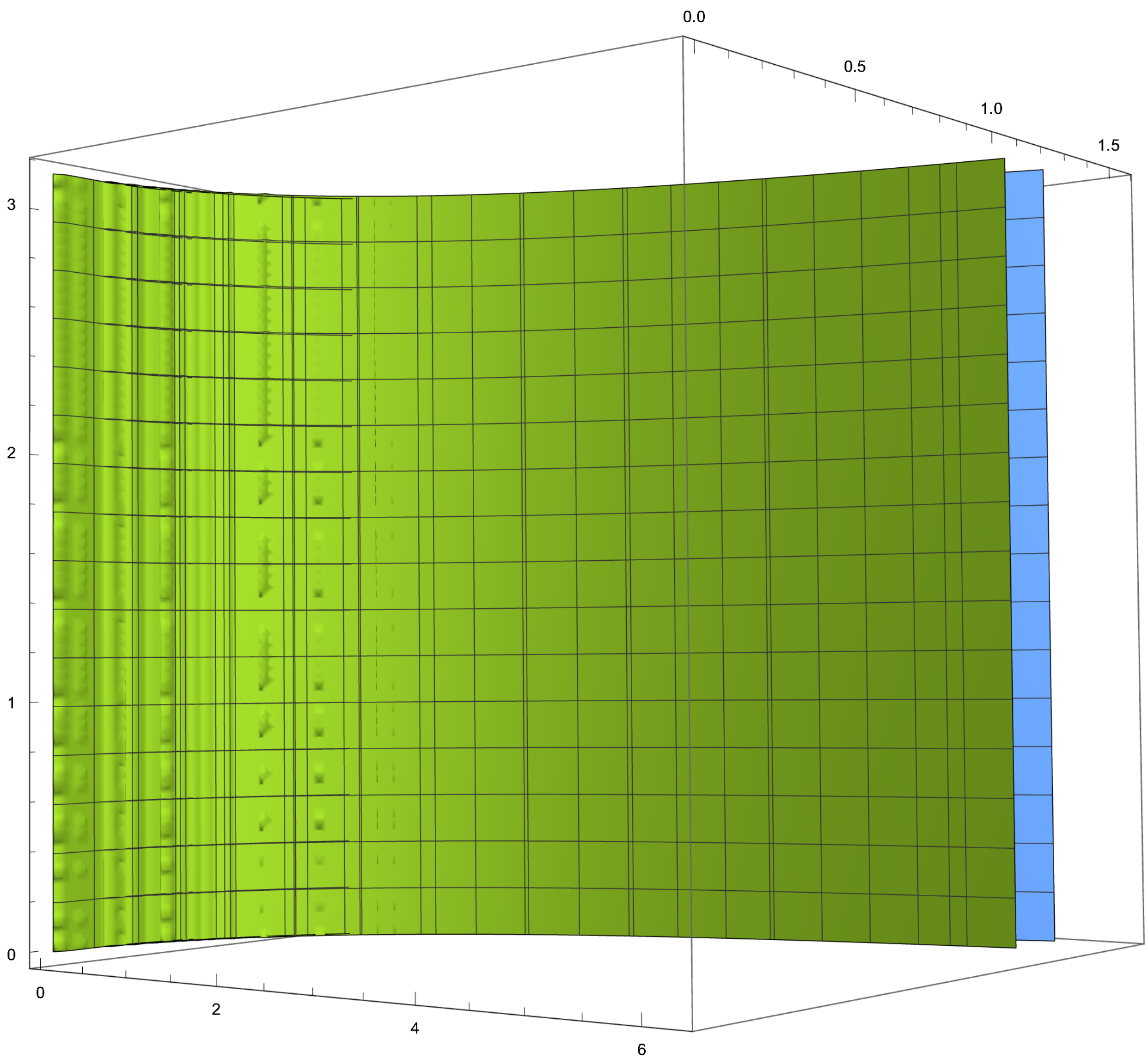
$$\Big\{v \to \Big(1.03671\times10^{-6}\ \text{Csc}[\beta]\ \left(-1.12941\times10^{18}\ \theta + 8.98755\times10^{16}\ \theta^2 + 3.54814\times10^{18}\ \text{Sin}[\beta]^2\right)^{1/4} \left(-7.78063\times10^{40} - \frac{1.21265\times10^{44}}{(6.28319+\gamma)^4} + \frac{6.14334\times10^{42}}{(6.28319+\gamma)^2} + 7.78063\times10^{40}\ \text{Sin}[\beta]^4\right)^{1/4}\Big) \Big/ \left(-12.5664\ \theta + \theta^2 + 39.4784\ \text{Sin}[\beta]^2\right)^{1/4}\Big\}\Big\}$$

$$\text{Solve}\Big[v == \Big(1.0367086190819426\grave{}*\hat{}-6\ \text{Csc}[\beta]\ (-1.1294090667581471\grave{}*\hat{}18\ \theta + 8.987551787368176\grave{}*\hat{}16\ \theta^2 + 3.5481432270250993\grave{}*\hat{}18\ \text{Sin}[\beta]^2)^{1/4} \left(-7.780626516783903\grave{}*\hat{}40 - \frac{1.2126460106799624\grave{}*\hat{}44}{(6.283185307179586\grave{} + \gamma)^4} + \frac{6.143336457062639\grave{}*\hat{}42}{(6.283185307179586\grave{} + \gamma)^2} + 7.780626516783903\grave{}*\hat{}40\ \text{Sin}[\beta]^4\right)^{1/4}\Big) \Big/ \left(-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \text{Sin}[\beta]^2\right)^{1/4}, \beta\Big]$$

```
ContourPlot3D[(1.0747647608787885`*^-12 Csc[β]^2 √(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)
    √(-7.780626516783903`*^40 - 1.2126460106799624`*^44/(6.283185307179586` + γ)^4 +
       6.143336457062639`*^42/(6.283185307179586` + γ)^2 + 7.780626516783903`*^40 Sin[β]^4))/
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {β, 0, π/4}, {θ, 0, π}, {γ, 0, 2 π}]
```


0.0
0.2
0.4
0.6
0.8
0
1
2
6
4
2
0

```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18
      Sin[β]^2)) / (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
  1.0747647608787885`*^-12 Csc[β]^2 √(-7.780626516783903`*^40 -
      1.2126460106799624`*^44 / (6.283185307179586` + γ)^4 + 6.143336457062639`*^42 / (6.283185307179586` + γ)^2 +
      7.780626516783903`*^40 Sin[β]^4), {θ, 0, π}, {γ, 0, 2 π}, {β, 0, π / 2}]
```



```
Solve[((√ (3.5481432270250993`*^18 h² -
      1.1294090667581471`*^18 r² θ + 8.987551787368176`*^16 r² θ²)) /
    (√(39.47841760435743` h² - 12.566370614359172` r² θ + r² θ²)))
  (√ (1.0870275225442393`*^50 h² + 3.4601160697970476`*^49 h² γ -
      3.4601160697970476`*^49 r² γ + 2.7534728808995085`*^48 h² γ² -
      2.7534728808995085`*^48 r² γ²)) /
   (√ (1.209481233890674`*^33 h² + 3.849898339011711`*^32 h² γ -
      3.849898339011711`*^32 r² γ + 3.0636517552749564`*^31 h² γ² -
      3.0636517552749564`*^31 r² γ²)) == v^2, r]
```

```
Manipulate[
 ContourPlot3D[((√ (3.5481432270250993`*^18 h² - 1.1294090667581471`*^18 r² θ +
      8.987551787368176`*^16 r² θ²)) /
    (√(39.47841760435743` h² - 12.566370614359172` r² θ + r² θ²)))
  (√ (1.0870275225442393`*^50 h² + 3.4601160697970476`*^49 h² γ -
      3.4601160697970476`*^49 r² γ + 2.7534728808995085`*^48 h² γ² -
      2.7534728808995085`*^48 r² γ²)) / (√ (1.209481233890674`*^33 h² +
      3.849898339011711`*^32 h² γ - 3.849898339011711`*^32 r² γ +
      3.0636517552749564`*^31 h² γ² - 3.0636517552749564`*^31 r² γ²)),
  {γ, 0, 4 π}, {θ, 0, π}, {h, 0, 10}], {r, 0, 10}]
```

\

```
Solve[((√(3.5481432270250993`*^18 η^2 -
      1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
   (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))
  (√(1.0870275225442393`*^50 h^2 + 3.4601160697970476`*^49 h^2 γ -
      3.4601160697970476`*^49 r^2 γ + 2.7534728808995085`*^48 h^2 γ^2 -
      2.7534728808995085`*^48 r^2 γ^2)) /
   (√(1.209481233890674`*^33 h^2 + 3.849898339011711`*^32 h^2 γ -
      3.849898339011711`*^32 r^2 γ + 3.0636517552749564`*^31 h^2 γ^2 -
      3.0636517552749564`*^31 r^2 γ^2)) == v^2, r]
```

```
{{r → -0.5
    √(-((2. (-3.04782 × 10^82 γ η^2 + 3.77317 × 10^48 v^4 γ η^2 - 2.42538 × 10^81 γ^2 η^2 + 3.00259 ×
              10^47 v^4 γ^2 η^2 - 3.04782 × 10^82 h^2 θ + 3.77317 × 10^48 h^2 v^4 θ - 9.70151 × 10^81 h^2
              γ θ + 1.20104 × 10^48 h^2 v^4 γ θ - 7.72021 × 10^80 h^2 γ^2 θ + 9.55755 × 10^46 h^2
              v^4 γ^2 θ + 2.42538 × 10^81 h^2 θ^2 - 3.00259 × 10^47 h^2 v^4 θ^2 + 7.72021 × 10^80 h^2 γ θ^2 -
              9.55755 × 10^46 h^2 v^4 γ θ^2 + 6.14355 × 10^79 h^2 γ^2 θ^2 - 7.60566 × 10^45 h^2 v^4 γ^2 θ^2)) /
          (γ θ (9.70151 × 10^81 - 1.20104 × 10^48 v^4 + 7.72021 × 10^80 γ -
              9.55755 × 10^46 v^4 γ - 7.72021 × 10^80 θ + 9.55755 × 10^46 v^4 θ -
              6.14355 × 10^79 γ θ + 7.60566 × 10^45 v^4 γ θ))) -
      2. √(-((4. h^2 (9.575 × 10^82 - 1.18538 × 10^49 v^4 + 3.04782 × 10^82 γ - 3.77317 × 10^48 v^4 γ +
                2.42538 × 10^81 γ^2 - 3.00259 × 10^47 v^4 γ^2) η^2) / (γ θ (9.70151 × 10^81 -
                1.20104 × 10^48 v^4 + 7.72021 × 10^80 γ - 9.55755 × 10^46 v^4 γ - 7.72021 × 10^80
                 θ + 9.55755 × 10^46 v^4 θ - 6.14355 × 10^79 γ θ + 7.60566 × 10^45 v^4 γ θ))) +
          (-3.04782 × 10^82 γ η^2 + 3.77317 × 10^48 v^4 γ η^2 - 2.42538 × 10^81 γ^2 η^2 +
              3.00259 × 10^47 v^4 γ^2 η^2 - 3.04782 × 10^82 h^2 θ + 3.77317 × 10^48 h^2 v^4 θ -
              9.70151 × 10^81 h^2 γ θ + 1.20104 × 10^48 h^2 v^4 γ θ - 7.72021 × 10^80 h^2 γ^2 θ +
              9.55755 × 10^46 h^2 v^4 γ^2 θ + 2.42538 × 10^81 h^2 θ^2 - 3.00259 × 10^47 h^2 v^4 θ^2 +
              7.72021 × 10^80 h^2 γ θ^2 - 9.55755 × 10^46 h^2 v^4 γ θ^2 +
              6.14355 × 10^79 h^2 γ^2 θ^2 - 7.60566 × 10^45 h^2 v^4 γ^2 θ^2)^2 /
           (γ^2 θ^2 (9.70151 × 10^81 - 1.20104 × 10^48 v^4 + 7.72021 × 10^80 γ -
                9.55755 × 10^46 v^4 γ - 7.72021 × 10^80 θ + 9.55755 × 10^46 v^4 θ -
                6.14355 × 10^79 γ θ + 7.60566 × 10^45 v^4 γ θ)^2)))},
  {r → 0.5 √(-((2. (-3.04782 × 10^82 γ η^2 + 3.77317 × 10^48 v^4 γ η^2 - 2.42538 × 10^81 γ^2 η^2 +
              3.00259 × 10^47 v^4 γ^2 η^2 - 3.04782 × 10^82 h^2 θ + 3.77317 × 10^48 h^2 v^4 θ -
              9.70151 × 10^81 h^2 γ θ + 1.20104 × 10^48 h^2 v^4 γ θ - 7.72021 × 10^80 h^2 γ^2 θ +
              9.55755 × 10^46 h^2 v^4 γ^2 θ + 2.42538 × 10^81 h^2 θ^2 - 3.00259 × 10^47 h^2 v^4 θ^2 +
              7.72021 × 10^80 h^2 γ θ^2 - 9.55755 × 10^46 h^2 v^4 γ θ^2 +
              6.14355 × 10^79 h^2 γ^2 θ^2 - 7.60566 × 10^45 h^2 v^4 γ^2 θ^2)) /
```

$$\left(\gamma\,\theta\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)\right)\Big)-$$

$$2.\sqrt{\Bigg(-\Bigg(\Big(4.\,h^2\left(9.575\times10^{82}-1.18538\times10^{49}\,v^4+3.04782\times10^{82}\,\gamma-3.77317\times10^{48}\,v^4\,\gamma+2.42538\times10^{81}\,\gamma^2-3.00259\times10^{47}\,v^4\,\gamma^2\right)\eta^2\Big)\Big/\Big(\gamma\,\theta\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)\Big)\Bigg)+\left(-3.04782\times10^{82}\,\gamma\,\eta^2+3.77317\times10^{48}\,v^4\,\gamma\,\eta^2-2.42538\times10^{81}\,\gamma^2\,\eta^2+3.00259\times10^{47}\,v^4\,\gamma^2\,\eta^2-3.04782\times10^{82}\,h^2\,\theta+3.77317\times10^{48}\,h^2\,v^4\,\theta-9.70151\times10^{81}\,h^2\,\gamma\,\theta+1.20104\times10^{48}\,h^2\,v^4\,\gamma\,\theta-7.72021\times10^{80}\,h^2\,\gamma^2\,\theta+9.55755\times10^{46}\,h^2\,v^4\,\gamma^2\,\theta+2.42538\times10^{81}\,h^2\,\theta^2-3.00259\times10^{47}\,h^2\,v^4\,\theta^2+7.72021\times10^{80}\,h^2\,\gamma\,\theta^2-9.55755\times10^{46}\,h^2\,v^4\,\gamma\,\theta^2+6.14355\times10^{79}\,h^2\,\gamma^2\,\theta^2-7.60566\times10^{45}\,h^2\,v^4\,\gamma^2\,\theta^2\right)^2\Big/\left(\gamma^2\,\theta^2\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)^2\right)\Bigg)}\Bigg)\Bigg\},$$

$$\Bigg\{r\to-0.5\sqrt{\Bigg(-\Bigg(\Big(2.\left(-3.04782\times10^{82}\,\gamma\,\eta^2+3.77317\times10^{48}\,v^4\,\gamma\,\eta^2-2.42538\times10^{81}\,\gamma^2\,\eta^2+3.00259\times10^{47}\,v^4\,\gamma^2\,\eta^2-3.04782\times10^{82}\,h^2\,\theta+3.77317\times10^{48}\,h^2\,v^4\,\theta-9.70151\times10^{81}\,h^2\,\gamma\,\theta+1.20104\times10^{48}\,h^2\,v^4\,\gamma\,\theta-7.72021\times10^{80}\,h^2\,\gamma^2\,\theta+9.55755\times10^{46}\,h^2\,v^4\,\gamma^2\,\theta+2.42538\times10^{81}\,h^2\,\theta^2-3.00259\times10^{47}\,h^2\,v^4\,\theta^2+7.72021\times10^{80}\,h^2\,\gamma\,\theta^2-9.55755\times10^{46}\,h^2\,v^4\,\gamma\,\theta^2+6.14355\times10^{79}\,h^2\,\gamma^2\,\theta^2-7.60566\times10^{45}\,h^2\,v^4\,\gamma^2\,\theta^2\right)\Big)\Big/\left(\gamma\,\theta\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)\right)\Bigg)+$$

$$2.\sqrt{\Bigg(-\Bigg(\Big(4.\,h^2\left(9.575\times10^{82}-1.18538\times10^{49}\,v^4+3.04782\times10^{82}\,\gamma-3.77317\times10^{48}\,v^4\,\gamma+2.42538\times10^{81}\,\gamma^2-3.00259\times10^{47}\,v^4\,\gamma^2\right)\eta^2\Big)\Big/\Big(\gamma\,\theta\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)\Big)\Bigg)+\left(-3.04782\times10^{82}\,\gamma\,\eta^2+3.77317\times10^{48}\,v^4\,\gamma\,\eta^2-2.42538\times10^{81}\,\gamma^2\,\eta^2+3.00259\times10^{47}\,v^4\,\gamma^2\,\eta^2-3.04782\times10^{82}\,h^2\,\theta+3.77317\times10^{48}\,h^2\,v^4\,\theta-9.70151\times10^{81}\,h^2\,\gamma\,\theta+1.20104\times10^{48}\,h^2\,v^4\,\gamma\,\theta-7.72021\times10^{80}\,h^2\,\gamma^2\,\theta+9.55755\times10^{46}\,h^2\,v^4\,\gamma^2\,\theta+2.42538\times10^{81}\,h^2\,\theta^2-3.00259\times10^{47}\,h^2\,v^4\,\theta^2+7.72021\times10^{80}\,h^2\,\gamma\,\theta^2-9.55755\times10^{46}\,h^2\,v^4\,\gamma\,\theta^2+6.14355\times10^{79}\,h^2\,\gamma^2\,\theta^2-7.60566\times10^{45}\,h^2\,v^4\,\gamma^2\,\theta^2\right)^2\Big/\left(\gamma^2\,\theta^2\left(9.70151\times10^{81}-1.20104\times10^{48}\,v^4+7.72021\times10^{80}\,\gamma-9.55755\times10^{46}\,v^4\,\gamma-7.72021\times10^{80}\,\theta+9.55755\times10^{46}\,v^4\,\theta-6.14355\times10^{79}\,\gamma\,\theta+7.60566\times10^{45}\,v^4\,\gamma\,\theta\right)^2\right)\Bigg)}\Bigg)}\Bigg\},$$

$$\Bigg\{r\to0.5\sqrt{\Bigg(-\Bigg(\Big(2.\left(-3.04782\times10^{82}\,\gamma\,\eta^2+3.77317\times10^{48}\,v^4\,\gamma\,\eta^2-2.42538\times10^{81}\,\gamma^2\,\eta^2+\right.}$$

$$3.00259\times10^{47}\, v^4\,\gamma^2\,\eta^2 - 3.04782\times10^{82}\, h^2\,\theta + 3.77317\times10^{48}\, h^2\, v^4\,\theta -$$
$$9.70151\times10^{81}\, h^2\,\gamma\,\theta + 1.20104\times10^{48}\, h^2\, v^4\,\gamma\,\theta - 7.72021\times10^{80}\, h^2\,\gamma^2\,\theta +$$
$$9.55755\times10^{46}\, h^2\, v^4\,\gamma^2\,\theta + 2.42538\times10^{81}\, h^2\,\theta^2 - 3.00259\times10^{47}\, h^2\, v^4\,\theta^2 +$$
$$7.72021\times10^{80}\, h^2\,\gamma\,\theta^2 - 9.55755\times10^{46}\, h^2\, v^4\,\gamma\,\theta^2 +$$
$$6.14355\times10^{79}\, h^2\,\gamma^2\,\theta^2 - 7.60566\times10^{45}\, h^2\, v^4\,\gamma^2\,\theta^2\big)\big)\Big/$$
$$\big(\gamma\,\theta\,\big(9.70151\times10^{81} - 1.20104\times10^{48}\, v^4 + 7.72021\times10^{80}\,\gamma -$$
$$9.55755\times10^{46}\, v^4\,\gamma - 7.72021\times10^{80}\,\theta + 9.55755\times10^{46}\, v^4\,\theta -$$
$$6.14355\times10^{79}\,\gamma\,\theta + 7.60566\times10^{45}\, v^4\,\gamma\,\theta\big)\big)\big) +$$
$$2.\sqrt{\Big(-\Big(\big(4.\, h^2\,\big(9.575\times10^{82} - 1.18538\times10^{49}\, v^4 + 3.04782\times10^{82}\,\gamma - 3.77317\times10^{48}\, v^4\,\gamma +}$$
$$2.42538\times10^{81}\,\gamma^2 - 3.00259\times10^{47}\, v^4\,\gamma^2\big)\,\eta^2\big)\Big/\big(\gamma\,\theta\,\big(9.70151\times10^{81} -$$
$$1.20104\times10^{48}\, v^4 + 7.72021\times10^{80}\,\gamma - 9.55755\times10^{46}\, v^4\,\gamma - 7.72021\times10^{80}$$
$$\theta + 9.55755\times10^{46}\, v^4\,\theta - 6.14355\times10^{79}\,\gamma\,\theta + 7.60566\times10^{45}\, v^4\,\gamma\,\theta\big)\big)\Big) +$$
$$\big(-3.04782\times10^{82}\,\gamma\,\eta^2 + 3.77317\times10^{48}\, v^4\,\gamma\,\eta^2 - 2.42538\times10^{81}\,\gamma^2\,\eta^2 +$$
$$3.00259\times10^{47}\, v^4\,\gamma^2\,\eta^2 - 3.04782\times10^{82}\, h^2\,\theta + 3.77317\times10^{48}\, h^2\, v^4\,\theta -$$
$$9.70151\times10^{81}\, h^2\,\gamma\,\theta + 1.20104\times10^{48}\, h^2\, v^4\,\gamma\,\theta - 7.72021\times10^{80}\, h^2\,\gamma^2\,\theta +$$
$$9.55755\times10^{46}\, h^2\, v^4\,\gamma^2\,\theta + 2.42538\times10^{81}\, h^2\,\theta^2 - 3.00259\times10^{47}\, h^2\, v^4\,\theta^2 +$$
$$7.72021\times10^{80}\, h^2\,\gamma\,\theta^2 - 9.55755\times10^{46}\, h^2\, v^4\,\gamma\,\theta^2 +$$
$$6.14355\times10^{79}\, h^2\,\gamma^2\,\theta^2 - 7.60566\times10^{45}\, h^2\, v^4\,\gamma^2\,\theta^2\big)^2\Big/$$
$$\big(\gamma^2\,\theta^2\,\big(9.70151\times10^{81} - 1.20104\times10^{48}\, v^4 + 7.72021\times10^{80}\,\gamma -$$
$$9.55755\times10^{46}\, v^4\,\gamma - 7.72021\times10^{80}\,\theta + 9.55755\times10^{46}\, v^4\,\theta -$$
$$6.14355\times10^{79}\,\gamma\,\theta + 7.60566\times10^{45}\, v^4\,\gamma\,\theta\big)^2\big)\Big)\Big)\Big\}\Big\}$$

h := η

$$0.5` \sqrt{\Big(-\Big(\Big(2.` \big(-3.047818057919681`*^{\wedge}82\,\gamma\,\eta^2 + 3.7731687262728915`*^{\wedge}48\,v^4\,\gamma\,\eta^2 - 2.425376547813289`*^{\wedge}81\,\gamma^2\,\eta^2 + 3.0025922695304064`*^{\wedge}47\,v^4\,\gamma^2\,\eta^2 - 3.047818057919681`*^{\wedge}82\,h^2\,\theta + 3.7731687262728915`*^{\wedge}48\,h^2\,v^4\,\theta - 9.701506191253155`*^{\wedge}81\,h^2\,\gamma\,\theta + 1.2010369078121626`*^{\wedge}48\,h^2\,v^4\,\gamma\,\theta - 7.720213328872831`*^{\wedge}80\,h^2\,\gamma^2\,\theta + 9.557548035705534`*^{\wedge}46\,h^2\,v^4\,\gamma^2\,\theta + 2.4253765478132886`*^{\wedge}81\,h^2\,\theta^2 - 3.0025922695304068`*^{\wedge}47\,h^2\,v^4\,\theta^2 + 7.720213328872831`*^{\wedge}80\,h^2\,\gamma\,\theta^2 - 9.557548035705534`*^{\wedge}46\,h^2\,v^4\,\gamma\,\theta^2 + 6.143550565070237`*^{\wedge}79\,h^2\,\gamma^2\,\theta^2 - 7.605655068603853`*^{\wedge}45\,h^2\,v^4\,\gamma^2\,\theta^2\big)\Big) \Big/ \Big(\gamma\,\theta\,\big(9.701506191253155`*^{\wedge}81 - 1.2010369078121626`*^{\wedge}48\,v^4 + 7.720213328872831`*^{\wedge}80\,\gamma - 9.557548035705534`*^{\wedge}46\,v^4\,\gamma - 7.720213328872831`*^{\wedge}80\,\theta + 9.557548035705534`*^{\wedge}46\,v^4\,\theta - 6.143550565070237`*^{\wedge}79\,\gamma\,\theta + 7.605655068603853`*^{\wedge}45\,v^4\,\gamma\,\theta\big)\Big)\Big) + 2.` \sqrt{\Big(-\Big(\Big(4.`\,h^2\,\big(9.57500282023878`*^{\wedge}82 - 1.1853759151213674`*^{\wedge}49\,v^4 + 3.047818057919681`*^{\wedge}82\,\gamma - 3.7731687262728915`*^{\wedge}48\,v^4\,\gamma + 2.425376547813289`*^{\wedge}81\,\gamma^2 - 3.0025922695304064`*^{\wedge}47\,v^4\,\gamma^2\big)\,\eta^2\Big) \Big/ \Big(\gamma\,\theta\,\big(9.701506191253155`*^{\wedge}81 - 1.2010369078121626`*^{\wedge}48\,v^4 + 7.720213328872831`*^{\wedge}80\,\gamma - 9.557548035705534`*^{\wedge}46\,v^4\,\gamma - 7.720213328872831`*^{\wedge}80\,\theta + 9.557548035705534`*^{\wedge}46\,v^4\,\theta - 6.143550565070237`*^{\wedge}79\,\gamma\,\theta + 7.605655068603853`*^{\wedge}45\,v^4\,\gamma\,\theta\big)\Big)\Big) + \big(-3.047818057919681`*^{\wedge}82\,\gamma\,\eta^2 + 3.7731687262728915`*^{\wedge}48\,v^4\,\gamma\,\eta^2 - 2.425376547813289`*^{\wedge}81\,\gamma^2\,\eta^2 + 3.0025922695304064`*^{\wedge}47\,v^4\,\gamma^2\,\eta^2 - 3.047818057919681`*^{\wedge}82\,h^2\,\theta + 3.7731687262728915`*^{\wedge}48\,h^2\,v^4\,\theta - 9.701506191253155`*^{\wedge}81\,h^2\,\gamma\,\theta + 1.2010369078121626`*^{\wedge}48\,h^2\,v^4\,\gamma\,\theta - 7.720213328872831`*^{\wedge}80\,h^2\,\gamma^2\,\theta + 9.557548035705534`*^{\wedge}46\,h^2\,v^4\,\gamma^2\,\theta + 2.4253765478132886`*^{\wedge}81\,h^2\,\theta^2 - 3.0025922695304068`*^{\wedge}47\,h^2\,v^4\,\theta^2 + 7.720213328872831`*^{\wedge}80\,h^2\,\gamma\,\theta^2 - 9.557548035705534`*^{\wedge}46\,h^2\,v^4\,\gamma\,\theta^2 + 6.143550565070237`*^{\wedge}79\,h^2\,\gamma^2\,\theta^2 - 7.605655068603853`*^{\wedge}45\,h^2\,v^4\,\gamma^2\,\theta^2\big)^2 \Big/ \Big(\gamma^2\,\theta^2\,\big(9.701506191253155`*^{\wedge}81 - 1.2010369078121626`*^{\wedge}48\,v^4 + 7.720213328872831`*^{\wedge}80\,\gamma - 9.557548035705534`*^{\wedge}46\,v^4\,\gamma - 7.720213328872831`*^{\wedge}80\,\theta + 9.557548035705534`*^{\wedge}46\,v^4\,\theta - 6.143550565070237`*^{\wedge}79\,\gamma\,\theta + 7.605655068603853`*^{\wedge}45\,v^4\,\gamma\,\theta\big)^2\Big)\Big)}\Big)}$$

$$0.5\sqrt{\left(-\left(\left(2.\left(-3.04782\times10^{82}\gamma\eta^2+3.77317\times10^{48}v^4\gamma\eta^2-2.42538\times10^{81}\gamma^2\eta^2+3.00259\times10^{47}v^4\gamma^2\eta^2-3.04782\times10^{82}\eta^2\theta+3.77317\times10^{48}v^4\eta^2\theta-9.70151\times10^{81}\gamma\eta^2\theta+1.20104\times10^{48}v^4\gamma\eta^2\theta-7.72021\times10^{80}\gamma^2\eta^2\theta+9.55755\times10^{46}v^4\gamma^2\eta^2\theta+2.42538\times10^{81}\eta^2\theta^2-3.00259\times10^{47}v^4\eta^2\theta^2+7.72021\times10^{80}\gamma\eta^2\theta^2-9.55755\times10^{46}v^4\gamma\eta^2\theta^2+6.14355\times10^{79}\gamma^2\eta^2\theta^2-7.60566\times10^{45}v^4\gamma^2\eta^2\theta^2\right)\right)\Big/\left(\gamma\theta\left(9.70151\times10^{81}-1.20104\times10^{48}v^4+7.72021\times10^{80}\gamma-9.55755\times10^{46}v^4\gamma-7.72021\times10^{80}\theta+9.55755\times10^{46}v^4\theta-6.14355\times10^{79}\gamma\theta+7.60566\times10^{45}v^4\gamma\theta\right)\right)\right)+2.\sqrt{\left(-\left(\left(4.\left(9.575\times10^{82}-1.18538\times10^{49}v^4+3.04782\times10^{82}\gamma-3.77317\times10^{48}v^4\gamma+2.42538\times10^{81}\gamma^2-3.00259\times10^{47}v^4\gamma^2\right)\eta^4\right)\Big/\left(\gamma\theta\left(9.70151\times10^{81}-1.20104\times10^{48}v^4+7.72021\times10^{80}\gamma-9.55755\times10^{46}v^4\gamma-7.72021\times10^{80}\theta+9.55755\times10^{46}v^4\theta-6.14355\times10^{79}\gamma\theta+7.60566\times10^{45}v^4\gamma\theta\right)\right)\right)+\left(-3.04782\times10^{82}\gamma\eta^2+3.77317\times10^{48}v^4\gamma\eta^2-2.42538\times10^{81}\gamma^2\eta^2+3.00259\times10^{47}v^4\gamma^2\eta^2-3.04782\times10^{82}\eta^2\theta+3.77317\times10^{48}v^4\eta^2\theta-9.70151\times10^{81}\gamma\eta^2\theta+1.20104\times10^{48}v^4\gamma\eta^2\theta-7.72021\times10^{80}\gamma^2\eta^2\theta+9.55755\times10^{46}v^4\gamma^2\eta^2\theta+2.42538\times10^{81}\eta^2\theta^2-3.00259\times10^{47}v^4\eta^2\theta^2+7.72021\times10^{80}\gamma\eta^2\theta^2-9.55755\times10^{46}v^4\gamma\eta^2\theta^2+6.14355\times10^{79}\gamma^2\eta^2\theta^2-7.60566\times10^{45}v^4\gamma^2\eta^2\theta^2\right)^2\Big/\left(\gamma^2\theta^2\left(9.70151\times10^{81}-1.20104\times10^{48}v^4+7.72021\times10^{80}\gamma-9.55755\times10^{46}v^4\gamma-7.72021\times10^{80}\theta+9.55755\times10^{46}v^4\theta-6.14355\times10^{79}\gamma\theta+7.60566\times10^{45}v^4\gamma\theta\right)^2\right)\right)}\right)}$$

```
Manipulate[ContourPlot3D[
  0.5` √(-((2.` (-3.047818057919681`*^82 γ η^2 + 3.7731687262728915`*^48 v^4 γ η^2 -
            2.425376547813289`*^81 γ^2 η^2 + 3.0025922695304064`*^47 v^4 γ^2 η^2 -
            3.047818057919681`*^82 η^2 θ + 3.7731687262728915`*^48 v^4 η^2 θ -
            9.701506191253155`*^81 γ η^2 θ + 1.2010369078121626`*^48 v^4 γ η^2 θ -
            7.720213328872831`*^80 γ^2 η^2 θ + 9.557548035705534`*^46 v^4 γ^2 η^2 θ +
            2.4253765478132886`*^81 η^2 θ^2 - 3.0025922695304068`*^47 v^4 η^2 θ^2 +
            7.720213328872831`*^80 γ η^2 θ^2 - 9.557548035705534`*^46 v^4 γ η^2 θ^2 +
            6.143550565070237`*^79 γ^2 η^2 θ^2 - 7.605655068603853`*^45 v^4 γ^2 η^2 θ^2)) /
        (γ θ (9.701506191253155`*^81 - 1.2010369078121626`*^48 v^4 +
            7.720213328872831`*^80 γ - 9.557548035705534`*^46 v^4 γ -
            7.720213328872831`*^80 θ + 9.557548035705534`*^46 v^4 θ -
            6.143550565070237`*^79 γ θ + 7.605655068603853`*^45 v^4 γ θ))) +
     2.` √(-((4.` (9.57500282023878`*^82 - 1.1853759151213674`*^49 v^4 +
                3.047818057919681`*^82 γ - 3.7731687262728915`*^48 v^4 γ +
                2.425376547813289`*^81 γ^2 - 3.0025922695304064`*^47 v^4 γ^2) η^4) /
            (γ θ (9.701506191253155`*^81 - 1.2010369078121626`*^48 v^4 +
                7.720213328872831`*^80 γ - 9.557548035705534`*^46 v^4 γ -
                7.720213328872831`*^80 θ + 9.557548035705534`*^46 v^4 θ -
                6.143550565070237`*^79 γ θ + 7.605655068603853`*^45 v^4 γ θ))) +
         (-3.047818057919681`*^82 γ η^2 + 3.7731687262728915`*^48 v^4 γ η^2 -
              2.425376547813289`*^81 γ^2 η^2 + 3.0025922695304064`*^47 v^4 γ^2
               η^2 - 3.047818057919681`*^82 η^2 θ + 3.7731687262728915`*^48 v^4 η^2
               θ - 9.701506191253155`*^81 γ η^2 θ + 1.2010369078121626`*^48 v^4 γ η^2
               θ - 7.720213328872831`*^80 γ^2 η^2 θ + 9.557548035705534`*^46 v^4 γ^2 η^2
               θ + 2.4253765478132886`*^81 η^2 θ^2 - 3.0025922695304068`*^47 v^4 η^2
               θ^2 + 7.720213328872831`*^80 γ η^2 θ^2 - 9.557548035705534`*^46 v^4 γ η^2 θ^2 +
              6.143550565070237`*^79 γ^2 η^2 θ^2 - 7.605655068603853`*^45 v^4 γ^2 η^2 θ^2)^2 /
          (γ^2 θ^2 (9.701506191253155`*^81 - 1.2010369078121626`*^48 v^4 +
               7.720213328872831`*^80 γ - 9.557548035705534`*^46 v^4 γ -
               7.720213328872831`*^80 θ + 9.557548035705534`*^46 v^4 θ -
               6.143550565070237`*^79 γ θ + 7.605655068603853`*^45 v^4 γ θ)^2))),
  {γ, 0, π}, {η, 0, 1}, {θ, 0, π / 2}], {v, 0,
  10^
   8}]
```

v

```
$Aborted
```

```
((√(8.987551787368176`*^16 r^2 α^2 -
      8.987551787368176`*^16 r^2 δ^2 - 1.7975103574736352`*^17 r z α θ +
      8.987551787368176`*^16 z δ^2 η^2 θ + 8.987551787368176`*^16 z^2 θ^2)) /
  (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2)))

Solve[(((√(3.5481432270250993`*^18 η^2 -
         1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
     (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))
    (√(1.0870275225442393`*^50 h^2 + 3.4601160697970476`*^49 h^2 γ -
       3.4601160697970476`*^49 r^2 γ + 2.7534728808995085`*^48 h^2 γ^2 -
       2.7534728808995085`*^48 r^2 γ^2)) /
     (√(1.209481233890674`*^33 h^2 + 3.849898339011711`*^32 h^2 γ -
       3.849898339011711`*^32 r^2 γ + 3.0636517552749564`*^31 h^2 γ^2 -
       3.0636517552749564`*^31 r^2 γ^2)) ==
   ((√(8.987551787368176`*^16 r^2 α^2 - 8.987551787368176`*^16 r^2 δ^2 -
       1.7975103574736352`*^17 r z α θ + 8.987551787368176`*^16 z δ^2 η^2 θ +
       8.987551787368176`*^16 z^2 θ^2)) /
    (√(r^2 α^2 - 1.` r^2 δ^2 - 2.` r z α θ + z δ^2 η^2 θ + z^2 θ^2))), r]
```

The Four Noble Truths of θ, The Hologram of Vision

by Parker Matthew Davis Emmerson

Postulates, polar coordinates, etc.

$$\text{Sin}[\beta] = \eta / r \tag{124}$$

$$\text{Tan}[\beta] = \eta / r_1 \tag{125}$$

$$\text{Cos}[\beta] = r_1 / r \tag{126}$$

$$\eta = r\,\text{Sin}[\beta] \tag{127}$$

$r = \eta / \text{Sin}[\beta]$

$\text{Cos}[\beta] = r_1 / r = r_1 / (\eta / \text{Sin}[\beta])$

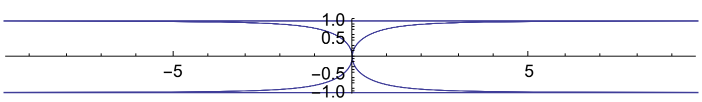
$\text{Simplify}[r_1 / (\eta / \text{Sin}[\beta])]$

$$\frac{\text{Sin}[\beta]\, r_1}{\eta}$$

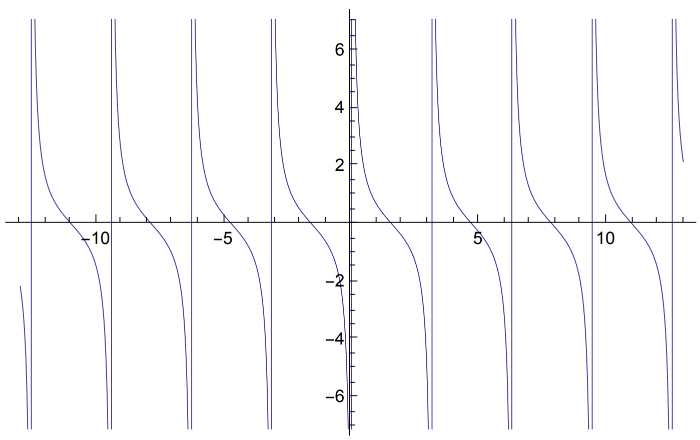
$$\frac{\text{Sin}[\beta]\, r_1}{\eta} = \text{Cos}[\beta]$$

$$\text{Cos}[\beta] / \text{Sin}[\beta] = \frac{r_1}{\eta}$$

$\text{PolarPlot}[\text{Cos}[\beta] / \text{Sin}[\beta], \{\beta, -13, 13\}]$



$\text{Plot}[\text{Cos}[\beta] / \text{Sin}[\beta], \{\beta, -13, 13\}]$



$$\text{Solve}\left[\theta\, r == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)\,\hat{}\,2 - \eta\,\hat{}\,2)},\ \eta\right]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

go from the philosophy to the axioms / geometric description, backed up with psych and philosophy

take the geometric situation described and working out what follows.

$$\eta == \frac{\sqrt{4\,\pi\,\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right)^2\Theta-\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right)^2\Theta^2}}{2\,\pi} = \mathrm{rate} * \mathrm{time} = \mathrm{rate} * 6\,((180/\pi)\,\Theta) \tag{128}$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right\}, \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right\}\right\} \tag{129}$$

$$\left\{\left\{r_1 \to -\sqrt{r^2-\eta^2}\right\}, \left\{r_1 \to \sqrt{r^2-\eta^2}\right\}\right\} \tag{130}$$

$$r_1 = \sqrt{r^2-\eta^2} = r\,\mathrm{Cos}[\beta] \tag{131}$$

There are special cases of the system when $h = r$, when $\beta = \Theta$, when $r_1 = r$ (the initial condition), and when $r_1 = h$.

Usually, we would think that $\beta \leq \pi/2$, whereas $\Theta \leq 4\,\pi$. (132)

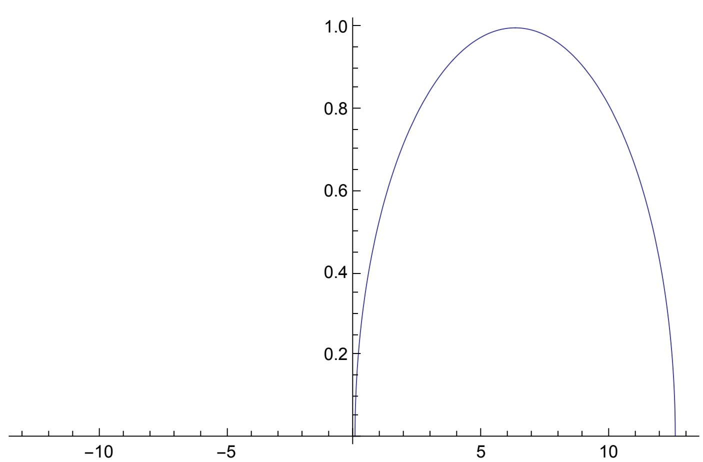
We can show that $\Theta \leq 4\,\pi$ by setting r equal to one in the equation $r = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}$

$\beta \leq \pi/2$ comes from the fact that when the cone folds all the way up, it makes a right angle with the x axis.

Solve$\left[1 == \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}, \eta\right]$

$$\left\{\left\{\eta \to \frac{\sqrt{(4\,\pi-\Theta)\,\Theta}}{2\,\pi}\right\}\right\}$$

Plot$\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}, \{\theta, -13, 13\}\right]$



There is a particularly interesting special case of the system, however,

when the square of the height of the cone is equal to the area of the base of the cone.

So What's the Point? How to Find the Four Noble θ Solutions, or Truths of θ.

$$r_1 = \sqrt{r^2 - \eta^2}$$

$$\eta = r\,\mathrm{Sin}[\beta]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}\right\}$$

$$\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right)\text{^}2 = \eta\text{^}2$$

$$\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right)\text{^}2$$

$$\frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}$$

$$\frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2} = \pi\,(r_1\text{^}2) = \pi\left(r^2 - \eta^2\right) = \pi\left(r^2 - \frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}\right)$$

$$\mathrm{Solve}\left[\pi\left(r^2 - \frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}\right) == \frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\pi + 4\pi^2 - \sqrt{16\pi^2 + 16\pi^3}}{2 + 2\pi}\right\}, \left\{\theta \to \frac{4\pi + 4\pi^2 + \sqrt{16\pi^2 + 16\pi^3}}{2\,(1 + \pi)}\right\}\right\}$$

$$N\left[\frac{4\pi + 4\pi^2 - \sqrt{16\pi^2 + 16\pi^3}}{2 + 2\pi}\right]$$

3.19576

$$N\left[\frac{4\pi + 4\pi^2 + \sqrt{16\pi^2 + 16\pi^3}}{2\,(1 + \pi)}\right]$$

9.37061

$$\mathrm{Solve}\left[\pi\left(r^2 - \frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}\right) == \frac{4\pi r^2 \theta - r^2 \theta^2}{4\pi^2}, r\right]$$

$$\{\{r \to 0\}, \{r \to 0\}\}$$

Thus, we have shown that a point, by definition, is the place at which the square of the height of a cone is equal to the area of the base of the cone when talking about a transition or even a translation of

points along an axis. We have also shown that the point has an inherent angle of $\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)}$ and $\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}$ radians.

So, what does θ r look like now?

$$\theta\, r = r\,\frac{4\pi+4\pi^2+\sqrt{16\pi^2+16\pi^3}}{2(1+\pi)},\ r\,\frac{4\pi+4\pi^2-\sqrt{16\pi^2+16\pi^3}}{2+2\pi}$$

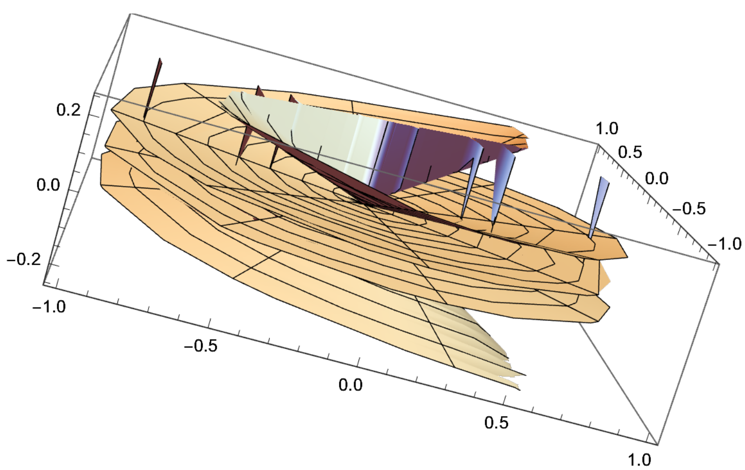
$$v = \lambda\, v = r\,(1/(1080/\pi)\,\theta) = D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

The velocity of η is equal to the first derivative of η with respect to time.

$$D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

$$\text{RevolutionPlot3D}\left[\frac{4\pi r^2 - 2r^2\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}, \{r, -1, 1\}, \{\theta, -13, 13\}\right]$$



$$\text{Solve}\left[\frac{4\pi r^2 - 2r^2\theta}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}} == r\,(1/(1080/\pi)\,\theta), \theta\right]$$

$$\Bigg\{\Bigg\{\theta \to \pi - \frac{1}{2}\sqrt{\Bigg(-\frac{194\,400}{\pi^4} + 4\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} + \sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3} + \frac{1}{3\pi^4}\Big(\frac{1}{2}\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} + \sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}\Bigg) -$$

$$\frac{1}{2}\sqrt{}\Bigg(-\frac{388\,800}{\pi^4}+8\,\pi^2-\frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\left(\frac{4\,665\,600}{\pi^3}+64\,\pi^3\right)\Big/\;\Bigg(4\sqrt{}\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000$$

$$\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{}\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000$$

$$\pi^{24}\Big)\Big)\Big)^{1/3}+\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+$$

$$503\,884\,800\,\pi^{12}+\sqrt{}\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+$$

$$253\,899\,891\,671\,040\,000\,\pi^{24}\Big)\Big)\Big)^{1/3}\Bigg)\Bigg)\Bigg)\Bigg)\Big\},$$

$$\Big\{\theta\to\pi-\frac{1}{2}\sqrt{}\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}+$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}\Bigg)+$$

$$\frac{1}{2}\sqrt{}\Bigg(-\frac{388\,800}{\pi^4}+8\,\pi^2-\frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}-$$

$$\left(\frac{4\,665\,600}{\pi^3}+64\,\pi^3\right)\Big/\;\Bigg(4\sqrt{}\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000$$

$$\Big(2\Big/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{}\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000$$

$$\pi^{24}\Big)\Big)\Big)^{1/3}+\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+$$

$$503\,884\,800\,\pi^{12}+\sqrt{}\Big(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+$$

$$253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3}))))\},$$

$$\{\Theta \to \pi + \frac{1}{2}\surd\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3} +$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}))\Big)^{1/3}\Big) -$$

$$\frac{1}{2}\surd\Big(-\frac{388\,800}{\pi^4} + 8\,\pi^2 - \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3} -$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}))\Big)^{1/3} +$$

$$\Big(\frac{4\,665\,600}{\pi^3} + 64\,\pi^3\Big)\Big/\Big(4\,\surd\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000$$

$$\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000$$

$$\pi^{24})))^{1/3} + \frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 +$$

$$503\,884\,800\,\pi^{12} + \surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} +$$

$$253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3}))))\},$$

$$\{\Theta \to \pi + \frac{1}{2}\surd\Big(-\frac{194\,400}{\pi^4} + 4\,\pi^2 + \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3} +$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24}))\Big)^{1/3}\Big) +$$

$$\frac{1}{2}\surd\Big(-\frac{388\,800}{\pi^4} + 8\,\pi^2 - \frac{1}{\pi^4}\,28\,343\,520\,000\,\Big(2\Big/\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\surd(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12} + 253\,899\,891\,671\,040\,000\,\pi^{24})))^{1/3} -$$

$$\frac{1}{3\,\pi^4}\,\Big(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000 + 503\,884\,800\,\pi^{12} +$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\,\pi^{24}\right)}\Big)\Big)^{1/3}+$$

$$\left(\frac{4\,665\,600}{\pi^3}+64\,\pi^3\right)\Bigg/\Bigg(4\sqrt{\Bigg(-\frac{194\,400}{\pi^4}+4\,\pi^2+\frac{1}{\pi^4}\,28\,343\,520\,000}$$

$$\Bigg(2\Bigg/\Big(49\,589\,822\,592\,000\,000+503\,884\,800\,\pi^{12}+$$

$$\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+253\,899\,891\,671\,040\,000\right.}$$

$$\left.\pi^{24}\right)\Big)\Bigg)^{1/3}+\frac{1}{3\,\pi^4}\,\Bigg(\frac{1}{2}\,\Big(49\,589\,822\,592\,000\,000+$$

$$503\,884\,800\,\pi^{12}+\sqrt{\left(49\,975\,115\,677\,610\,803\,200\,000\,000\,\pi^{12}+\right.}$$

$$\left.253\,899\,891\,671\,040\,000\,\pi^{24}\right)\Big)\Bigg)^{1/3}\Bigg)\Bigg)\Bigg)\Big\}\Big\}$$

These are mathematical expressions of the reality of the four noble truths.

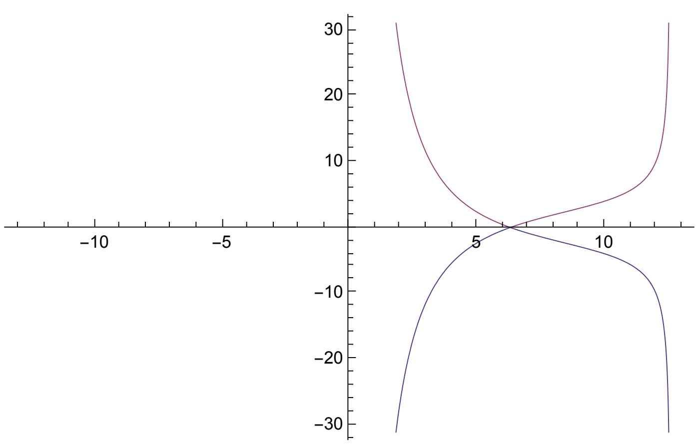
$$\mathbf{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,r,\,\theta\right]$$

$$-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

$$\mathbf{Solve}\left[\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)==r\,(1/(1080/\pi)\,\theta),\,r\right]$$

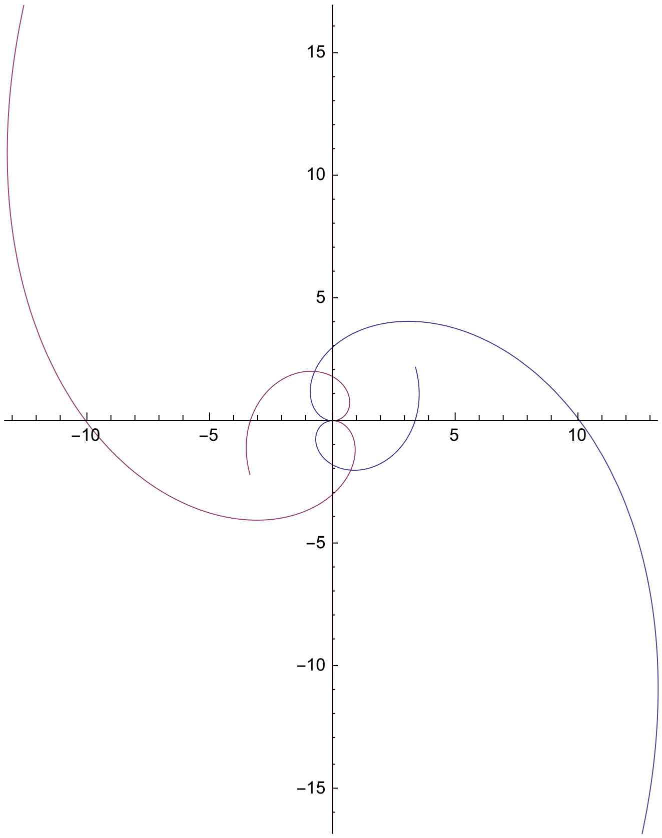
$$\left\{\left\{r\to-\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\},\,\left\{r\to\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\}\right\}$$

$$\mathbf{Plot}\left[\left\{-\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}},\,\frac{270\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\,\sqrt{\theta}}\right\},\,\{\theta,\,-13,\,13\}\right]$$



```
PolarPlot[{-(270 Sqrt[1/(4π-θ) + 4π/θ^2 - 3/θ])/(π^2 Sqrt[θ]), (270 Sqrt[1/(4π-θ) + 4π/θ^2 - 3/θ])/(π^2 Sqrt[θ])}, {θ, -10, 10}]
```

$$\text{PolarPlot}\left[\left\{-\frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}},\ \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}}\right\},\ \{\theta,-10,10\}\right]$$



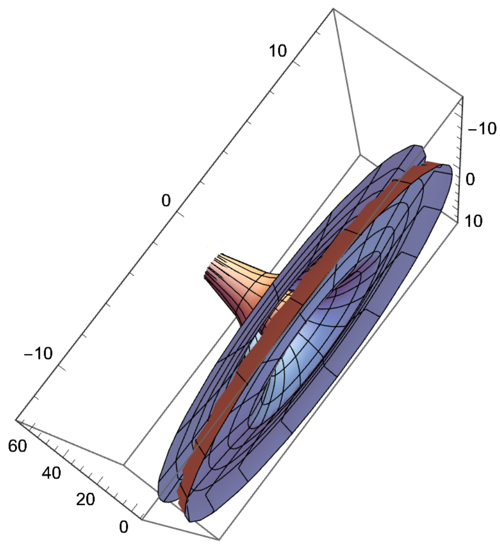
$$\sqrt{r^2-\eta^2}$$

$$\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}} = r = \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}}$$

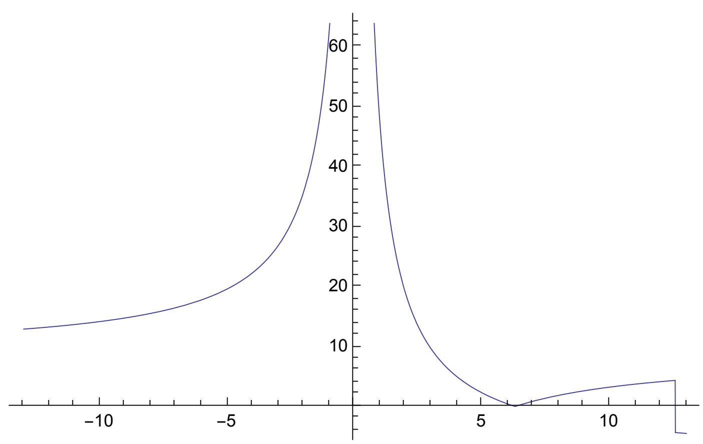
$$\text{Solve}\left[\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}} == \frac{270\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{\pi^2\sqrt{\theta}},\ \eta\right]$$

$$\left\{\left\{\eta\to\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}}\right\}\right\}$$

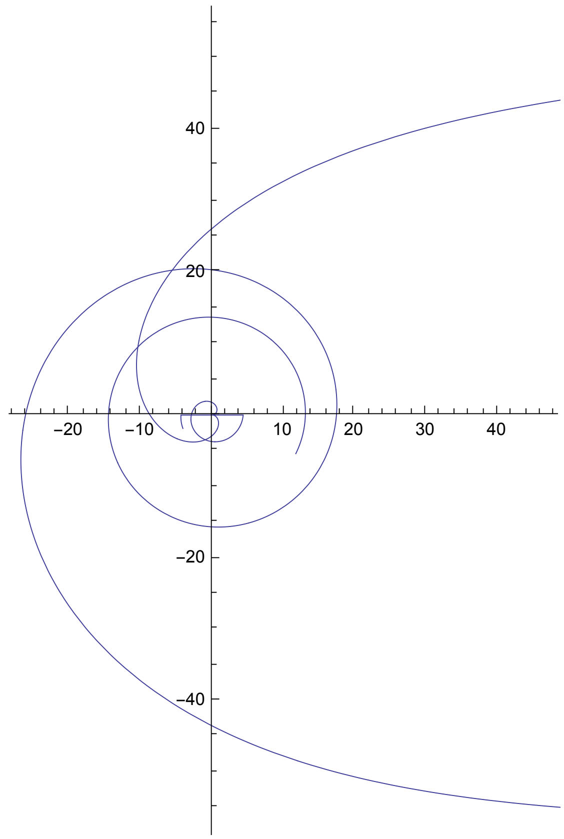
$$\texttt{RevolutionPlot3D}\left[\frac{135\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\pi^3\,\sqrt{\theta}},\ \{\theta,\,-13,\,13\}\right]$$



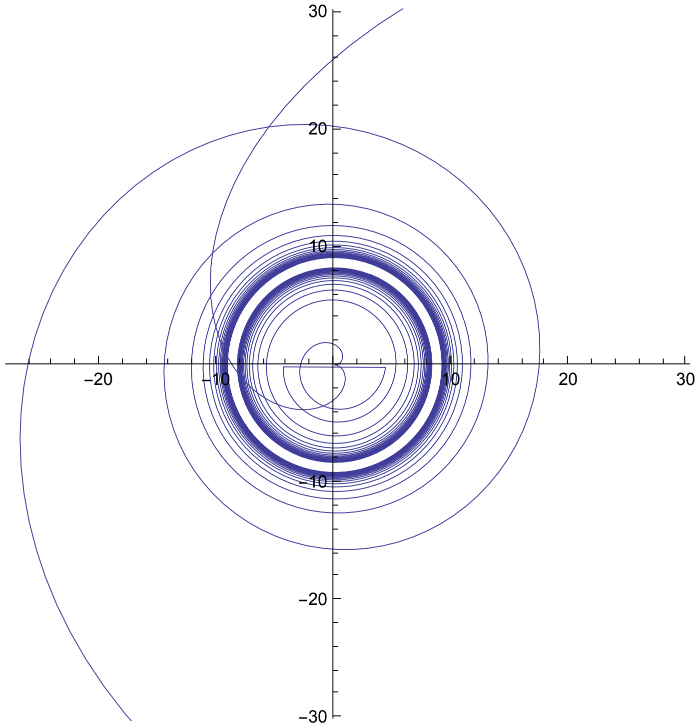
$$\texttt{Plot}\left[\frac{135\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\pi^3\,\sqrt{\theta}},\ \{\theta,\,-13,\,13\}\right]$$



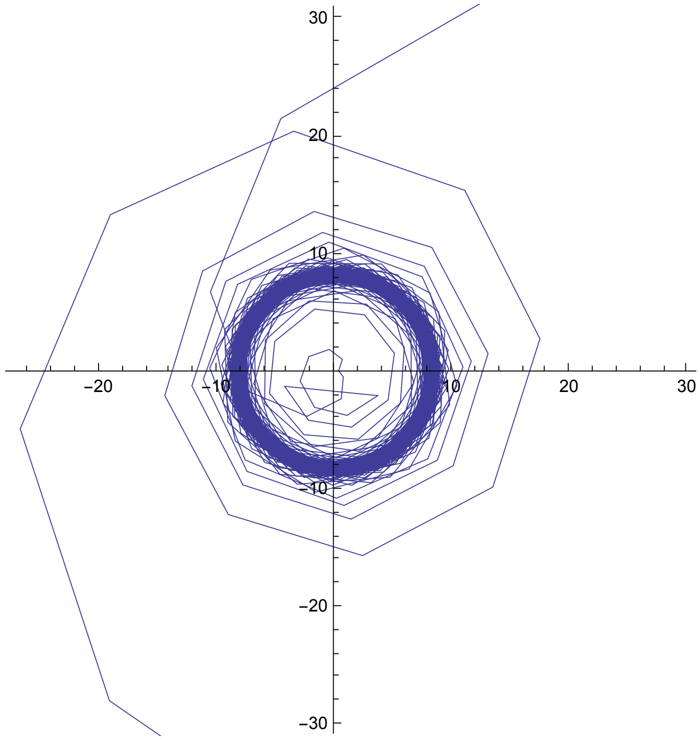
$$\texttt{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}},\{\theta,-13,13\}\right]$$



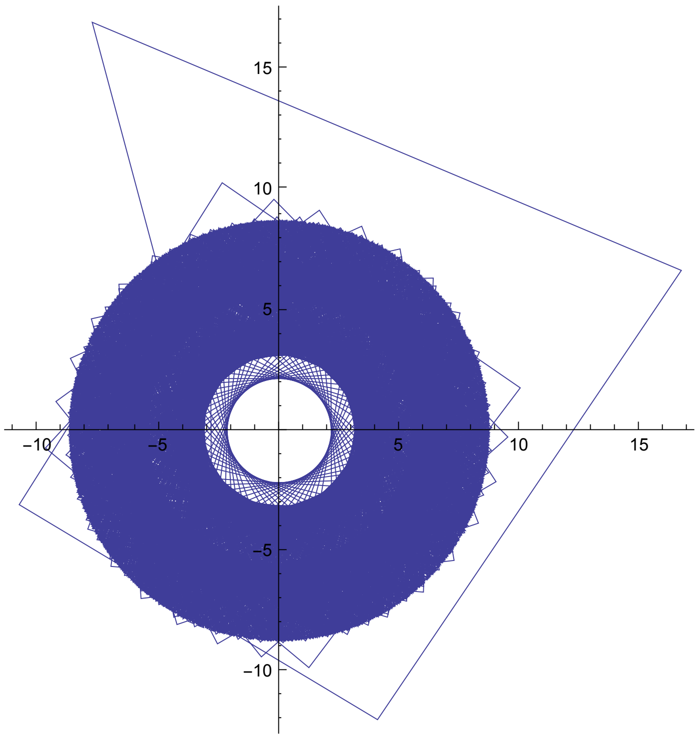
$$\text{PolarPlot}\left[\frac{135\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{\pi^3\,\sqrt{\theta}},\,\{\theta,\,-130,\,130\}\right]$$



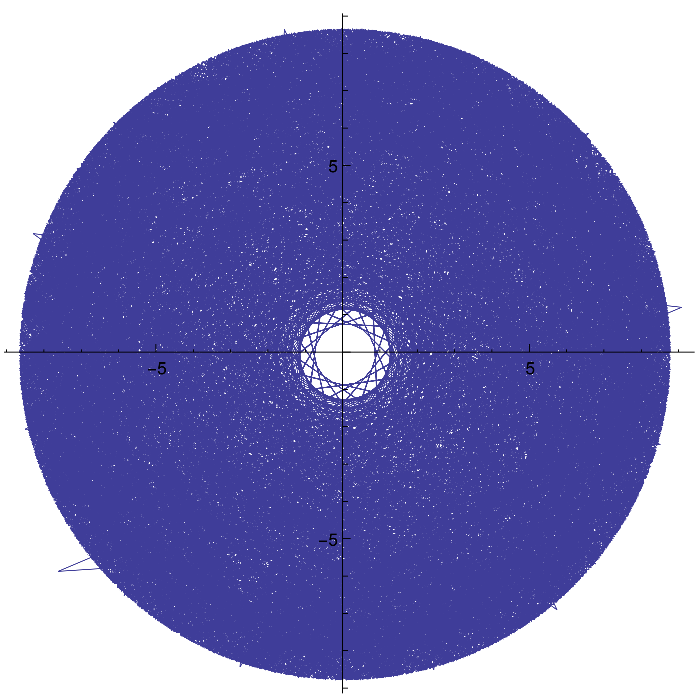
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}}, \{\theta, -1300, 1300\}\right]$$



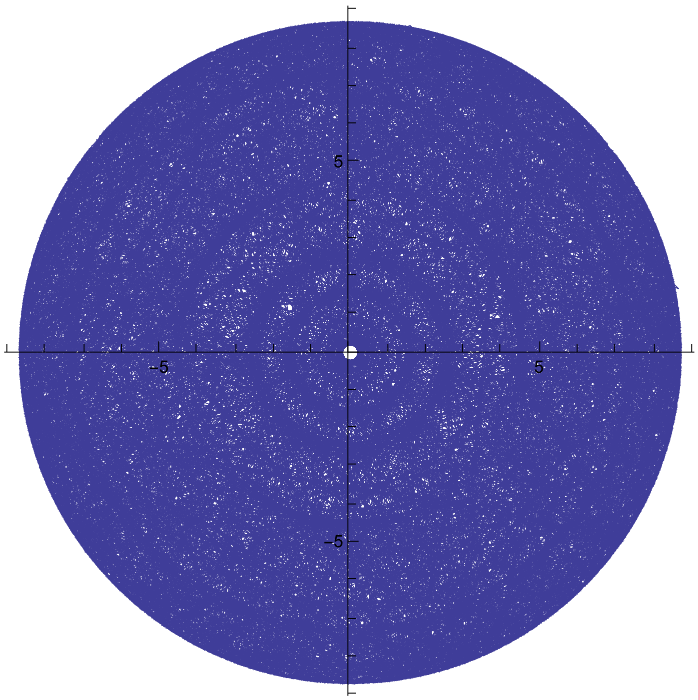
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}}, \{\theta, -13000, 13000\}\right]$$



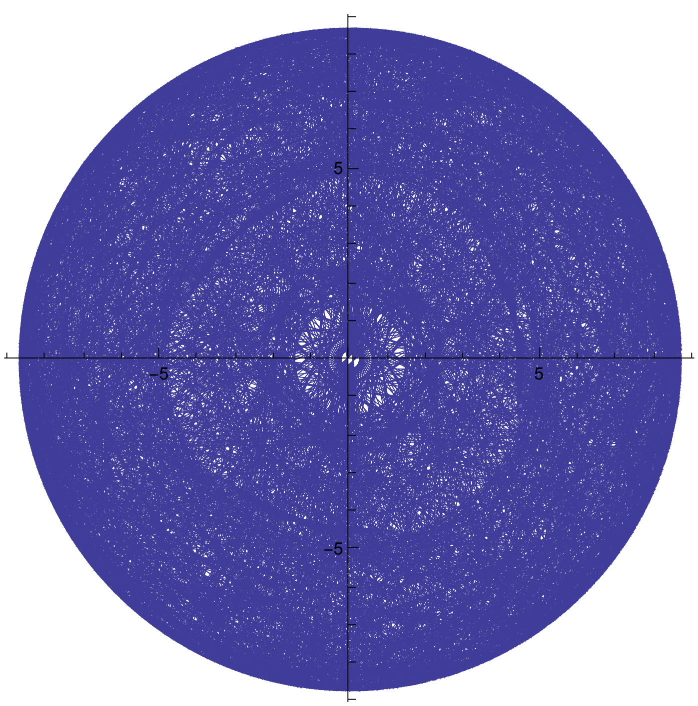
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\sqrt{4\pi\theta-\theta^2}}{\pi^3\sqrt{\theta}}, \{\theta, -130000, 130000\}\right]$$



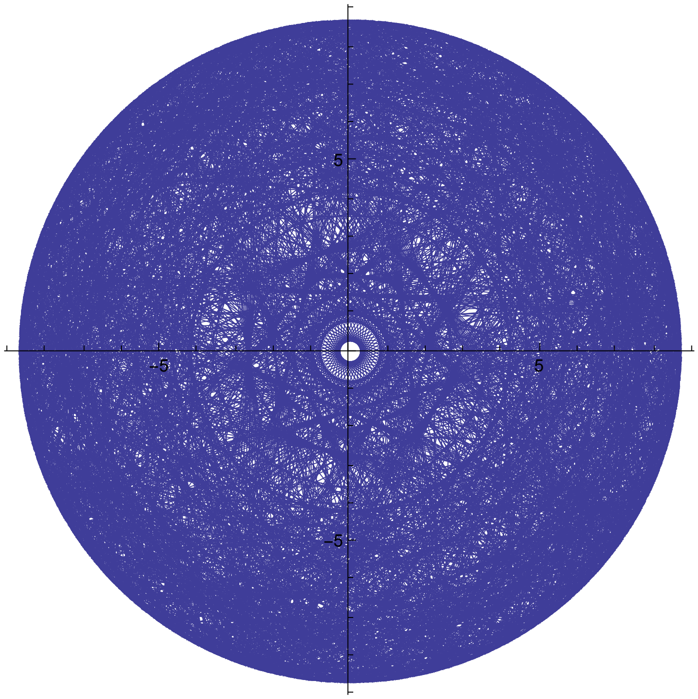
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -1\,300\,000, 1\,300\,000\}\right]$$



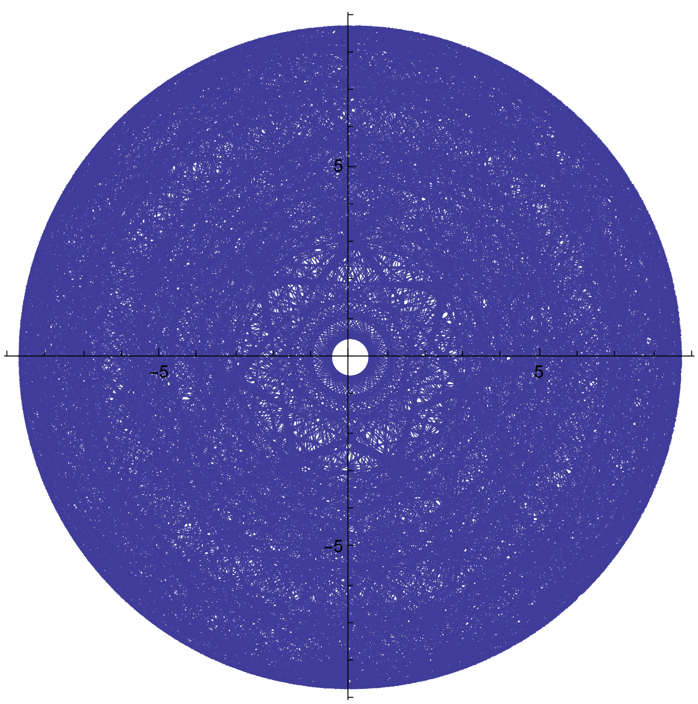
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -13\,000\,000, 13\,000\,000\}\right]$$



$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -130\,000\,000, 130\,000\,000\}\right]$$



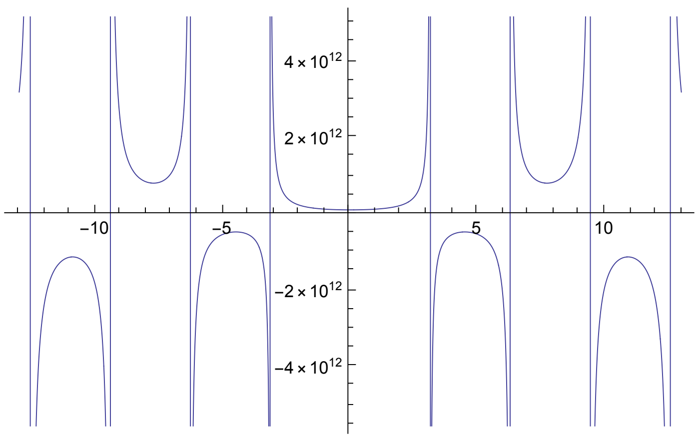
$$\text{PolarPlot}\left[\frac{135\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{\pi^3\ \sqrt{\theta}}, \{\theta, -1\,300\,000\,000, 1\,300\,000\,000\}\right]$$



$$\text{Solve}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}} == \frac{2\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}, r\right]$$

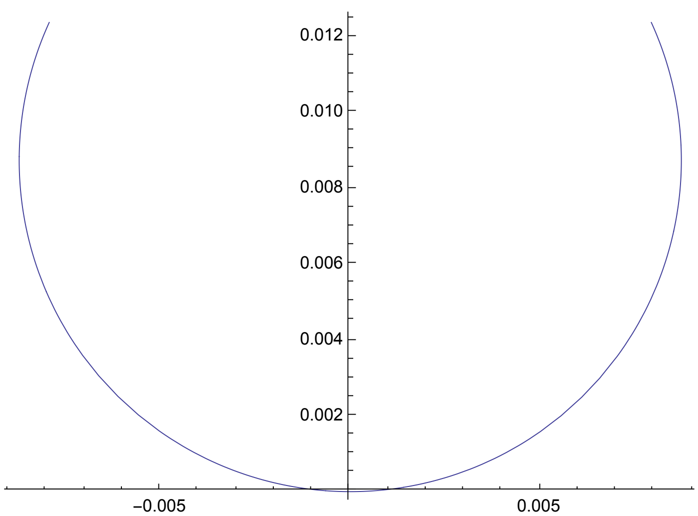
$$\left\{\left\{r \to \frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}, \{\theta, -13, 13\}\right]$$

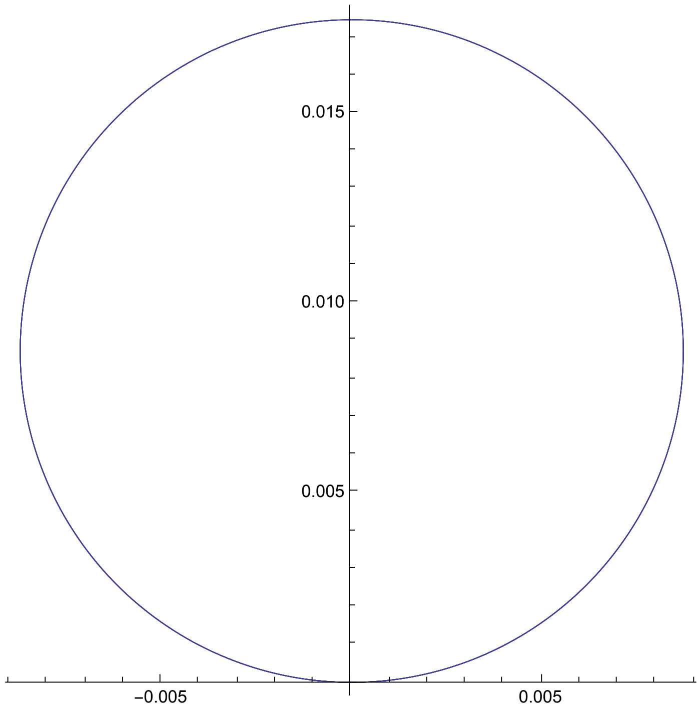


$$\left\{\left\{n \to \frac{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\pi-\theta)\,\theta}}\right\}\right\}$$

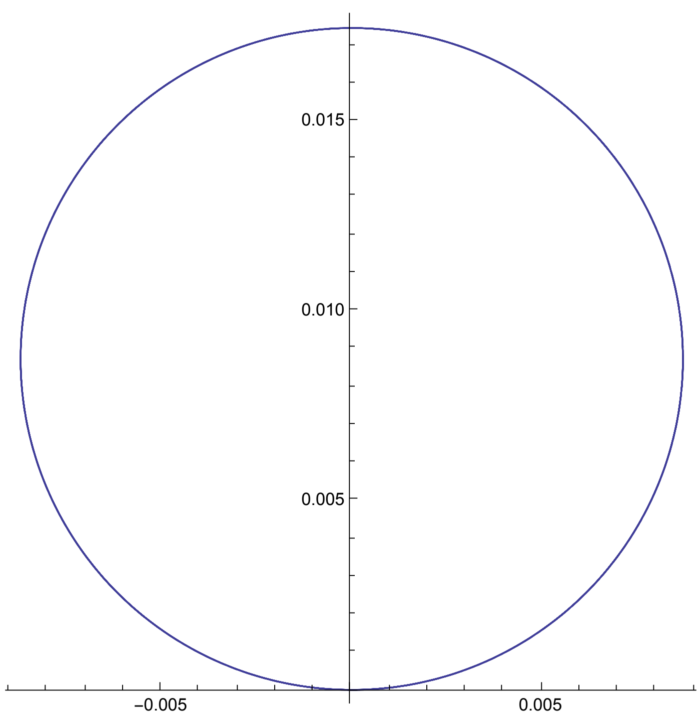
$$\text{PolarPlot}\left[\frac{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -1, 1\}\right]$$



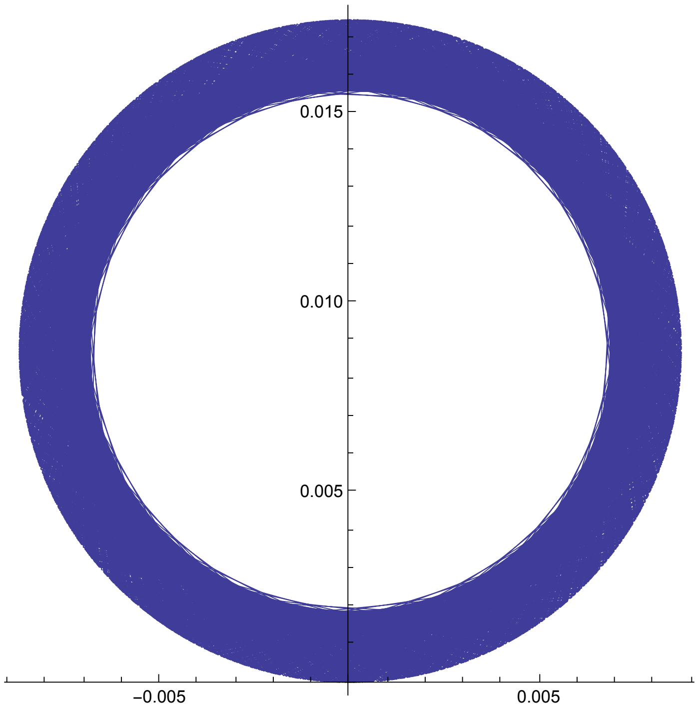
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,\ -10,\ 10\}\right]$$



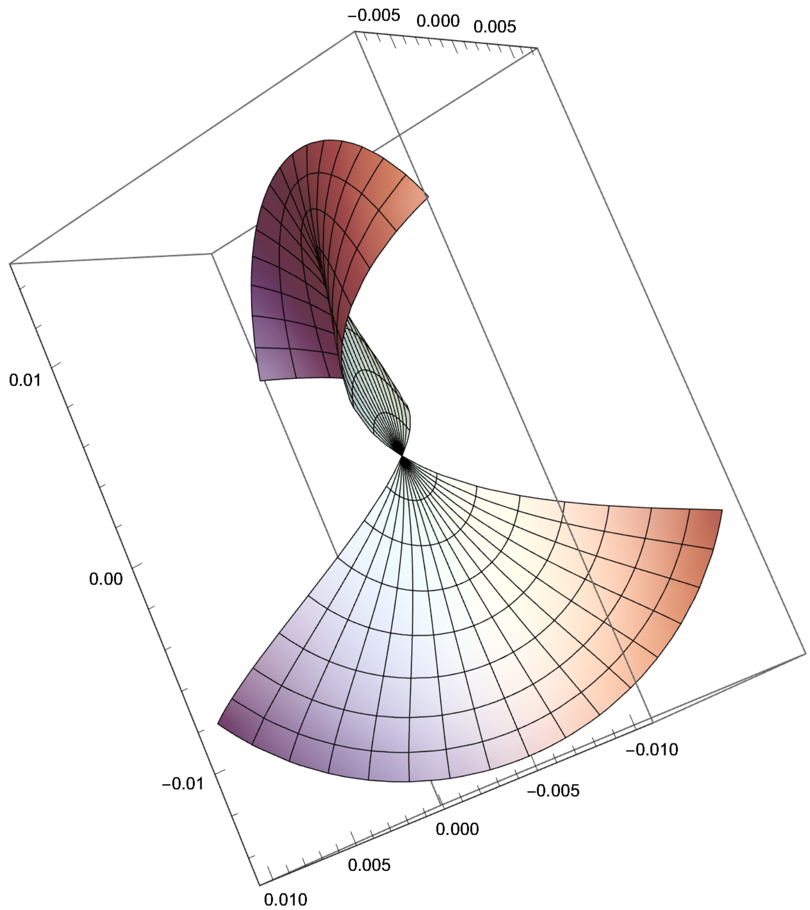
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\ \{\theta,\ -100,\ 100\}\right]$$



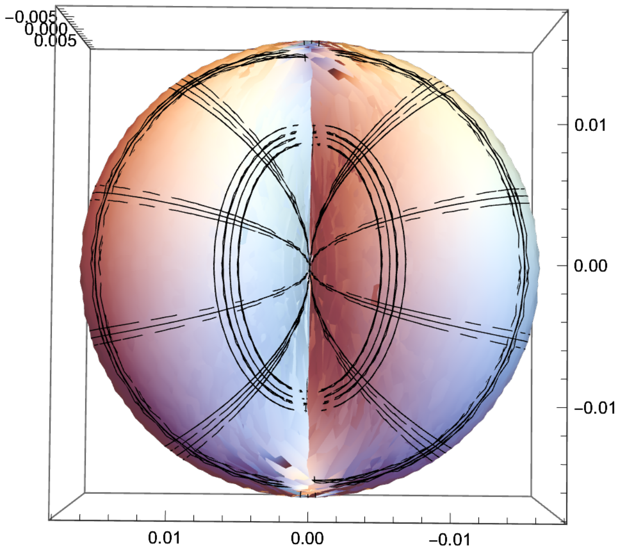
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\theta,\ -1000,\ 1000\}\right]$$



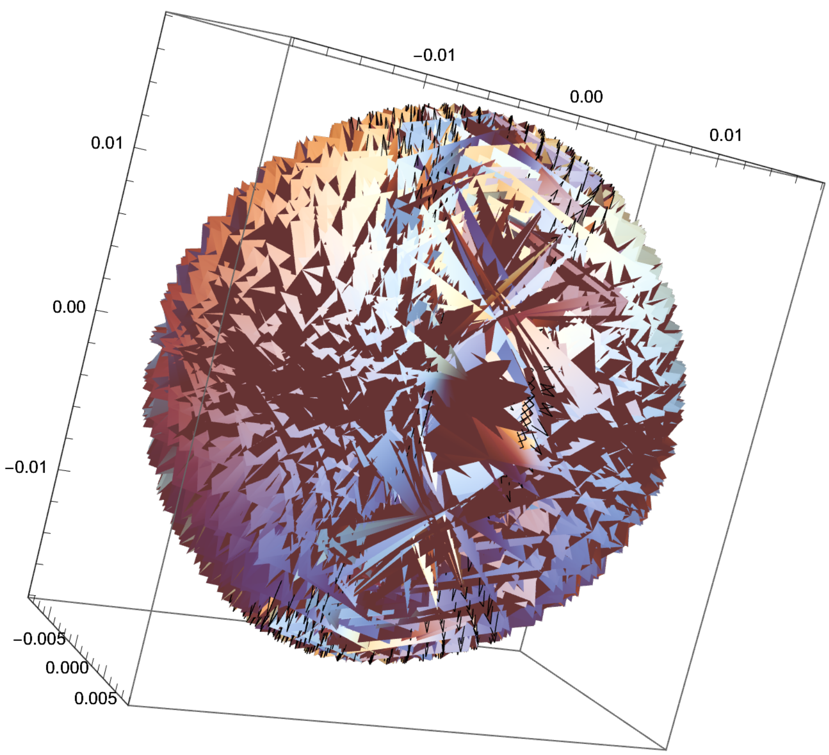
$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\ \pi - \theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\ \pi - \theta)\ \theta}}, \{\theta, -1, 1\}, \{\beta, -1, 1\}\right]$$



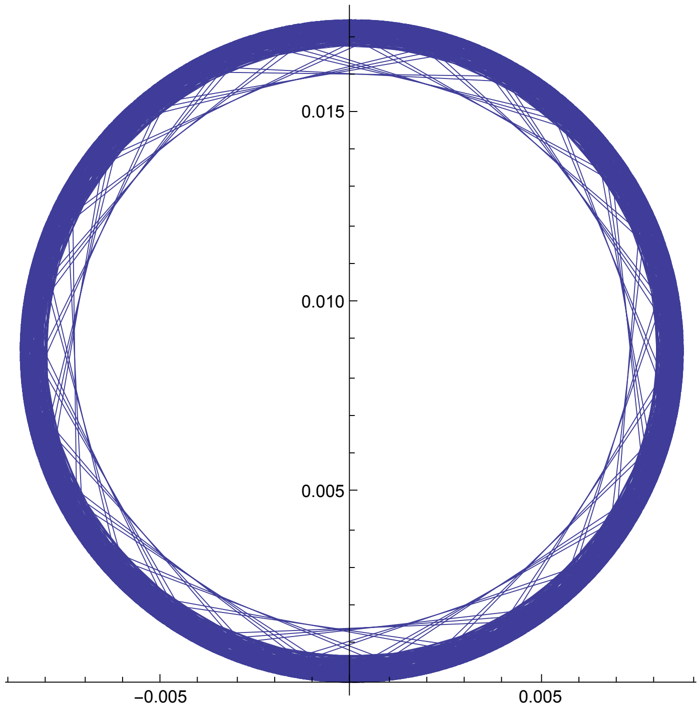
$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\ \pi - \theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\ \pi - \theta)\ \theta}}, \{\theta, -10, 10\}, \{\beta, -10, 10\}\right]$$



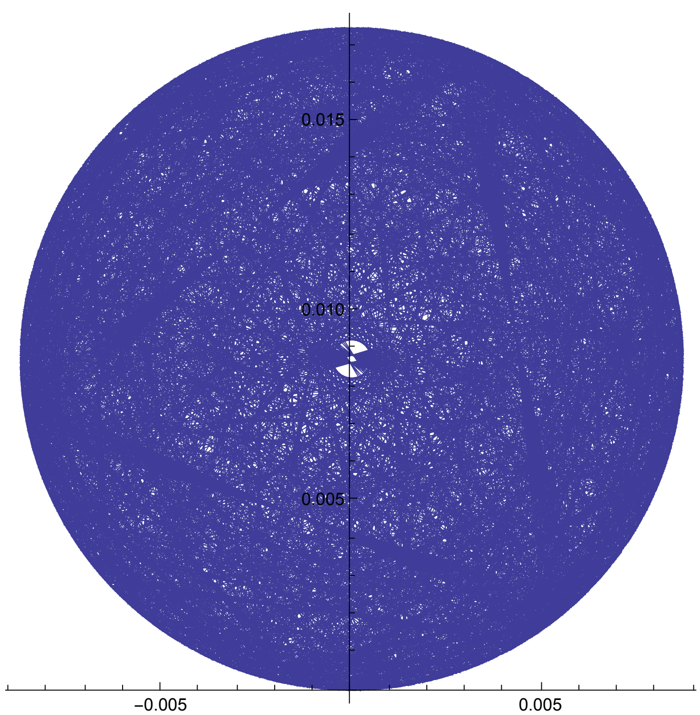

```
SphericalPlot3D[π √(4π - θ) √θ Sin[β] / (180 √((4π - θ) θ)), {θ, -100, 100}, {β, -100, 100}]
```



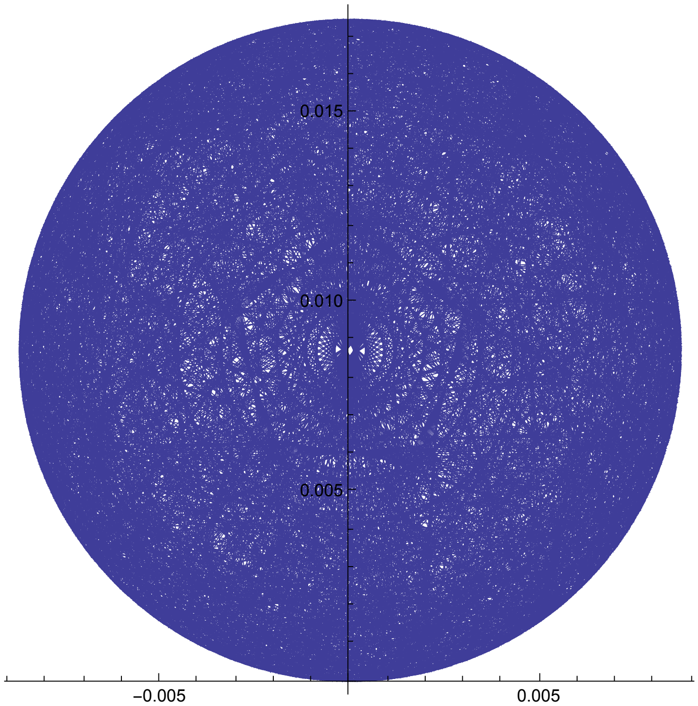
$$\text{PolarPlot}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -10000, 10000\}\right]$$



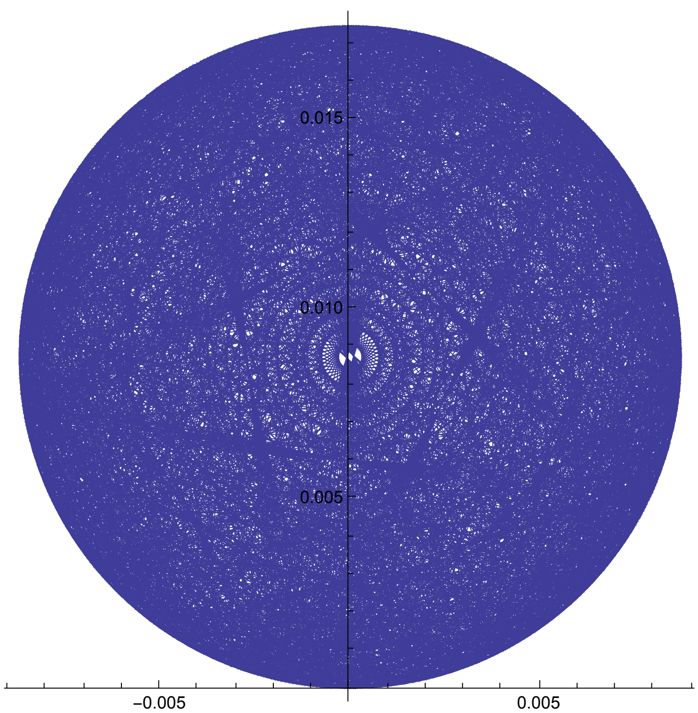
$$\text{PolarPlot}\left[\frac{\pi\sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\sqrt{(4\pi-\theta)\,\theta}}, \{\theta, -100000, 100000\}\right]$$



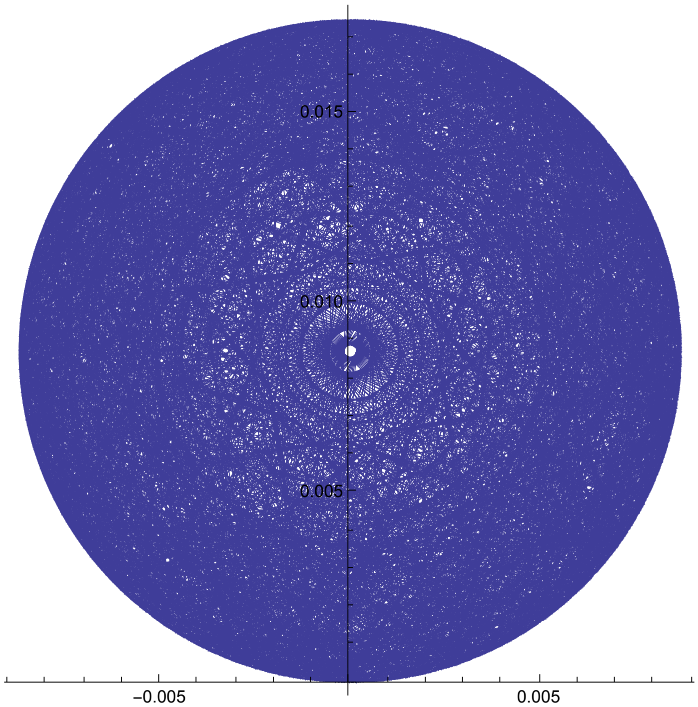
$$\text{PolarPlot}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\ \{\theta,\ -1\,000\,000,\ 1\,000\,000\}\right]$$



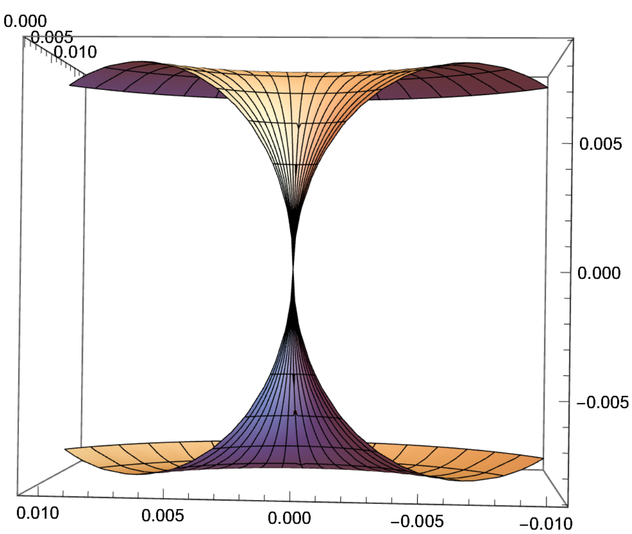
$$\text{PolarPlot}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\ \{\theta,\ -10\,000\,000,\ 10\,000\,000\}\right]$$



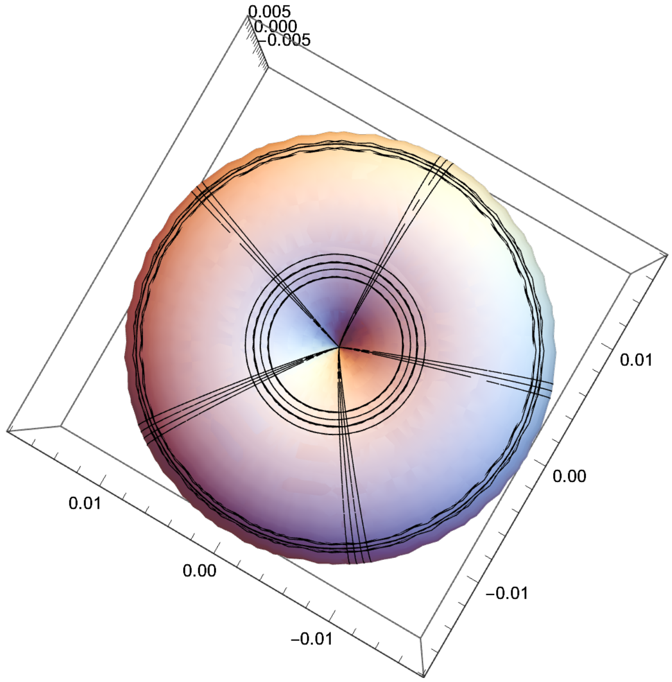
$$\text{PolarPlot}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\,\pi-\theta)\,\theta}},\ \{\theta,\ -100\,000\,000,\ 100\,000\,000\}\right]$$



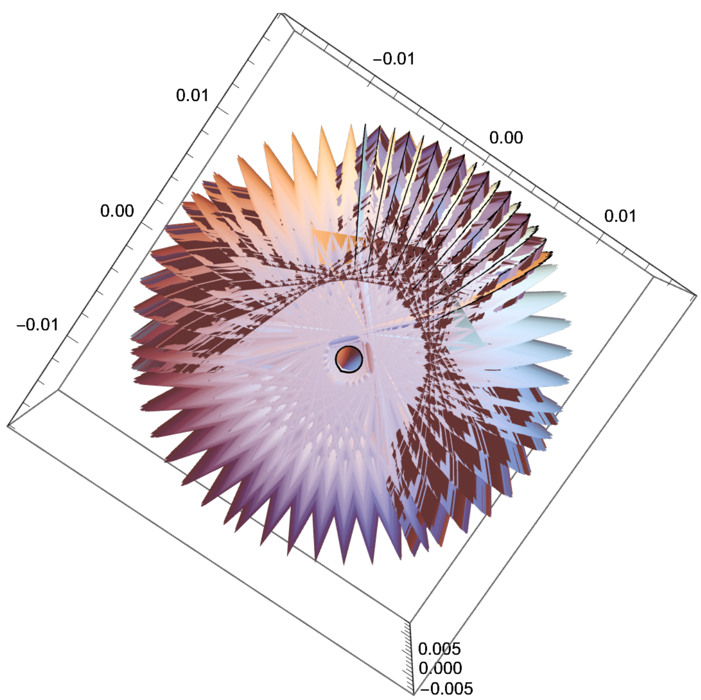
$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\,\theta}},\ \{\beta,\ -1,\ 1\},\ \{\theta,\ -1,\ 1\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -10,\ 10\},\ \{\theta,\ -10,\ 10\}\right]$$

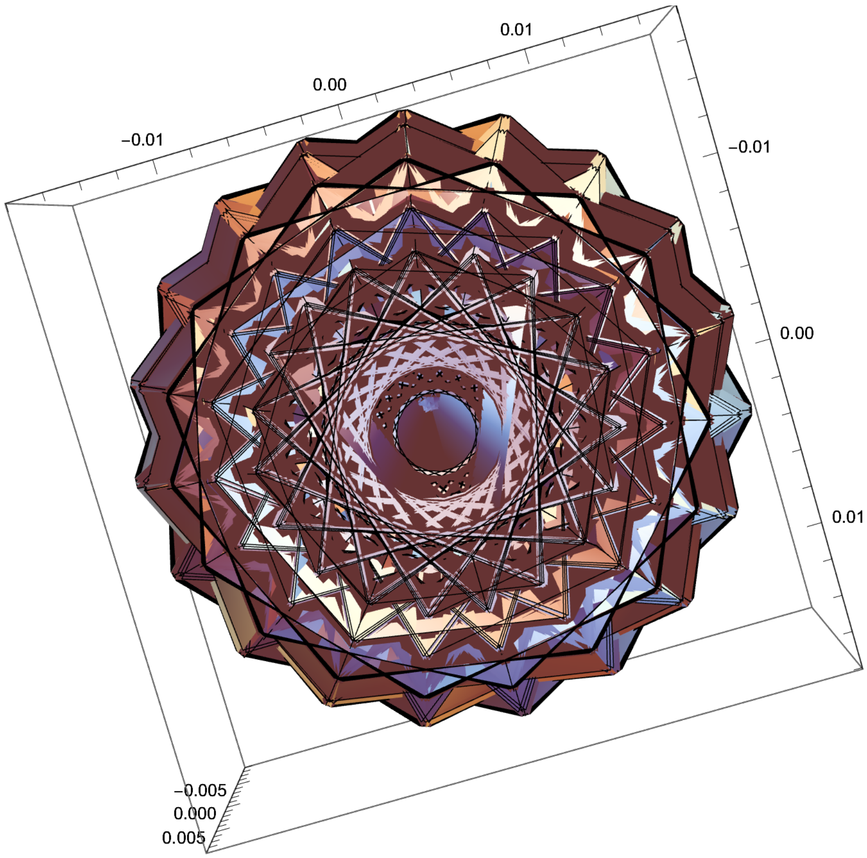


$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -100,\ 100\},\ \{\theta,\ -100,\ 100\}\right]$$

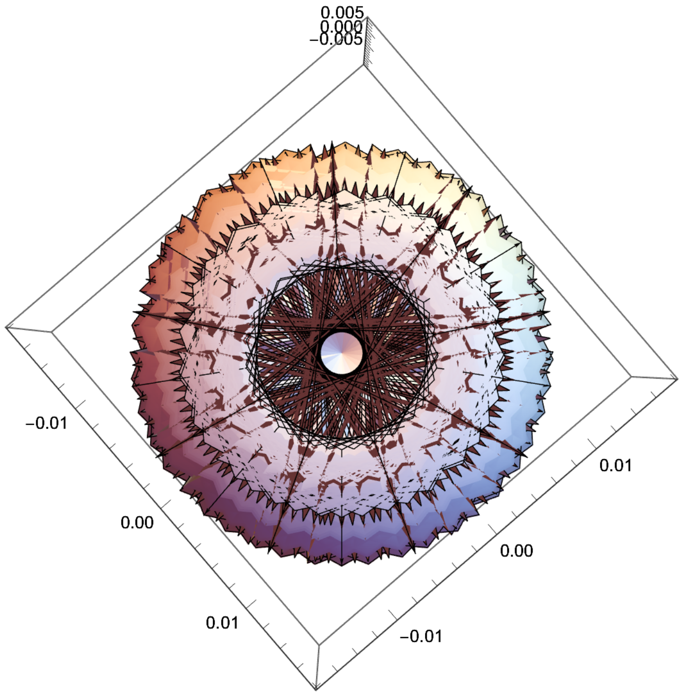


```
SphericalPlot3D[π √(4π - θ) √θ Sin[β] / (180 √((4π - θ) θ)), {β, -1000, 1000}, {θ, -1000, 1000}]
```

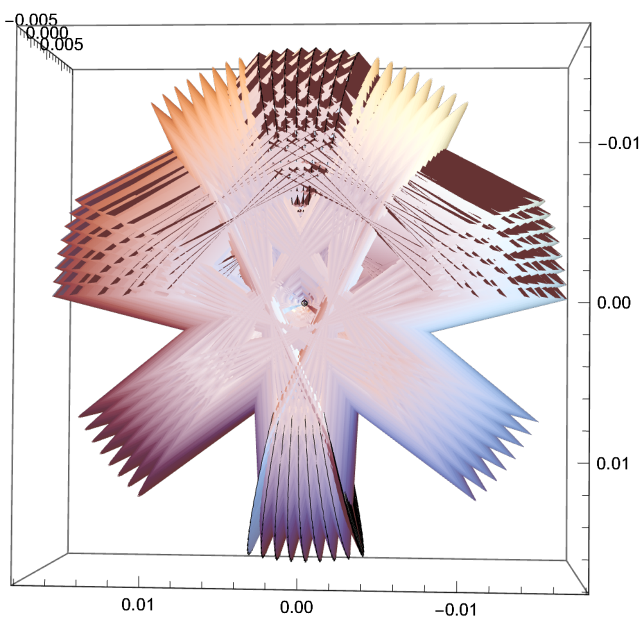
$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -1000,\ 1000\},\ \{\theta,\ -1000,\ 1000\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\pi-\theta)\ \theta}}, \{\beta, -10\,000, 10\,000\}, \{\theta, -10\,000, 10\,000\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\pi-\theta)\ \theta}},\right.$$
$$\left.\{\beta, -100\,000\,000, 100\,000\,000\}, \{\theta, -100\,000\,000, 100\,000\,000\}\right]$$



Special Case 1, $\theta = \beta$

Some velocity, which is the first derivative of the equation for θ r, is the angular velocity, and is equal to a wavelength of frequency. Some velocity, which is the first derivative of r is the transitional velocity, and is equal to a the distance, r being a wavelength,

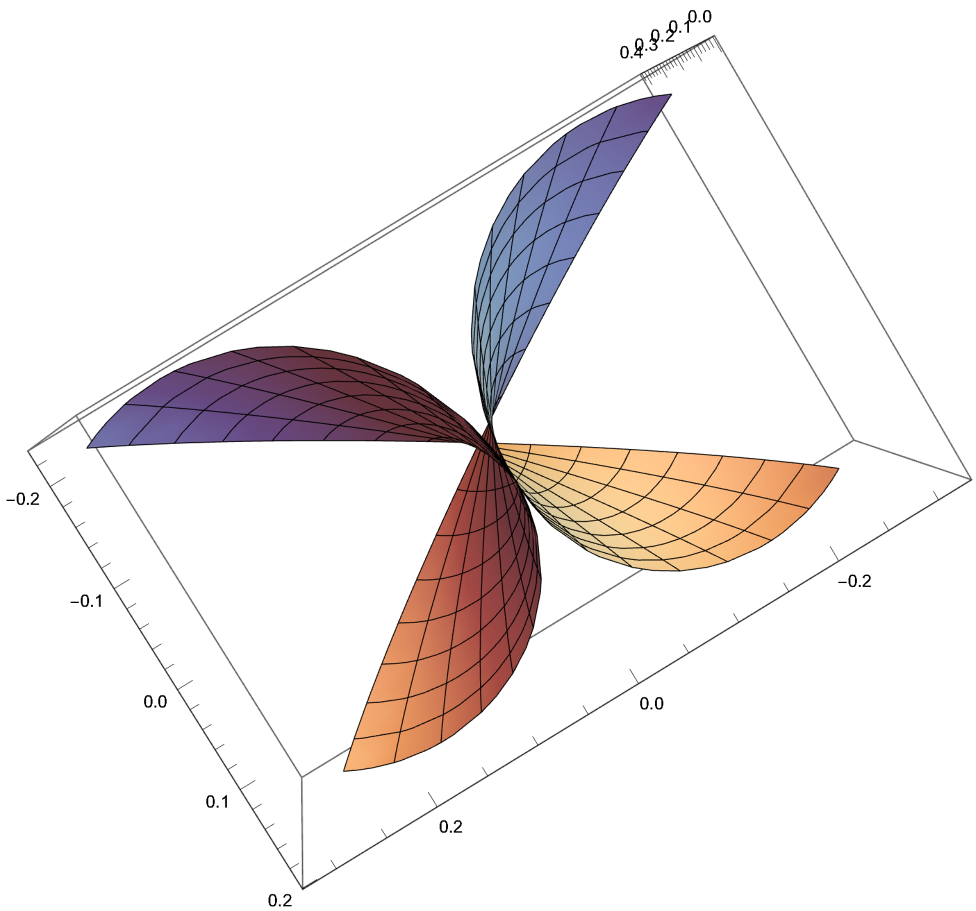
$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}, \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\}$$

η = r Sin[β]

$$\left\{\left\{r \to -\sqrt{1 + \frac{4\,\pi^2}{(4\,\pi - \Theta)^2} - \frac{4\,\pi}{4\,\pi - \Theta}}\right\}, \left\{r \to \sqrt{1 + \frac{4\,\pi^2}{(4\,\pi - \Theta)^2} - \frac{4\,\pi}{4\,\pi - \Theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\,\pi - \theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\,\pi - \theta} + \frac{4\,\pi}{\theta^2} - \frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}\right\}$$

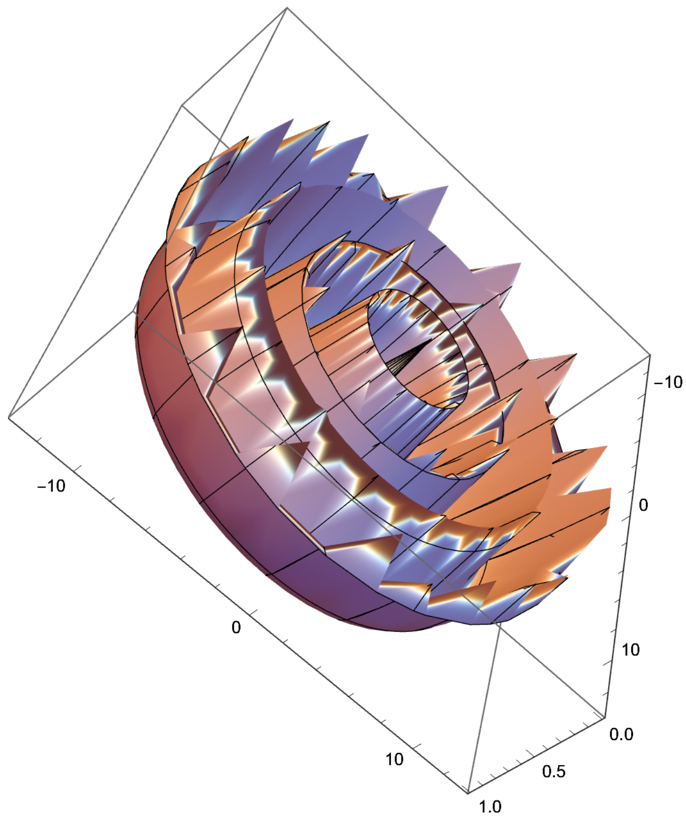
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,-1,1\},\ \{\beta,-1,1\}\right]$$



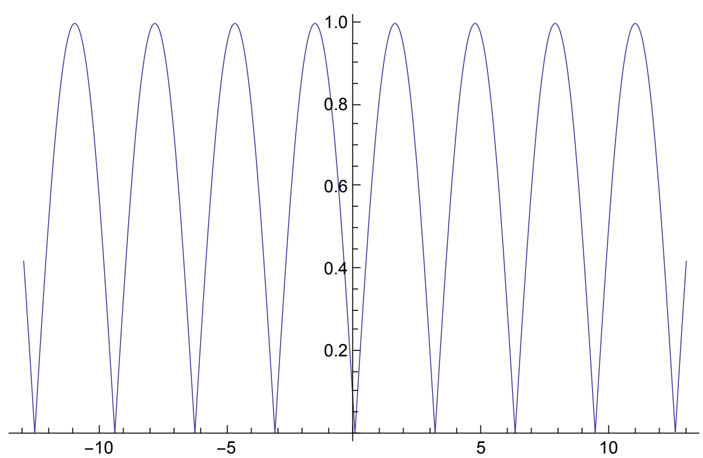
$$\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi}=$$

$$\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi}=\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,(r)\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,(r)\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}} == \left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right), \theta\right]$$

$$\Big\{\{\theta \to 2\pi\},$$

$$\left\{\theta \to -\left(\frac{2}{1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}}\right)^{1/3}+\frac{\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{12\pi^2}\right\},$$

$$\left\{\theta \to -\frac{\left(1+i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{24\pi^2}+\frac{1-i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)^{1/3}}\right\},$$

$$\left\{\theta \to -\frac{\left(1-i\sqrt{3}\right)\left(\frac{1}{2}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)\right)^{1/3}}{24\pi^2}+\frac{1+i\sqrt{3}}{2^{2/3}\left(1728\pi^5+\sqrt{6912\pi^6+2985984\pi^{10}}\right)^{1/3}}\right\}\Big\}$$

$$\frac{\sqrt{4\pi\left(\frac{2\pi\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi} =$$

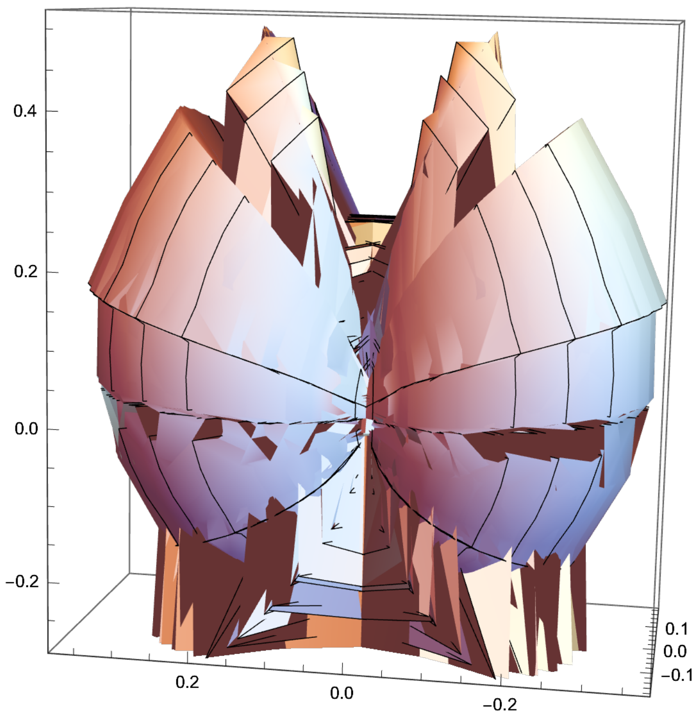
$$r = \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}$$

$$\left\{\left\{r \to -\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}, \left\{r \to \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

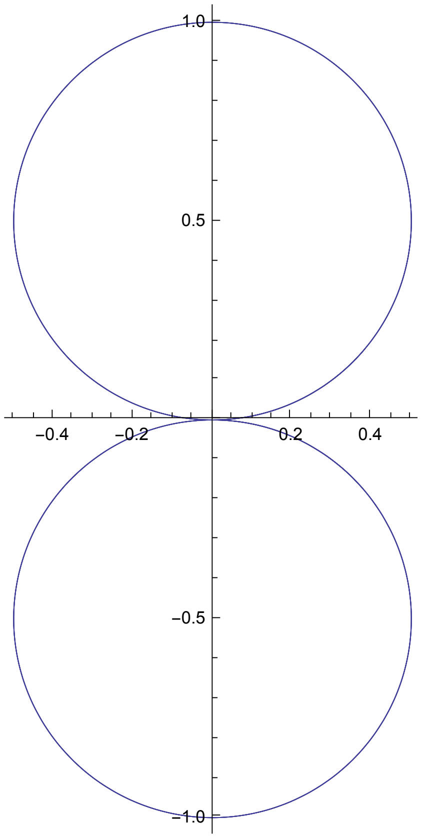
$$\left.\{\theta,-360,360\},\{\beta,-360,360\}\right]$$



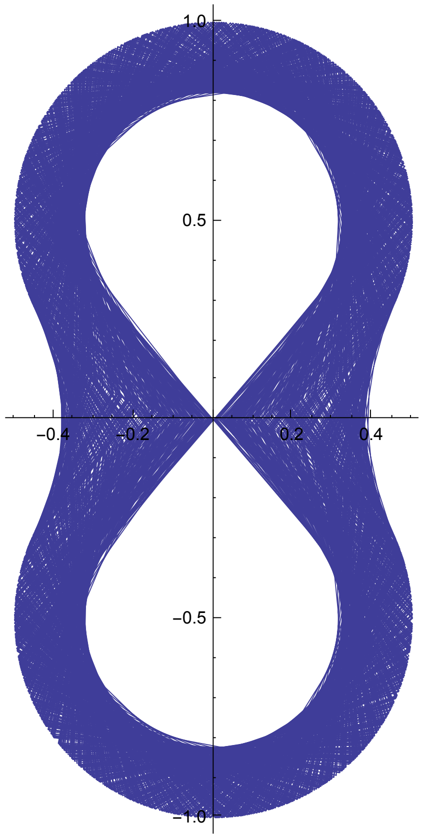
$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\right.$$

$$\left.\{\theta,-360,360\},\{\beta,-360,360\}\right]$$

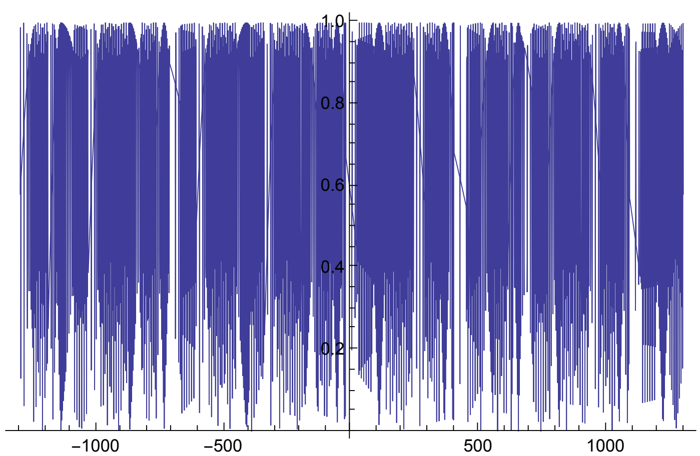
$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\,\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\,\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\,\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



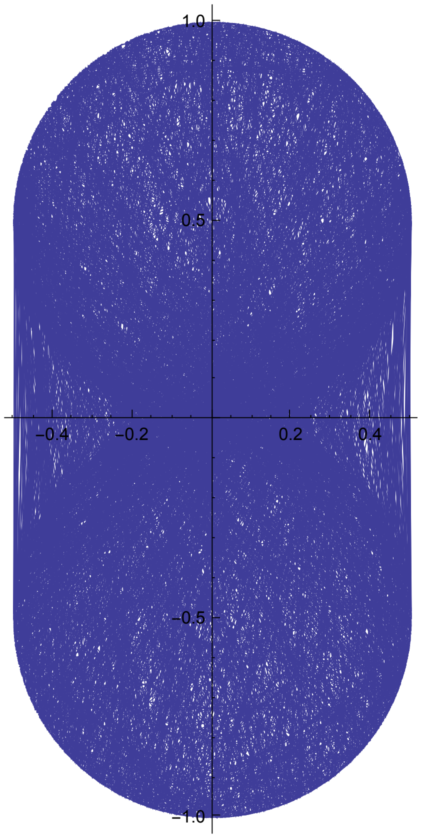
$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -1300,\ 1300\}\right]$$



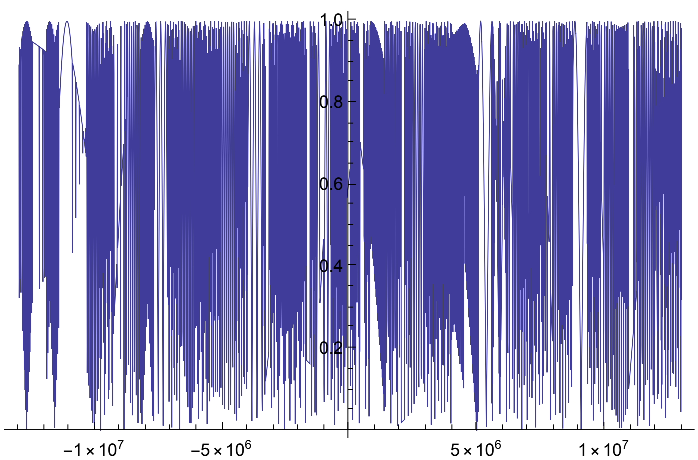
$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -1300,\ 1300\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\,\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13\,000\,000,\ 13\,000\,000\}\right]$$



$$\text{Plot}\left[\frac{\sqrt{4\,\pi\,\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13\,000\,000,\ 13\,000\,000\}\right]$$



Contour is said to be the experience of this kind of polar equation from information available in light. Light is interpreted in the polar coordinate system by a human being when perception occurs. How it is

interpreted depends partially on how you see something. For instance, I can see this graphed contour like a cylinder or two spheres. We call this a conisphilinder. It's holographic characteristic is the first special case.

The Geometric Pattern of Perception of the Moon from beneath the Legs.

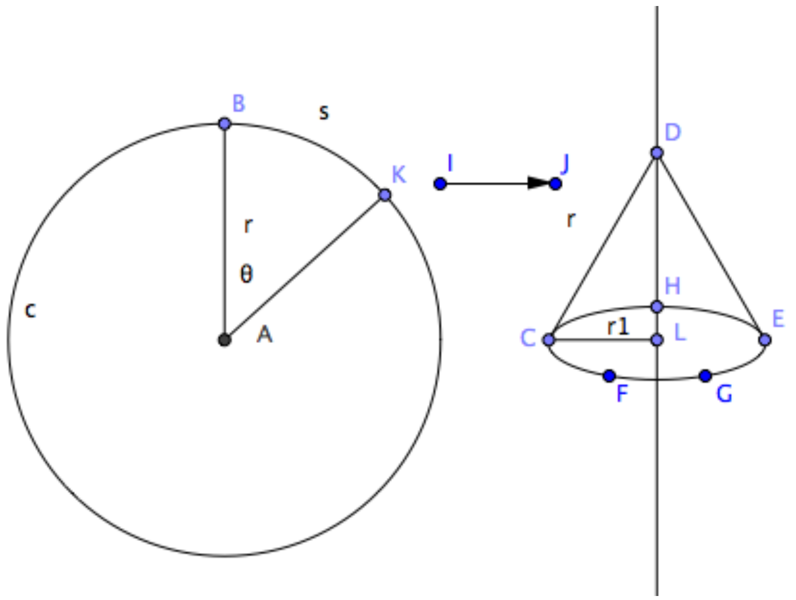
by Parker Emmerson

From Perception of the Environment with Tom Toleno

Perception would and could only be perceived as the inception and or acceptance of the information provided by the individual or individuals through any giving persona section of reality. In this paper, I will discuss how Gibson’s theory of the ambient optic array, in combination with mathematical inquiry of the experience, will act like a thought experiment for understanding the reason behind the illusion that, when you look at the moon through your legs, you will see that it looks smaller than when you see it from a standing position. Specifically, we will attempt to answer the question of, "how can perceived change in size, theoretically relating to a change in distance, be accounted for even though the change in distance does not actually occur"?

When people look up in the sky from a standing position, a clear and accessible visual structure presents the opportunity for relatively accurate depth perception and size discernment. The object being perceived takes the shape of a circle or orb in the sky, which is the moon. However, when the body is turned upside down and the eye strains to move about searching for or focusing on external stimuli, the visual structure is depleted. It was shown that by G. M. Stratton that, for voluntary eye motions, following a moving object was anything but predicatble. The conclusion from Stratton's experiments pertains to the phenomenon of the moon's looking smaller from upside down beneath the legs, because it shows us that, "reception of visual structures is possible only for the eye at rest" (The Perceptual World by Wolfgang Metzger 63). We will now use mathematics to describe the visual structure of the variables relating to depth perception and measurement of the size of a circle or orb.

First, we postulate that :



The diagram is not drawn to scale with regard to theta or an actual transformation of this sort. This diagram is a representation of a geometric structure and a system that has complex implications. If an object or wavelength progresses through the height of the cone, it is said to be traveling through theta in terms of time. However, it should be noted that the circle does not have to fold all the way up in order for the max height of r to be achieved for variables to maintain their correlation. This is said to be an *invariance* of the system. The position is also said to have an initial radius of a max of the height of the cone during a given instance. It is a structure that I propose may be present in every point of the ambient optic array, and one that also has clear cut geometric relations *through* the folding of space-time. It also acts like an observable metaphor for how discernment of the size of a massive orb in space occurs and can change with context.

The parameters of the system for the purposes of this discussion are:

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle, the base of the cone, of radius r_1

$r^2 = r_1^2 + h^2$

This is the initial radius squared expressed as the slant of the cone in terms of the height of the cone, h, and the radius of the base of the cone, r_1

$r = \sqrt{(r_1^2 + h^2)}$

$s = \theta r$

$s / \theta = r$

The arc length taken out of a circle at a given time is =

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r \quad \rightarrow$ Equation 7

$r_1^2 == r^2 - h^2$

$r_1 = \sqrt{(r^2 - h^2)}$

$h < r$

τ = time
1 second = 6 degrees
$\tau = 6\,\theta$

I will now do some algebra to conclude what the height of the cone is in terms of the initial parameters. It can eventually be reduced to a single variable.

```
Solve[r1^2 + h^2 == r^2, h]
```

$$\left\{\left\{h \to -\sqrt{r^2 - r_1^2}\right\}, \left\{h \to \sqrt{r^2 - r_1^2}\right\}\right\}$$

```
(t / θ) = r
```

We will propose that for our system, it is true that this correlation pertains :

$$\text{Solve}\left[\theta == \left(\left(2\,\pi\,(r) - 2\,\pi\sqrt{\left((r)\,^\wedge 2 - \left(\left(\left(\frac{2\,\sqrt{r^2\,(2\,\pi - (\theta))\,(\theta)}}{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}\right)\left(\frac{\sqrt{(2\,(r))^2\,(2\,\pi - \theta)\,\theta}}{2\,\pi}\right)\right)^\wedge 2\right)\right)}\right)\Big/ r\right), \theta\right]$$

$$\left\{\{\theta \to 0\}, \left\{\theta \to \frac{4\,\pi}{3}\right\}, \left\{\theta \to \frac{12\,\pi}{5}\right\}\right\}$$

$$\left\{\left\{h \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}, \left\{h \to \frac{\sqrt{4\,\pi\,(1)^2\,\theta - (1)^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

$$\text{PolarMap}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \{-1, 1\}, \{-13, 13\}\right]$$

$$\text{PolarMap}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \{-1, 1\}, \{-13, 13\}\right]$$

$$\frac{\sqrt{4\,\pi\,(r)^2\,\theta - (1)^2\,\theta^2}}{2\,\pi} == x\,($$

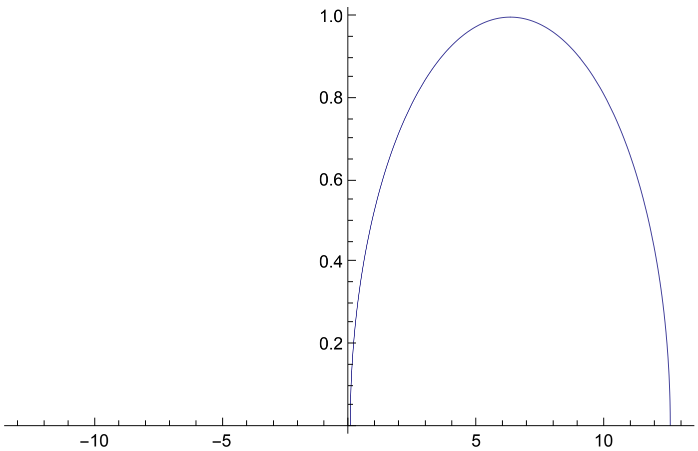
$$\text{Simplify}\left[\frac{\sqrt{4\,\pi\,(r)^2\,\theta - (r)^2\,\theta^2}}{2\,\pi}\right]$$

$$\frac{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}{2\,\pi}$$

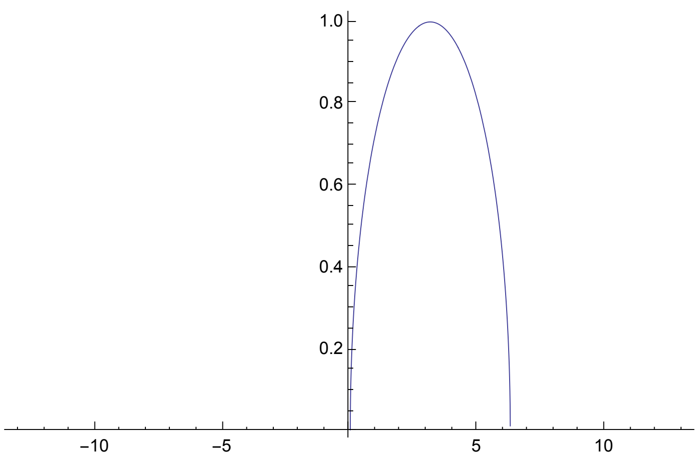
$$\text{Solve}\left[\frac{\sqrt{(2\,r)^2\,(2\,\pi-\theta)\,\theta}}{2\,\pi}==x\,\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi},\,x\right]$$

$$\left\{\left\{x\to\frac{2\,\sqrt{r^2\,(2\,\pi-\theta)\,\theta}}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{\sqrt{4\,\pi\,(1)^2\,\theta-(1)^2\,\theta^2}}{2\,\pi},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{Plot}\left[\frac{\sqrt{2\,\pi\,(1)^2\,\theta-(1)^2\,\theta^2}}{\pi},\,\{\theta,\,-13,\,13\}\right]$$



$$\frac{2\,\sqrt{r^2\,(2\,\pi-\theta)\,\theta}}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}=x$$

$$t==\pi\,(r)-2\,\pi\,\sqrt{\left((r)\,\hat{}\,2-\left(\frac{2\,\sqrt{r^2\,(2\,\pi-\theta)\,\theta}}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\,h\right)\hat{}\,2\right)}$$

$$\pi\ (1) - 2\,\pi\ \sqrt{\left((1)\ \char94 2 - \left(\frac{2\ \sqrt{1^2\ (2\,\pi - \theta)\ \theta}}{\sqrt{1^2\ (4\,\pi - \theta)\ \theta}}\ h\right)\char94 2\right)}$$

$$t = C - C_2 = 2\,\pi r - 2\,\pi r_1 = 2\,\pi\ (r) - 2\,\pi\ \sqrt{((r)\ \char94 2 - h\char94 2)}$$

$$t == 2\,\pi\ (t/\theta) - 2\,\pi\ \sqrt{((t/\theta)\ \char94 2 - h\char94 2)}$$

Add $2\,\pi\ \sqrt{((r)\ \char94 2 - h\char94 2)}$ to both sides

$$t + 2\,\pi\ \sqrt{((t/\theta)\ \char94 2 - h\char94 2)} = 2\,\pi\ (t/\theta)$$

Subtract t from both sides and remember that $(t/\theta) = r$

$$2\,\pi\ \sqrt{((t/\theta)\ \char94 2 - (h\char94 2))} = 2\,\pi\ (t/\theta) - t = 2\,\pi r - t$$

Divide by $2\,\pi$ on both sides.

$$(t/\theta) - t/(2\,\pi) = (r) - t/(2\,\pi) = \sqrt{((t/\theta)\ \char94 2 - (h\char94 2))} = \sqrt{((r)\ \char94 2 - (h\char94 2))} = r_1$$

$$(r) - t/(2\,\pi) = \sqrt{((t/\theta)\ \char94 2 - (h\char94 2))}$$

Square both sides. Substitute : $(t/\theta) = r$

$$((t/\theta) - (t/(2\,\pi)))\ \char94 2 = ((r) - (t/(2\,\pi)))\ \char94 2 = ((t/\theta)\ \char94 2 - (h\char94 2)) = (r_1\char94 2)$$

$$((r) - (t/(2\,\pi)))\ \char94 2 = ((r)\ \char94 2 - (h\char94 2))$$

Add h^2 to both sides.

```
((r) - (t/(2 π)))^2 + (h^2) = (r)^2
```

Substitute : θ r=t

```
((t/θ) - (t/(2 π)))^2  = ((r) - (θ*r/(2 π)))^2
```

$$((r) - (\theta * r/(2\,\pi)))\ \char94 2$$

$$\left(r - \frac{r\,\theta}{2\,\pi}\right)^2$$

$$\text{Expand}\left[\left(r - \frac{r\,\theta}{2\,\pi}\right)^2\right]$$

$$r^2 - \frac{r^2\,\theta}{\pi} + \frac{r^2\,\theta^2}{4\,\pi^2}$$

$$r^2 - \frac{r^2\,\theta}{\pi} + \frac{r^2\,\theta^2}{4\,\pi^2} + h\char94 2 = ((r) - (t/2\,\pi))\ \char94 2 + (h\char94 2) = r\char94 2$$

$$(r\char94 2) - \left(r^2 - \frac{r^2\,\theta}{\pi} + \frac{r^2\,\theta^2}{4\,\pi^2}\right) = h\char94 2$$

$$\text{Simplify}\left[(r\char94 2) - \left(r^2 - \frac{r^2\,\theta}{\pi} + \frac{r^2\,\theta^2}{4\,\pi^2}\right)\right]$$

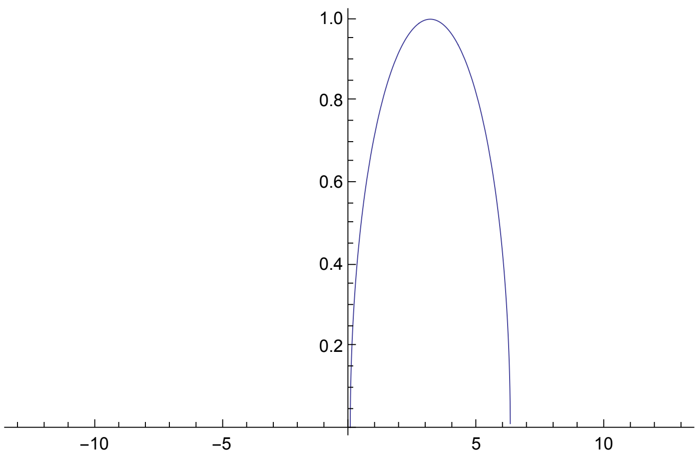
$$h\wedge 2 = \frac{r^2\,(4\,\pi - \theta)\,\theta}{4\,\pi^2}$$

$$\sqrt{\left[\frac{r^2\,\theta}{\pi} - \frac{r^2\,\theta^2}{4\,\pi^2}\right]} = h$$

$$\text{Simplify}\left[\sqrt{\frac{r^2\,\theta}{\pi} - \frac{r^2\,\theta^2}{4\,\pi^2}}\right]$$

$$\frac{\sqrt{r^2\,(4\,\pi - \theta)\,\theta}}{2\,\pi}$$

$$\text{Plot}\left[\frac{\sqrt{(2 * r)^2\,(2\,\pi - \theta)\,\theta}}{2\,\pi}, \{\theta, -13, 13\}\right]$$

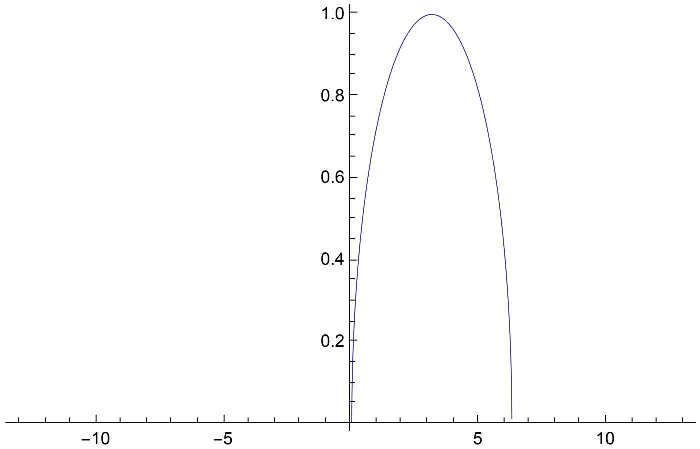


We alter the equation to fix it, because what we find with what we found was missing a coefficient.

$$\frac{\sqrt{((2\,r))^2\,(4\,\pi - \theta)\,\theta}}{\pi}$$

$$\frac{\sqrt{(2\,r)^2\,(4\,\pi - \theta)\,\theta}}{2\,\pi}$$

$$\text{Plot}\left[\frac{\sqrt{(2\ (1))^2\ (2\,\pi - \theta)\ \theta}}{2\,\pi}, \{\theta, -13, 13\}\right]$$



$$h = \frac{\sqrt{r^2\ (4\,\pi - \theta)\ \theta}}{2\,\pi}$$

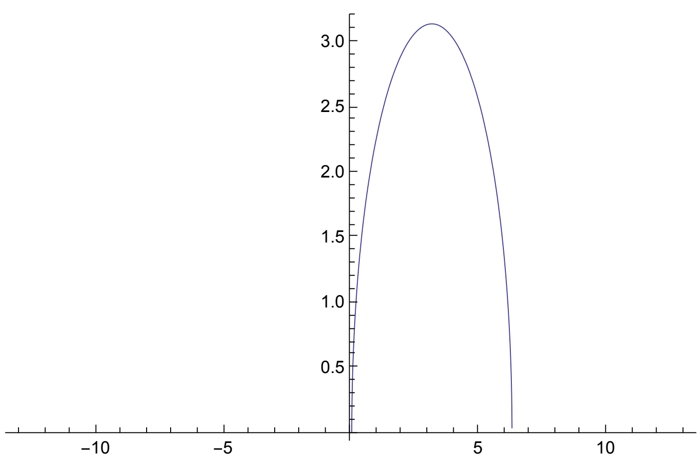
$$h = \frac{\sqrt{(2\,r)^2\ (4\,\pi - \theta)\ \theta}}{2\,\pi}$$

$$D\left[\frac{\sqrt{(2\ (1))^2\ (4\,\pi - \theta)\ \theta}}{2\,\pi}, \theta\right]$$

$$\frac{4\,\pi - 2\,\theta}{2\,\pi\,\sqrt{(4\,\pi - \theta)\ \theta}}$$

D[

$$\text{Plot}\left[\frac{\sqrt{(2\ (r))^2\ (2\,\pi - \theta)\ \theta}}{2\,\pi}, \{\theta, -13, 13\}\right]$$



There are methods for solving this equation so that we know what r is in terms of theta. We will not use them for our immediate introspection. However, an additional postulate should be noted. The

initial discernment of the moon's radius is a measurement of one. The moon will be said to have an initial radius of one, because it is the first measurement taken, and any multiplier of other scaling methods could be applied to the initial designation of the radius' being equal to one.

When we look at the moon from beneath the legs, we see an object in relation to contour. The object, however, is a heavenly body, and discernment of its actual size is more difficult than objects on the ground. In Gibson' s terminology, what happens during the perception of the moon when standing up is that, although the object, "neither approaches nor recedes from the point of observation, and no change occurs within the contour corresponding object" (Gibson, 103), there is a perceived magnification. In the optical array, when perceiving the moon, we can suggest that there must be a decretion in the optical structure, i.e. framing by the legs (deletion of optical structure relating to the contour of the moon), an therefore a decrease of the moon' s edge contour from the standing position. This refers to a disturbance in the perspective.

When we look from beneath our legs, not only do our eyes have to strain to look upward (creating hypocycloid, or syccatic eye movements), but also they switch positions and invert. The phenomenon occurs within the sphere of an individual's perceptual space. From the notion of mirroring (due to inverted eye positions), we notice that the derivative of the actual geometric element of depth inceives a perceptual illusion of depth change independently from within the space of an individual and their translation of the existence of objects in real space into subjective experience upon reception of the external sensation of light.

The moon phenomenon is some evidence for the old Buddhist koan that suggests that the mind really may be that which moves, because the first derivative of height would be velocity with respect to our version of the time variable.

In order to model this phenomenon, we will use the hypocycloid to model the syccatic eye movements, and the derivative of the height (due to mirroring of the individual's perceptual space) to find the exact amount of decretion of contour around the perceived moon when looking upside down from beneath your legs.

$$h = \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi} = \frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}$$

$$D\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}, \theta\right]$$

$$\frac{4\pi - 2\theta}{4\pi\sqrt{(4\pi - \theta)\ \theta}}$$

```
Clear[x, y, t, a, b,  tmini, tmaxi]
a = Sqrt[(4 π - θ) θ] / (2 π);
b = (4 π - 2 θ) / (2 π Sqrt[(4 π - θ) θ])
tmini  = -10 π;
tmaxi = 10 π;
{x[t_], y[t_]} =
  {(a - b) * Cos[θ] + b * Cos[(a - b) / b * θ], (a - b) * Sin[θ] - b * Sin[(a - b) / b * θ]};

hypocycloid =
     ParametricPlot[{x[θ], y[θ]}, {θ, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```

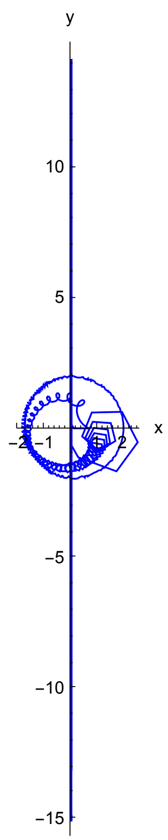
```
Clear[x, y, t, a, b,  tmini, tmaxi]
```

$$a = \frac{\sqrt{(2\ (1))^2\ (4\pi - \theta)\ \theta}}{2\pi};$$

$$b = \frac{4\pi - 2\theta}{4\pi\ \sqrt{(4\pi - \theta)\ \theta}}$$

```
tmini  = -13 π;
tmaxi = 13 π;
{x[t_], y[t_]} =
  {(a - b) * Cos[θ] + b * Cos[(a - b) / b * θ], (a - b) * Sin[θ] - b * Sin[(a - b) / b * θ]};

hypocycloid =
     ParametricPlot[{x[θ], y[θ]}, {θ, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```

$$\frac{4\pi - 2\theta}{4\pi\ \sqrt{(4\pi - \theta)\ \theta}}$$



We can interpret this to show us the way in which contour gives us the perception of depth in our environment, and that, when the contour around an object is eroded by a change in the environmental

factors, it looks smaller. I think the graph should be interpreted to say that there is the amount of contour is even on all edges of the object when the average is found for the size of a loop.

Science offers to humanities the language by which they may discuss the parameters of the human being in its beauty, symmetry, and sense of place. A human being is a material being, though this material ought not to be thought of as a separate element from its geometry. If we think about it, we are like spheres.Our bodies and minds both have a centralized locale in the environment. A body of knowledge grows to more accurately describe the being who asked the question of individual meaning.The individuality of this being, however, must only be considered to be truly individual from the rest of the universe in which it inhabits. Science can offer a path to the humanitarian study in which each element of the impressions made by a being is an ever - expanding body of connective knowledge. Science shows the humanities how they are symbolically present through the entire realm of being. The arts, in this way, are like the tissue or sinew of a structure for expanding and exploring the cognition and being of the individual.

$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\left[13 == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\left\{\left\{\beta \to -i\,\text{ArcSinh}\left[\frac{\sqrt{13\,(13 - 4\,\pi)}}{2\,\pi}\right]\right\}, \left\{\beta \to i\,\text{ArcSinh}\left[\frac{\sqrt{13\,(13 - 4\,\pi)}}{2\,\pi}\right]\right\}\right\}$$

```
c := 2.99792458 * (10^8)
```

RevolutionPlot3D[

$$\frac{1}{1166400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\,\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}+\frac{1620\,c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{5/2}}\right),$$

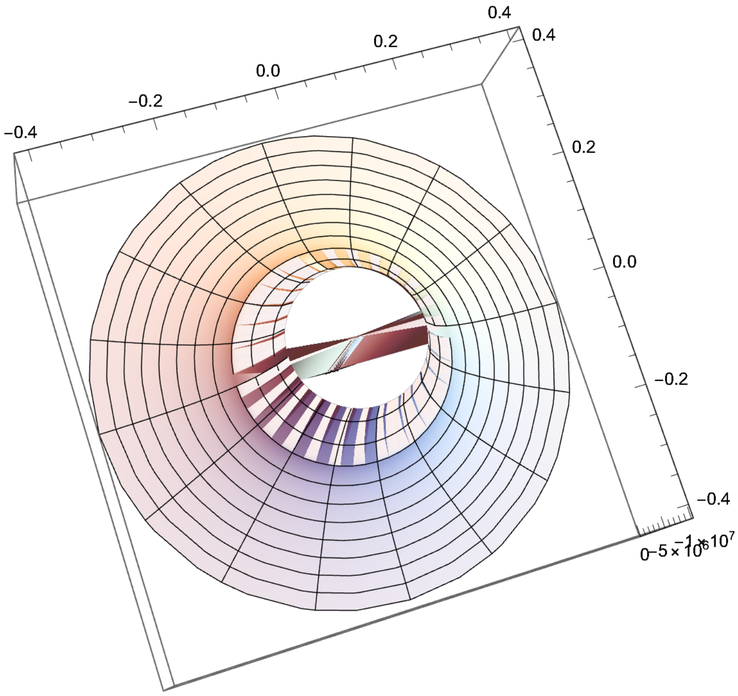
$$\left\{\beta,-i\,\mathrm{ArcSinh}\left[\frac{\sqrt{13\,(13-4\pi)}}{2\pi}\right],\mathrm{ArcSinh}\left[\frac{\sqrt{13\,(13-4\pi)}}{2\pi}\right]\right\}]$$

RevolutionPlot3D[

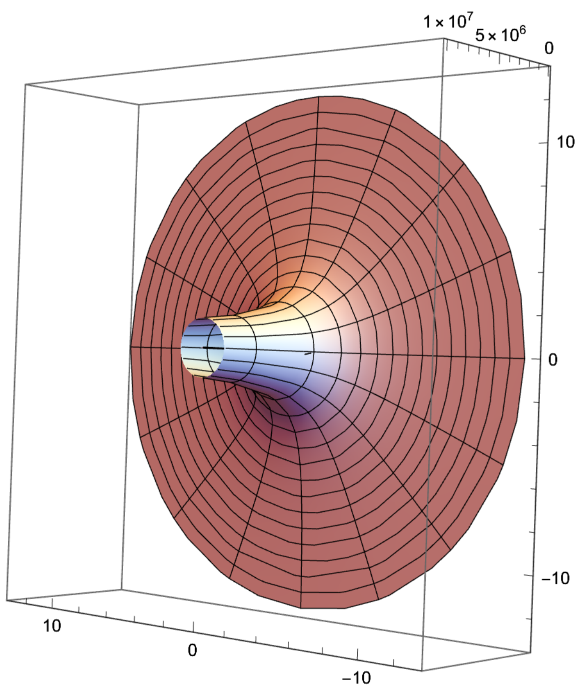
$$\frac{1}{1166400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\,\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}+\frac{1620\,c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{5/2}}\right),$$

$$\left\{\beta,-i\,\mathrm{ArcSinh}\left[\frac{\sqrt{13\,(13-4\pi)}}{2\pi}\right],\mathrm{ArcSinh}\left[\frac{\sqrt{13\,(13-4\pi)}}{2\pi}\right]\right\}]$$

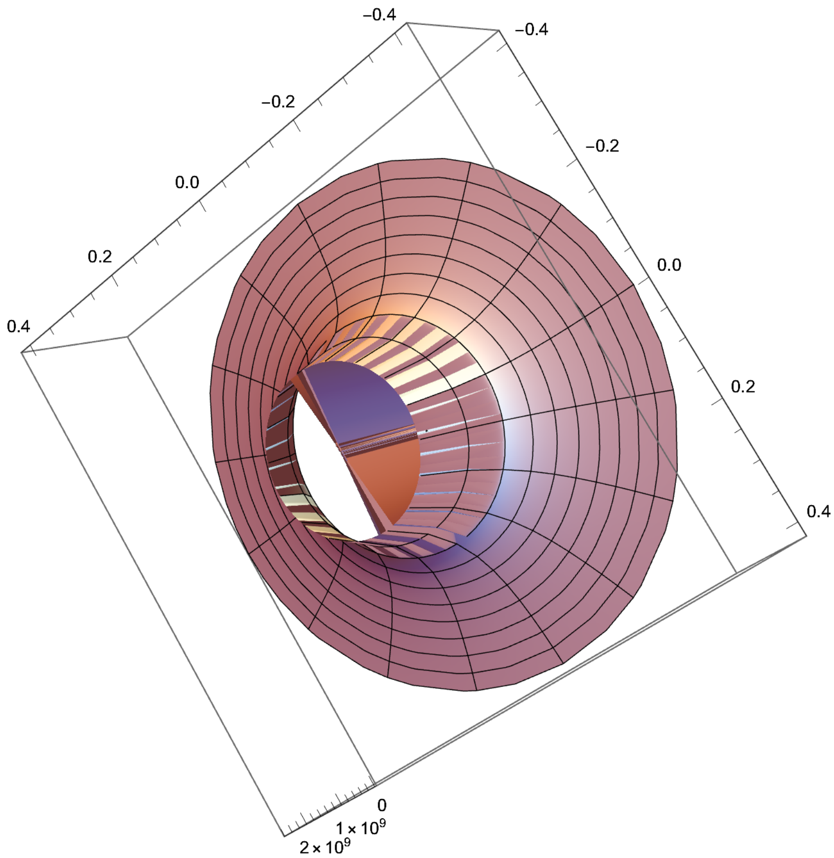
$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400},\left\{\theta,\frac{26\pi}{-13+2\pi},\frac{2\left(-13\pi+4\pi^2\right)}{-13+2\pi}\right\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400},\left\{\gamma,\frac{26\pi}{-13+2\pi},13\right\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1166400},\left\{\gamma,\frac{26\pi}{-13+2\pi},\frac{2\left(-13\pi+4\pi^2\right)}{-13+2\pi}\right\}\right]$$



$$c := 2.99792458 * (10 ^ 8)$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{Solve}\left[\gamma==\frac{2\left(\pi-\pi\,\text{Csc}[\beta]^2+\sqrt{-\pi^2\,\text{Csc}[\beta]^2+\pi^2\,\text{Csc}[\beta]^4}\right)}{-1+\text{Csc}[\beta]^2},\beta\right]$$

$$\left\{\left\{\beta\to-\text{ArcCsc}\left[\frac{\sqrt{-4\pi^2-4\pi\gamma-\gamma^2}}{\sqrt{-4\pi\gamma-\gamma^2}}\right]\right\},\left\{\beta\to\text{ArcCsc}\left[\frac{\sqrt{-4\pi^2-4\pi\gamma-\gamma^2}}{\sqrt{-4\pi\gamma-\gamma^2}}\right]\right\}\right\}$$

$$\text{ArcCsc}\left[\frac{\sqrt{-4\pi^2-4\pi\gamma-\gamma^2}}{\sqrt{-4\pi\gamma-\gamma^2}}\right]$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}\left[\text{ArcCsc}\left[\frac{\sqrt{-4\pi^2-4\pi\gamma-\gamma^2}}{\sqrt{-4\pi\gamma-\gamma^2}}\right]\right]^2}\right)$$

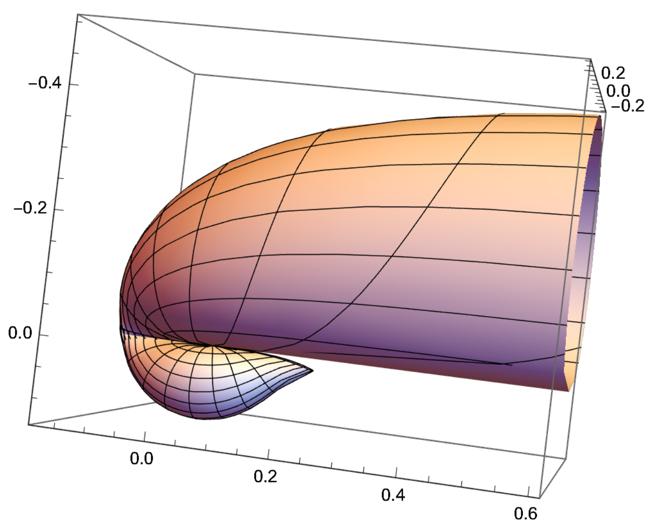
$$\text{Solve}\left[13 == 2\left(\pi + \sqrt{\pi^2 - \frac{\pi^2\left(-4\pi\gamma - \gamma^2\right)}{-4\pi^2 - 4\pi\gamma - \gamma^2}}\right), \gamma\right]$$

$$\left\{\left\{\gamma \to \frac{26\pi}{-13+2\pi}\right\}, \left\{\gamma \to -\frac{2\left(-13\pi + 4\pi^2\right)}{-13+2\pi}\right\}\right\}$$

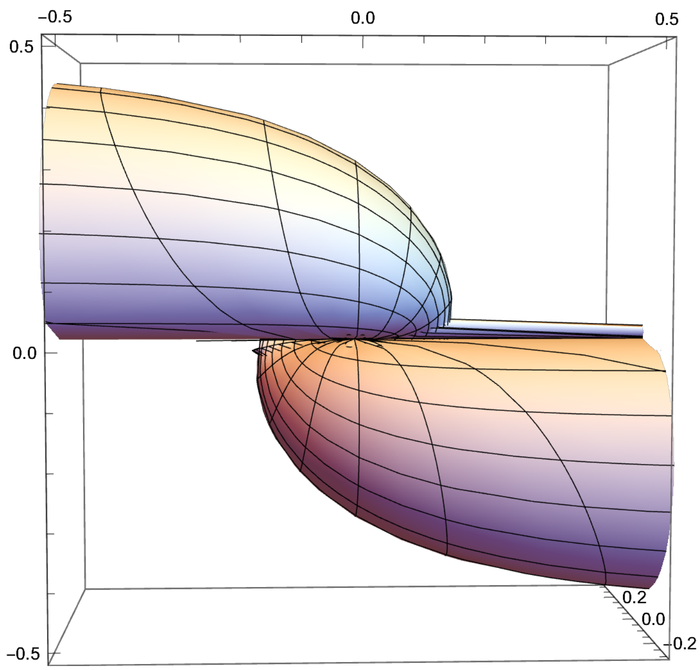
$$\text{Solve}\left[2\pi r - 2\pi\sqrt{\left(r\hat{}2 - \left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)\hat{}2\right)} - \theta r == \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} \Big/ \left(2\pi r - r\theta - 2\pi\sqrt{r^2 - \frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2}}\right), r\right]$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta} + \frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}}}{\sqrt{32\pi^2 - 32\pi\theta + 8\theta^2}}\right\}, \left\{r \to \frac{\sqrt{\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta} + \frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}}}{\sqrt{32\pi^2 - 32\pi\theta + 8\theta^2}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta} + \frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}}}{\sqrt{32\pi^2 - 32\pi\theta + 8\theta^2}}, \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{SphericalPlot3D}\left[\left\{-\frac{\sqrt{\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}+\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}}}{\sqrt{32\,\pi^2-32\,\pi\,\theta+8\,\theta^2}},\ \frac{\sqrt{\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}+\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}}}{\sqrt{32\,\pi^2-32\,\pi\,\theta+8\,\theta^2}}\right\},\right.$$
$$\left.\{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{Sin}[\beta] = \frac{\eta}{r};\ \text{Cos}[\beta] = \frac{x}{r} = \frac{(2\,L+q)}{r};\ \text{Tan}[\beta] = \frac{\eta}{x} = \frac{\eta}{(2\,L+q)}$$

$$\text{Sin}[\gamma] = \frac{\eta}{r_1};\ \text{Cos}[\gamma] = \frac{(L+q)}{r_1};\ \text{Tan}[\gamma] = \frac{\eta}{(L+q)}$$

$$\text{Sin}[\delta] = \frac{\eta}{r_2};\ \text{Cos}[\delta] = \frac{(q)}{r_2};\ \text{Tan}[\delta] = \frac{\eta}{(q)}$$

$$\text{GoldenRatio}\,\alpha == \omega$$

$$r_2\,\omega == \text{GoldenRatio}\,r_1\,\alpha$$

$$\frac{\pi}{2} + \beta + (\alpha + \omega + \vartheta) == \pi$$

$$\frac{\pi}{2} + \gamma + (\omega + \vartheta) == \pi$$

$$\frac{\pi}{2} + \delta + \vartheta == \pi$$

$$r\,^\wedge 2 == \eta\,^\wedge 2 + (2\,L+q)\,^\wedge 2 = \eta\,^\wedge 2 + (x)\,^\wedge 2$$

$$r_1\,^\wedge 2 = \eta\,^\wedge 2 + (L+q)\,^\wedge 2$$

$$r_2\,^\wedge 2 = \eta\,^\wedge 2 + (q)\,^\wedge 2$$

$2\pi r - 2\pi x = \theta r$

$2\pi r - 2\pi r_1 = \iota r$

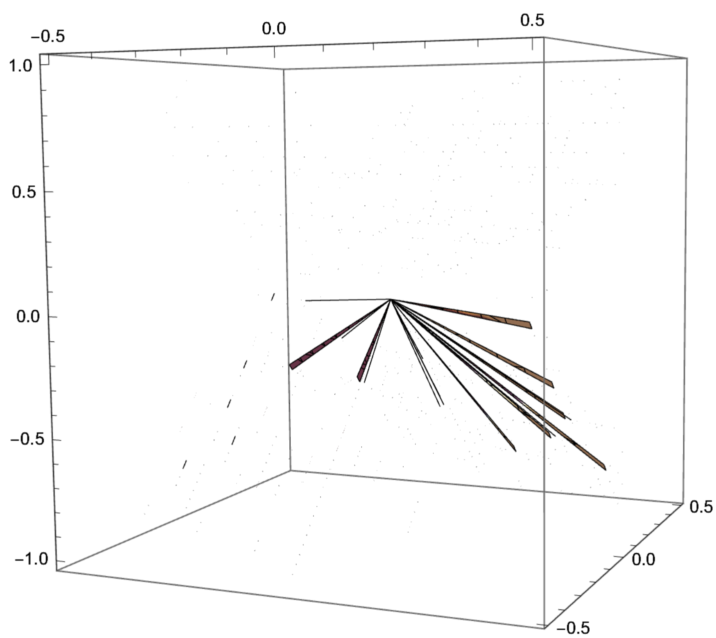
$2\pi r - 2\pi r_2 = \varkappa r$

$2\pi r_1 - 2\pi r_2 = \mu r$

```
Solve[r^2 == η^2 + (2 L + q)^2, η]
```

$$\left\{\left\{\eta \to -\sqrt{-4 L^2 - 4 L q - q^2 + r^2}\right\}, \left\{\eta \to \sqrt{-4 L^2 - 4 L q - q^2 + r^2}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\left\{-\sqrt{-4 L^2 - 4 L q - q^2 + r^2}, \sqrt{-4 L^2 - 4 L q - q^2 + r^2}\right\}, \{L, -.5, .5\}, \{r, -1, 1\}, \{q, -.5, .5\}\right]$$

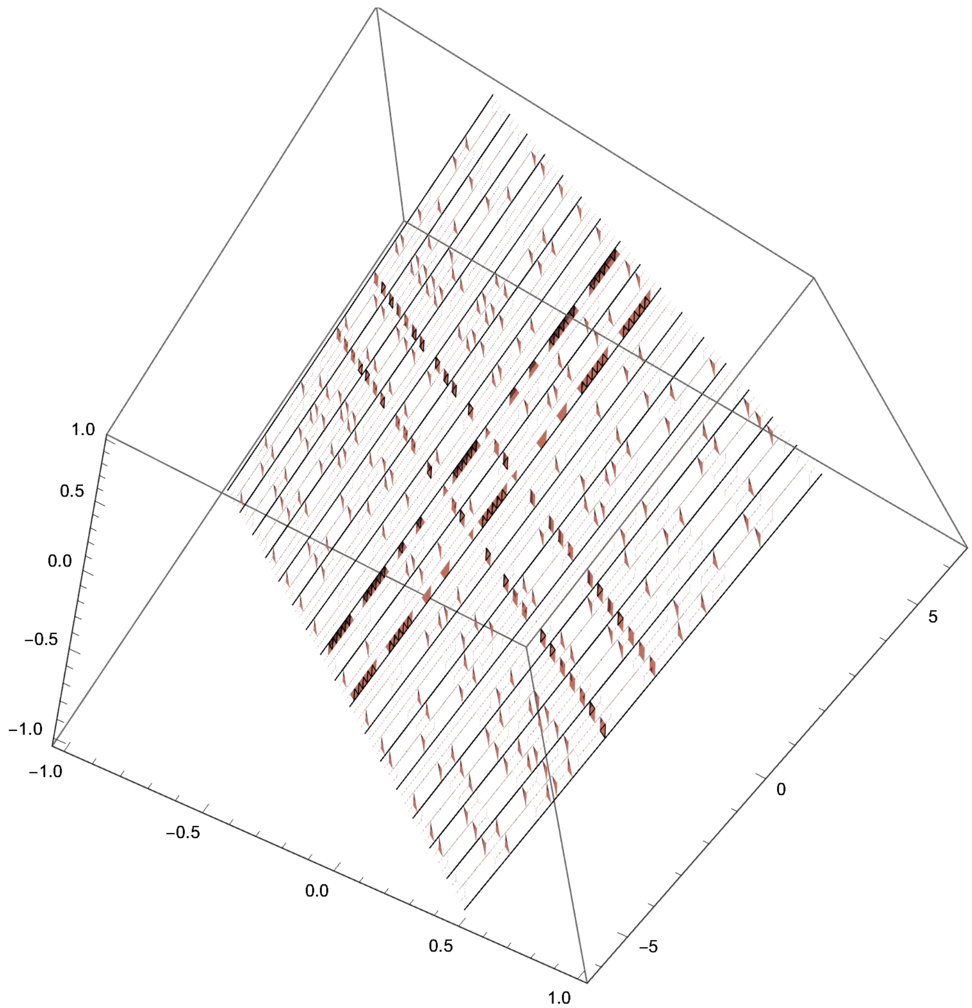


$$\text{Solve}\left[\sqrt{-4 L^2 - 4 L q - q^2 + r^2} == \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, r\right]$$

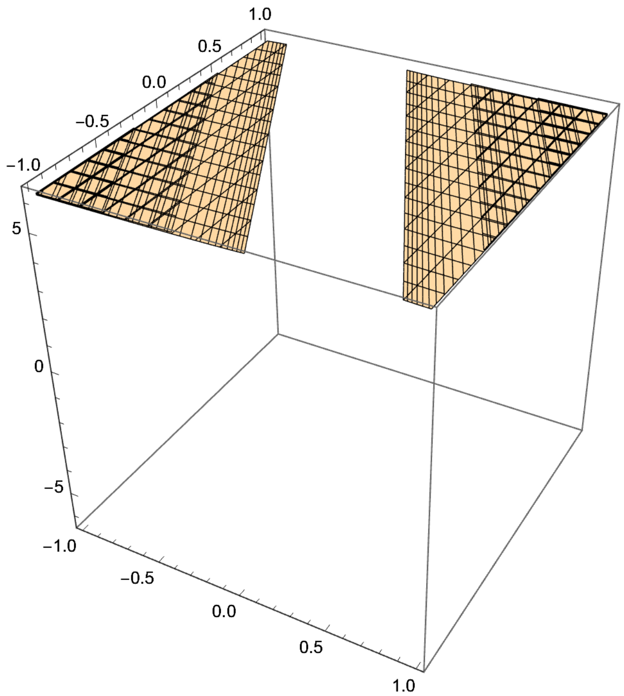
$$\left\{\left\{r \to -\frac{2 \pi \sqrt{4 L^2 + 4 L q + q^2}}{\sqrt{4 \pi^2 - 4 \pi \theta + \theta^2}}\right\}, \left\{r \to \frac{2 \pi \sqrt{4 L^2 + 4 L q + q^2}}{\sqrt{4 \pi^2 - 4 \pi \theta + \theta^2}}\right\}\right\}$$

```
ContourPlot3D[{-2π Sqrt[4 L^2 + 4 L q + q^2]/Sqrt[4 π^2 - 4 π θ + θ^2], 2π Sqrt[4 L^2 + 4 L q + q^2]/Sqrt[4 π^2 - 4 π θ + θ^2]},
 {L, -1, 1}, {q, -1, 1}, {θ, -2π, 2π}]
```

$$\text{ContourPlot3D}\left[\left\{-\frac{2\pi\sqrt{4L^2+4Lq+q^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\ \frac{2\pi\sqrt{4L^2+4Lq+q^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\ \{L,-1,1\},\{q,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{ContourPlot3D}\left[\frac{2\,\pi\,\sqrt{4\,L^2+4\,L\,q+q^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{L,-1,1\},\ \{q,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



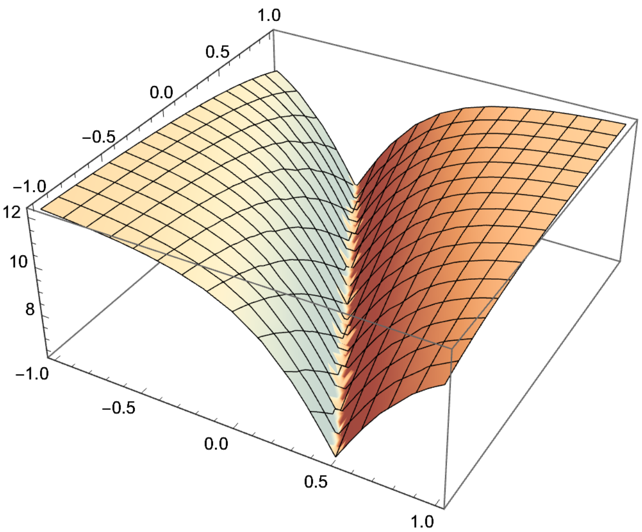
$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{Solve}\left[\sqrt{-4\,L^2-4\,L\,q-q^2+r^2} == \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,\pi\left(1+4\,L^2+4\,L\,q+q^2-\sqrt{4\,L^2+16\,L^4+4\,L\,q+32\,L^3\,q+q^2+24\,L^2\,q^2+8\,L\,q^3+q^4}\right)}{1+4\,L^2+4\,L\,q+q^2}\right\},\right.$$

$$\left.\left\{\theta\to\frac{2\,\pi\left(1+4\,L^2+4\,L\,q+q^2+\sqrt{4\,L^2+16\,L^4+4\,L\,q+32\,L^3\,q+q^2+24\,L^2\,q^2+8\,L\,q^3+q^4}\right)}{1+4\,L^2+4\,L\,q+q^2}\right\}\right\}$$

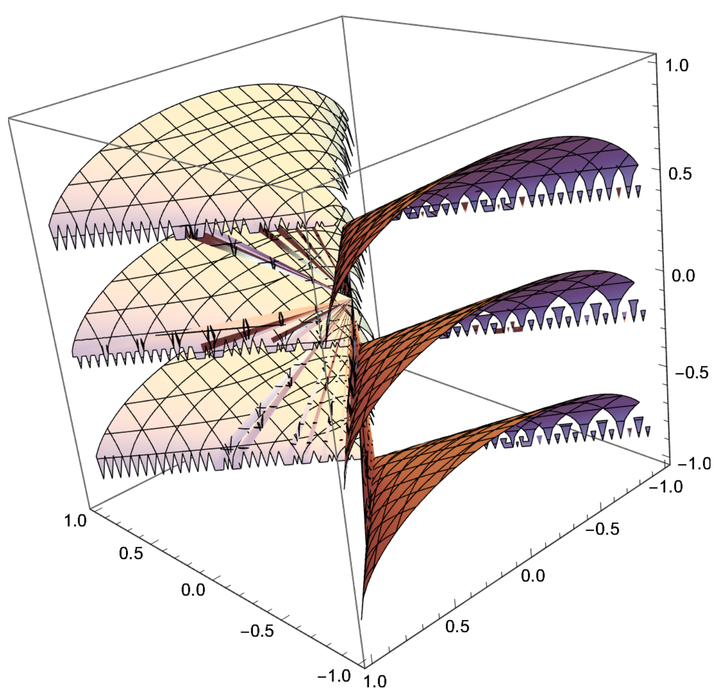
```
Plot3D[(2 π (1 + 4 L^2 + 4 L q + q^2 + Sqrt[4 L^2 + 16 L^4 + 4 L q + 32 L^3 q + q^2 + 24 L^2 q^2 + 8 L q^3 + q^4]))/(1 + 4 L^2 + 4 L q + q^2),
 {L, -1, 1}, {q, -1, 1}]
```




```
Solve[r^2 == η^2 + (2 L + q)^2, q]
```

$$\left\{\left\{q \to -2\,L - \sqrt{r^2 - \eta^2}\right\}, \left\{q \to -2\,L + \sqrt{r^2 - \eta^2}\right\}\right\}$$

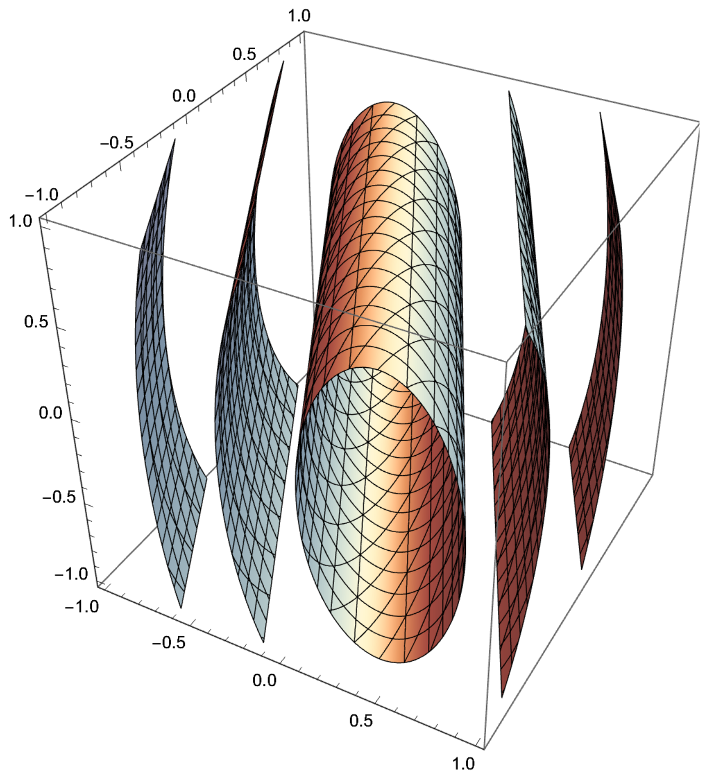
```
ContourPlot3D[-2 L + Sqrt[r^2 - η^2], {L, -1, 1}, {r, -1, 1}, {η, -1, 1}]
```



Solve[r^2 == η^2 + (2 L + q)^2, r]

$\left\{\left\{r \to -\sqrt{(2\,L + q)^2 + \eta^2}\right\}, \left\{r \to \sqrt{(2\,L + q)^2 + \eta^2}\right\}\right\}$

ContourPlot3D$\left[\sqrt{(2\,L + q)^2 + \eta^2}\right.$, {L, -1, 1}, {q, -1, 1}, {η, -1, 1}$\left.\right]$



$\frac{\pi}{2} + \beta + (\alpha + \omega + \vartheta) == \pi$

Solve$\left[\frac{\pi}{2} + \beta + (\alpha + \omega + \vartheta) == \pi, \vartheta\right]$

$\left\{\left\{\vartheta \to \frac{1}{2}\,(\pi - 2\,\alpha - 2\,\beta - 2\,\omega)\right\}\right\}$

Sin[δ] = $\frac{\eta}{r_2}$; Cos[δ] = $\frac{(q)}{r_2}$; Tan[δ] = $\frac{\eta}{(q)}$

Solve$\left[\text{Tan}[\delta] == \frac{\eta}{(q)}, \delta\right]$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$\left\{\left\{\delta \to \text{ArcTan}\left[\frac{\eta}{q}\right]\right\}\right\}$

$$r = \frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}$$

$$\beta = \text{ArcSin}\left[\frac{4\pi r\theta - r\theta^2}{4\pi^2}\right] = \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]$$

$$\text{ArcTan}\left[\frac{\eta}{q}\right] == \frac{1}{2}(\pi - 2\alpha - 2\beta - 2\omega) =$$

$$\frac{1}{2}(\pi - 2\alpha - 2\beta - 2\,\text{GoldenRatio}\,\alpha) = \frac{1}{2}\left(\pi - 2\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right] - 2\,\text{GoldenRatio}\,\alpha\right) =$$

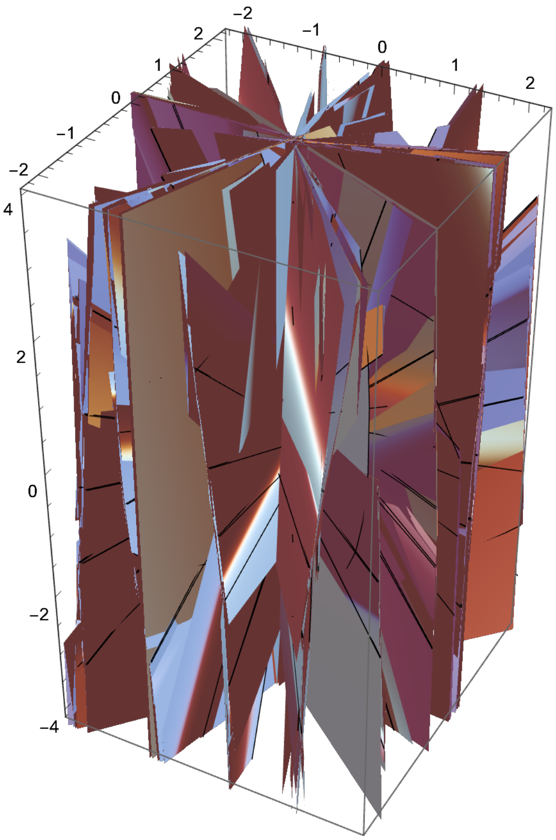
$$\text{ArcTan}\left[\frac{\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{q}\right] = \text{ArcTan}\left[\frac{\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta - \left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}}{2\pi}}{q}\right]$$

$$\text{Solve}\left[\text{ArcTan}\left[\frac{\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta - \left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}}{2\pi}}{q}\right] == \right.$$

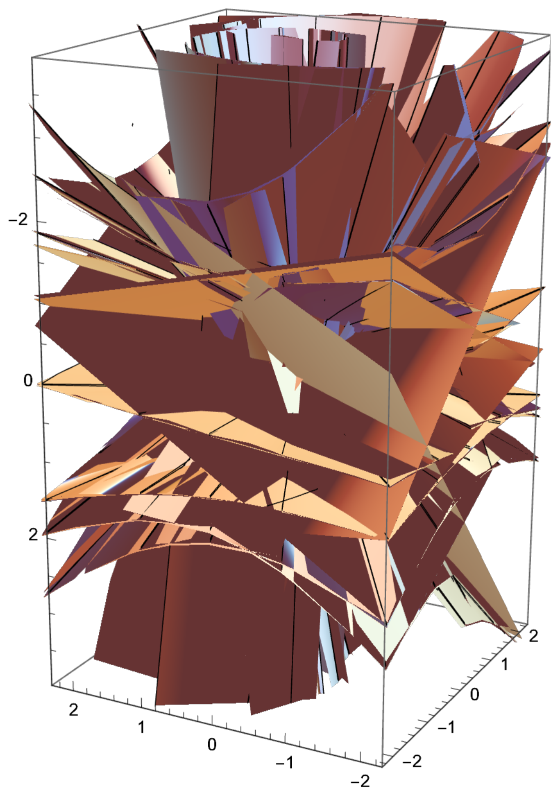
$$\left.\frac{1}{2}\left(\pi - 2\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right] - 2\,\text{GoldenRatio}\,\alpha\right), q\right]$$

$$\left\{\left\{q \to \text{Cot}\left[\frac{1}{2}\left(\pi - 3\alpha - \sqrt{5}\,\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]\right)\right]\right\}\right\}$$

```
SphericalPlot3D[
 Cot[1/2 (π - 3 α - √5 α - 2 ArcSin[√((4 π - θ) θ)/(2 π)])], {θ, -2 π, 2 π}, {α, -π, π}]
```



$$\text{SphericalPlot3D}\left[\text{Cot}\left[\frac{1}{2}\left(\pi - 3\,\alpha - \sqrt{5}\,\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right)\right], \{\alpha, -\pi, \pi\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{Tan}[\beta] = \frac{\eta}{x} = \frac{\eta}{(2\,L + q)}$$

$$\text{Solve}\left[\text{Tan}[\beta] == \frac{\eta}{\left(2\,L + \text{Cot}\left[\frac{1}{2}\left(\pi - 3\,\alpha - \sqrt{5}\,\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right]\right)}, L\right]$$

$$\left\{\left\{L \to \frac{1}{2}\,\text{Cot}[\beta]\,\left(\eta - \text{Cot}\left[\frac{1}{2}\left(\pi - 3\,\alpha - \sqrt{5}\,\alpha - 2\,\text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right)\right]\,\text{Tan}[\beta]\right)\right\}\right\}$$

$$\frac{1}{2}\,\mathrm{Cot}[\beta]\left(\eta-\mathrm{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right]\mathrm{Tan}[\beta]\right)=$$

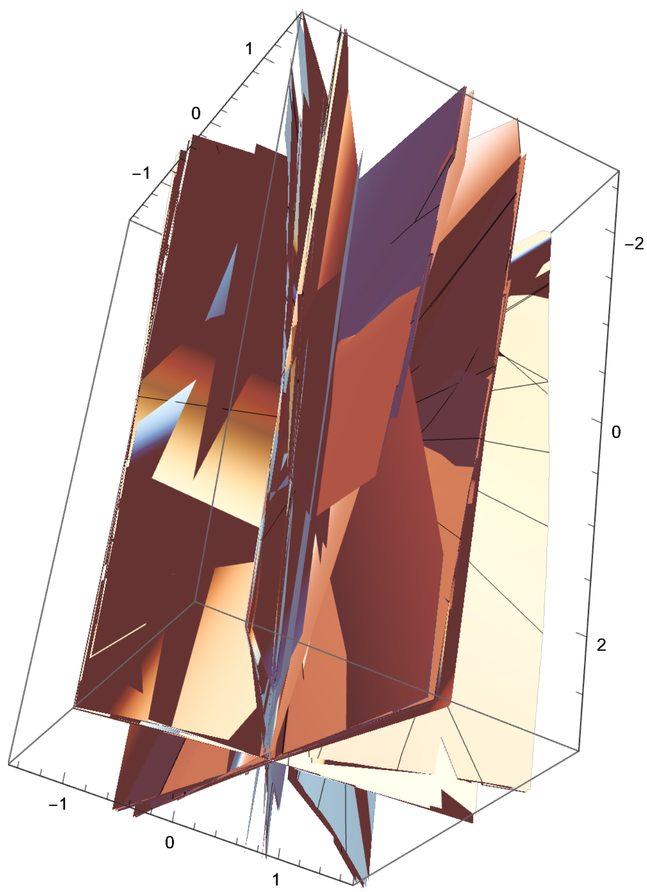
$$\frac{1}{2}\,\mathrm{Cot}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-\right.$$

$$\left.\mathrm{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right]\mathrm{Tan}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\right)=$$

$$\frac{1}{2}\,\mathrm{Cot}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}-\right.$$

$$\left.\mathrm{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right]\mathrm{Tan}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\right)$$

$$\text{SphericalPlot3D}\Big[\frac{1}{2}\,\text{Cot}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}-\text{Cot}\Big[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\right)\Big]\,\text{Tan}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big]\right),\{\theta,-2\,\pi,2\,\pi\},\{\alpha,-\pi/2,\pi/2\}\Big]$$

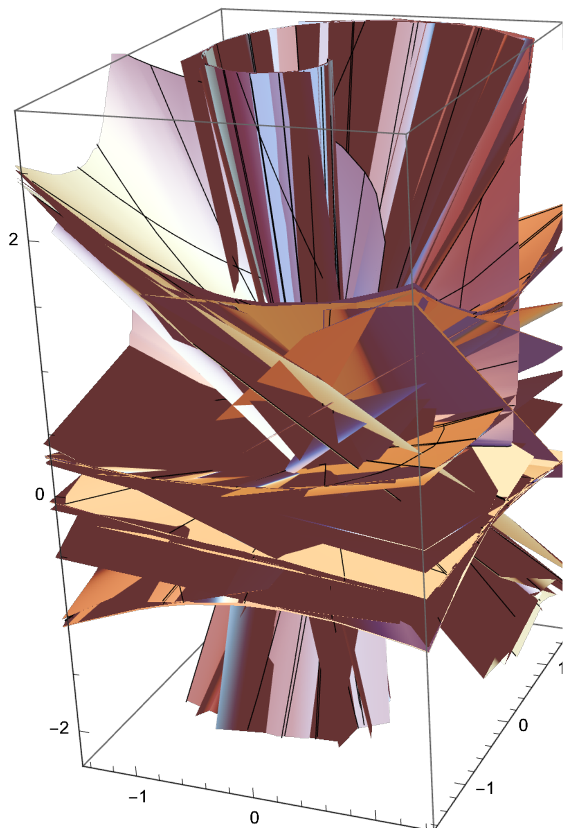


```
SphericalPlot3D[
```

$$\frac{1}{2}\,\mathrm{Cot}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^{2}\theta^{2}}}{2\,\pi}-\right.$$

$$\left.\mathrm{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)\right]\mathrm{Tan}\left[\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]\right),$$

```
{α, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```

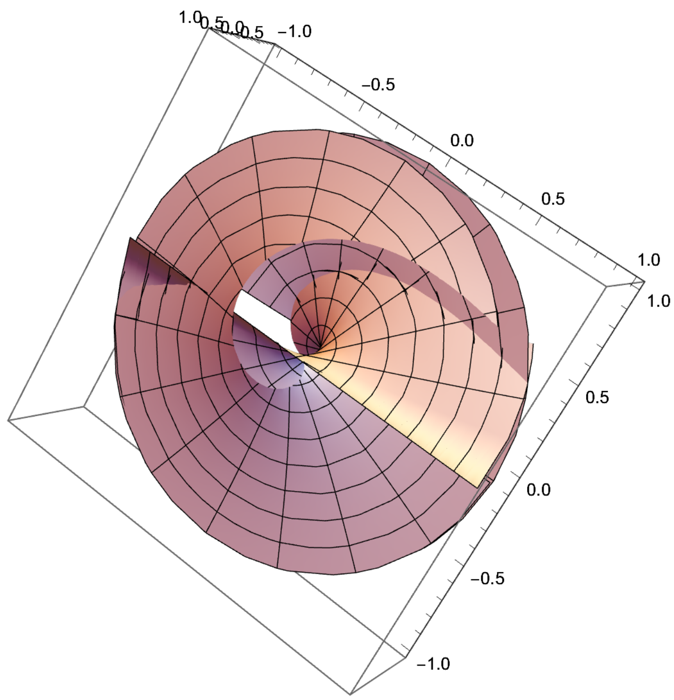


$$\text{Solve}\left[\frac{1}{2}\,\text{Cot}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\left(\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}-\text{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]\text{Tan}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\right)==L,\alpha\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\alpha\to\frac{1}{4}\left(3\pi-\sqrt{5}\,\pi-6\,\text{ArcCot}\left[\frac{8\,L\,\pi\,\theta-2\,L\,\theta^2-\sqrt{(2\pi-\theta)^2}\,\sqrt{(4\pi-\theta)\,\theta}}{-4\,\pi\,\theta+\theta^2}\right]+2\sqrt{5}\,\text{ArcCot}\left[\frac{8\,L\,\pi\,\theta-2\,L\,\theta^2-\sqrt{(2\pi-\theta)^2}\,\sqrt{(4\pi-\theta)\,\theta}}{-4\,\pi\,\theta+\theta^2}\right]-6\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]+2\sqrt{5}\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{1}{4}\left(3\pi-\sqrt{5}\,\pi-6\,\text{ArcCot}\left[\frac{8\,L\,\pi\,\theta-2\,L\,\theta^2-\sqrt{(2\pi-\theta)^2}\,\sqrt{(4\pi-\theta)\,\theta}}{-4\,\pi\,\theta+\theta^2}\right]+2\sqrt{5}\,\text{ArcCot}\left[\frac{8\,L\,\pi\,\theta-2\,L\,\theta^2-\sqrt{(2\pi-\theta)^2}\,\sqrt{(4\pi-\theta)\,\theta}}{-4\,\pi\,\theta+\theta^2}\right]-6\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]+2\sqrt{5}\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right),\{L,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[\frac{1}{2}\left(\pi-2\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]-2\,\text{GoldenRatio}\,\alpha\right)==\text{ArcTan}\left[\frac{\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\pi}}{q}\right],q\right]$$

$$\left\{\left\{q\to\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]}{2\pi}\right\}\right\}$$

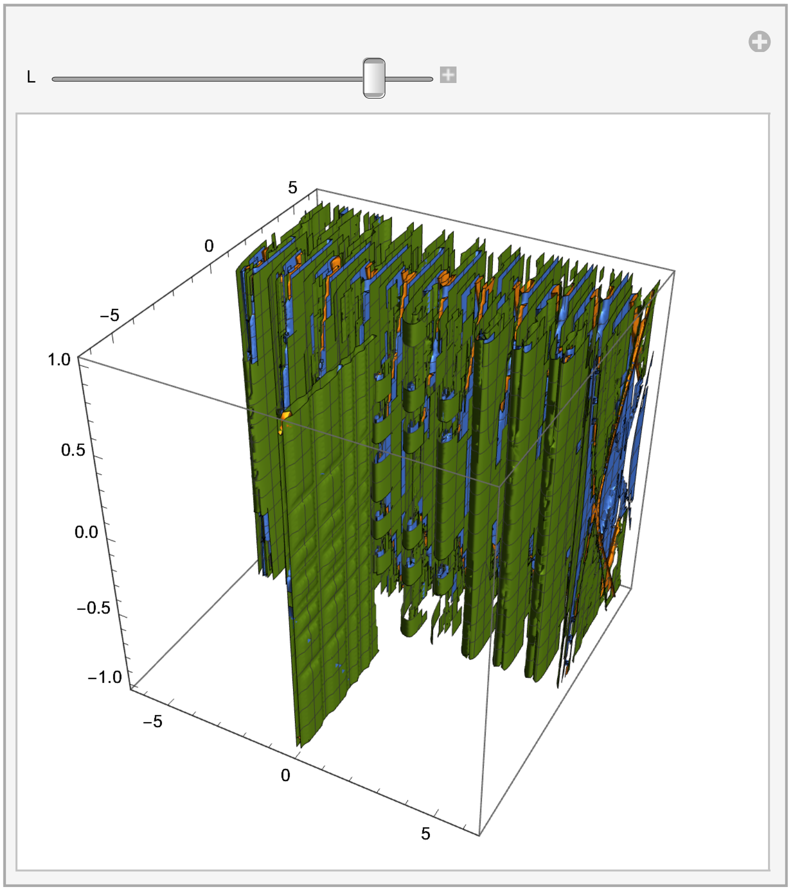
$$r:=\sqrt{(2\,L+q)^2+\eta^2}$$

$$\text{Solve}\left[q == \frac{\sqrt{\left(\sqrt{(2L+q)^2+\eta^2}\right)^2 (4\pi-\theta)\,\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]}}{2\pi}, q\right]$$

$$\Bigg\{\Bigg\{q\to\Bigg(-L\,(16\pi-4\theta)\,\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2-$$
$$\sqrt{\Bigg(L^2\,(16\pi-4\theta)^2\,\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^4+4\,\theta}$$
$$\left(-16L^2\pi-4\pi\eta^2+4L^2\theta+\eta^2\theta\right)\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2$$
$$\left(-4\pi^2+4\pi\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2-\right.$$
$$\left.\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2\right)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(2\left(-4\pi^2+4\pi\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2-\right.$$
$$\left.\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2\right)\Bigg)\Bigg\},$$

$$\Bigg\{q\to\Bigg(-L\,(16\pi-4\theta)\,\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2+$$
$$\sqrt{\Bigg(L^2\,(16\pi-4\theta)^2\,\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^4+4\,\theta}$$
$$\left(-16L^2\pi-4\pi\eta^2+4L^2\theta+\eta^2\theta\right)\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2$$
$$\left(-4\pi^2+4\pi\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2-\right.$$
$$\left.\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2\right)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(2\left(-4\pi^2+4\pi\theta\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2-\right.$$
$$\left.\theta^2\,\text{Cot}\left[\frac{1}{2}\left(\pi-3\alpha-\sqrt{5}\,\alpha-2\,\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)\right]^2\right)\Bigg)\Bigg\}\Bigg\}$$

$$
\begin{aligned}
&\texttt{Manipulate}\Big[\\
&\texttt{ContourPlot3D}\Big[\Big(-L\,(16\,\pi-4\,\theta)\,\theta\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2+\\
&\quad\sqrt{\Big(L^2\,(16\,\pi-4\,\theta)^2\,\theta^2\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^4+4\,\theta}\\
&\qquad\left(-16\,L^2\,\pi-4\,\pi\,\eta^2+4\,L^2\,\theta+\eta^2\,\theta\right)\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2\\
&\qquad\Big(-4\,\pi^2+4\,\pi\,\theta\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2-\\
&\qquad\quad\theta^2\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2\Big)\Big)\Big)\Big/\\
&\quad\Big(2\,\Big(-4\,\pi^2+4\,\pi\,\theta\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2-\\
&\qquad\theta^2\,\texttt{Cot}\Big[\frac{1}{2}\Big(\pi-3\,\alpha-\sqrt{5}\,\alpha-2\,\texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big]\Big)\Big]^2\Big)\Big),\\
&\{\alpha,-2\,\pi,2\,\pi\},\{\theta,-2\,\pi,2\,\pi\},\{\eta,-1,1\}\Big],\{L,\\
&-1,\\
&1\}\Big]
\end{aligned}
$$


L
5
0
−5
1.0
0.5
0.0
−0.5
−1.0
−5
0
5

```
Manipulate[
 ContourPlot3D[(-L (16 π - 4 θ) θ Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2 +
     Sqrt[(L^2 (16 π - 4 θ)^2 θ^2 Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^4 + 4 θ
         (-16 L^2 π - 4 π η^2 + 4 L^2 θ + η^2 θ) Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2
         (-4 π^2 + 4 π θ Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2 -
           θ^2 Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2))])/
   (2 (-4 π^2 + 4 π θ Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2 -
       θ^2 Cot[1/2 (π - 3 α - Sqrt[5] α - 2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)])]^2)),
  {θ, -2 π, 2 π}, {L, -1, 1}, {η, -10, 10}, AxesLabel → Automatic], {α,
  -2 π,
  2 π}]
```

α

$Aborted

$$\frac{\sqrt{2\,c^2\,\pi-\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}=\text{velocity}$$

$$((1080/\pi)\,\theta)=\text{time}$$

$$v*t=\eta$$

```
c := (2.99792458 * 10^8)
```

$$\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$

$$\text{Solve}\left[\frac{\sqrt{2\,c^2\,\pi-\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}\,((1080\,/\,\pi)\,\theta)==r,\,r\right]$$

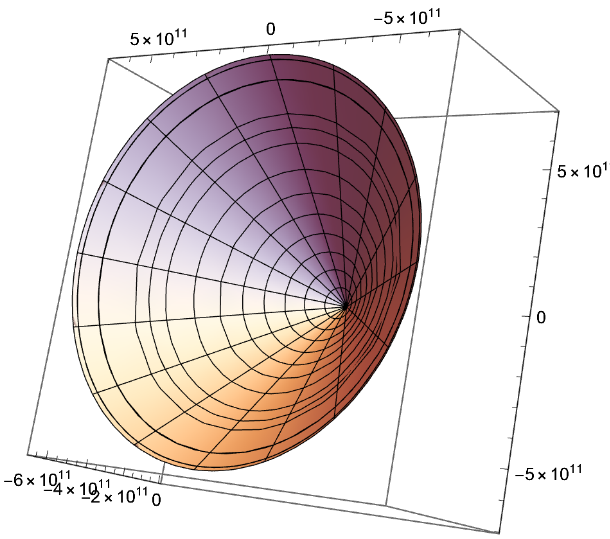
$$\Bigg\{\Bigg\{r\to -0.5\sqrt{\left(4.24863\times10^{22}\,\theta^2-2.\sqrt{\left(4.51272\times10^{44}\,\theta^4-\frac{1}{12.5664-1.\,\theta}\,4.\,\left(1.41771\times10^{45}\,\theta^4-2.25636\times10^{44}\,\theta^5+3.59111\times10^{43}\,\theta^6-2.85771\times10^{42}\,\theta^7\right)\right)}\right)}\Bigg\},$$

$$\Bigg\{r\to 0.5\sqrt{\left(4.24863\times10^{22}\,\theta^2-2.\sqrt{\left(4.51272\times10^{44}\,\theta^4-\frac{1}{12.5664-1.\,\theta}\,4.\,\left(1.41771\times10^{45}\,\theta^4-2.25636\times10^{44}\,\theta^5+3.59111\times10^{43}\,\theta^6-2.85771\times10^{42}\,\theta^7\right)\right)}\right)}\Bigg\},$$

$$\Bigg\{r\to -0.5\sqrt{\left(4.24863\times10^{22}\,\theta^2+2.\sqrt{\left(4.51272\times10^{44}\,\theta^4-\frac{1}{12.5664-1.\,\theta}\,4.\,\left(1.41771\times10^{45}\,\theta^4-2.25636\times10^{44}\,\theta^5+3.59111\times10^{43}\,\theta^6-2.85771\times10^{42}\,\theta^7\right)\right)}\right)}\Bigg\},$$

$$\Bigg\{r\to 0.5\sqrt{\left(4.24863\times10^{22}\,\theta^2+2.\sqrt{\left(4.51272\times10^{44}\,\theta^4-\frac{1}{12.5664-1.\,\theta}\,4.\,\left(1.41771\times10^{45}\,\theta^4-2.25636\times10^{44}\,\theta^5+3.59111\times10^{43}\,\theta^6-2.85771\times10^{42}\,\theta^7\right)\right)}\right)}\Bigg\}\Bigg\}$$

```
RevolutionPlot3D[{0.5` Sqrt[(4.248632459322957`*^22 θ^2 -
    2.` Sqrt[(4.512719443603159`*^44 θ^4 - 1/(12.566370614359172` - 1.` θ) 4.`
        (1.4177126251735504`*^45 θ^4 - 2.2563597218015795`*^44 θ^5 +
          3.591108031181752`*^43 θ^6 - 2.8577129716979`*^42 θ^7))]),
  -0.5` Sqrt[(4.248632459322957`*^22 θ^2 - 2.` Sqrt[(4.512719443603159`*^44 θ^4 -
        1/(12.566370614359172` - 1.` θ) 4.`
        (1.4177126251735504`*^45 θ^4 - 2.2563597218015795`*^44 θ^5 +
          3.591108031181752`*^43 θ^6 - 2.8577129716979`*^42 θ^7))])]}, {θ, -4 π, 4 π}]
```



$$\text{Solve}\left[\frac{\sqrt{2\,c^2\,\pi - \frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}\left((1080\,/\,\pi)\,\theta\Big/\sqrt{1-\left(\left(\frac{\sqrt{2\,c^2\,\pi - \frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}\right)\text{^}2\Big/\,(c\text{^}2)\right)}\right) == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ r\right]$$

$$\left\{\left\{r \to -\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \left(9\,331\,200\,\pi\sqrt{\left(256\,c^4\,\pi^5\,\theta - 448\,c^4\,\pi^4\,\theta^2 + 304\,c^4\,\pi^3\,\theta^3 - 100\,c^4\,\pi^2\,\theta^4 + 16\,c^4\,\pi\,\theta^5 - c^4\,\theta^6\right)}\right) \Big/ \left(64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4\right)\right)}\right\},$$

$$\left\{r \to \sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \left(9\,331\,200\,\pi\sqrt{\left(256\,c^4\,\pi^5\,\theta - 448\,c^4\,\pi^4\,\theta^2 + 304\,c^4\,\pi^3\,\theta^3 - 100\,c^4\,\pi^2\,\theta^4 + 16\,c^4\,\pi\,\theta^5 - c^4\,\theta^6\right)}\right) \Big/ \left(64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4\right)\right)}\right\},$$

$$\left\{r \to -\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \left(9\,331\,200\,\pi\sqrt{\left(256\,c^4\,\pi^5\,\theta - 448\,c^4\,\pi^4\,\theta^2 + 304\,c^4\,\pi^3\,\theta^3 - 100\,c^4\,\pi^2\,\theta^4 + 16\,c^4\,\pi\,\theta^5 - c^4\,\theta^6\right)}\right) \Big/ \left(64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4\right)\right)}\right\},$$

$$\left\{r \to \sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} - \frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4} + \left(9\,331\,200\,\pi\sqrt{\left(256\,c^4\,\pi^5\,\theta - 448\,c^4\,\pi^4\,\theta^2 + 304\,c^4\,\pi^3\,\theta^3 - 100\,c^4\,\pi^2\,\theta^4 + 16\,c^4\,\pi\,\theta^5 - c^4\,\theta^6\right)}\right) \Big/ \left(64\,\pi^4 - 96\,\pi^3\,\theta + 52\,\pi^2\,\theta^2 - 12\,\pi\,\theta^3 + \theta^4\right)\right)}\right\}\right\}$$

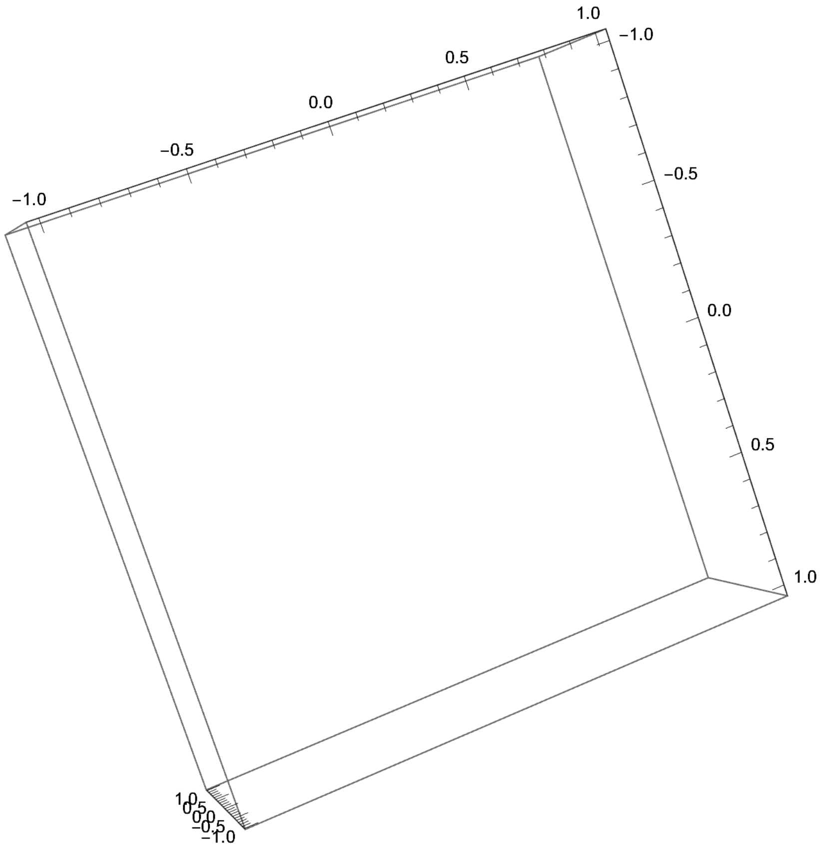
RevolutionPlot3D[

$$\left\{\left\{-\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\left(9\,331\,200\,\pi\,\sqrt{\left(256\,c^4\,\pi^5\,\theta-448\,c^4\,\pi^4\,\theta^2+304\,c^4\,\pi^3\,\theta^3-100\,c^4\,\pi^2\,\theta^4+16\,c^4\,\pi\,\theta^5-c^4\,\theta^6\right)}\right)\Big/\left(64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4\right)\right)}\right\},$$

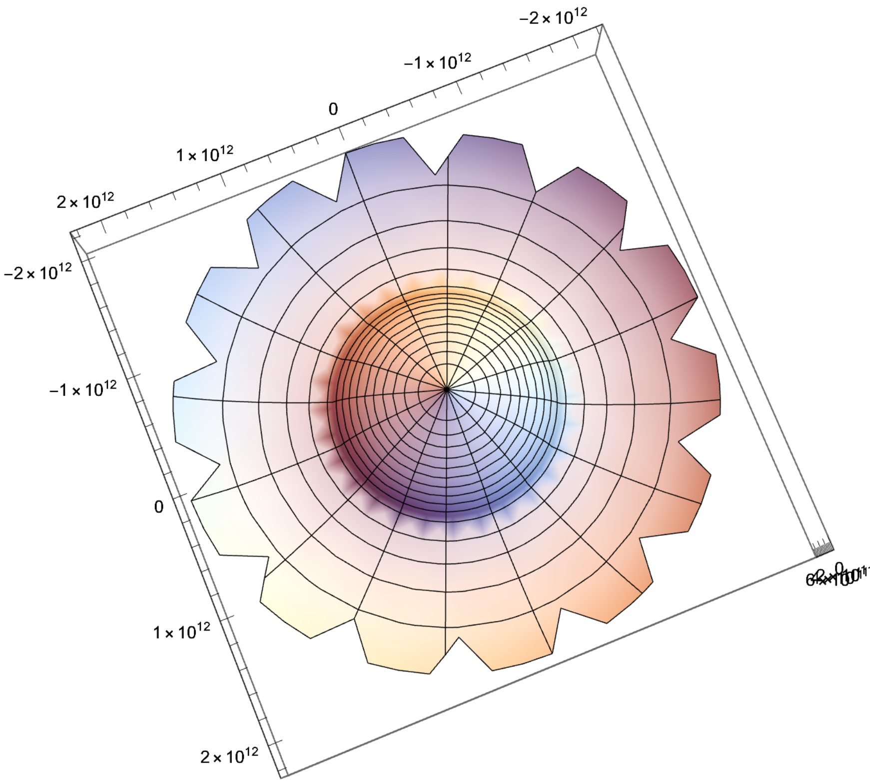
$$\left\{\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\left(9\,331\,200\,\pi\,\sqrt{\left(256\,c^4\,\pi^5\,\theta-448\,c^4\,\pi^4\,\theta^2+304\,c^4\,\pi^3\,\theta^3-100\,c^4\,\pi^2\,\theta^4+16\,c^4\,\pi\,\theta^5-c^4\,\theta^6\right)}\right)\Big/\left(64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4\right)\right)}\right\},$$

$$\left\{-\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\left(9\,331\,200\,\pi\,\sqrt{\left(256\,c^4\,\pi^5\,\theta-448\,c^4\,\pi^4\,\theta^2+304\,c^4\,\pi^3\,\theta^3-100\,c^4\,\pi^2\,\theta^4+16\,c^4\,\pi\,\theta^5-c^4\,\theta^6\right)}\right)\Big/\left(64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4\right)\right)}\right\},$$

$$\left\{\sqrt{\left(-\frac{74\,649\,600\,c^2\,\pi^3\,\theta}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{93\,312\,000\,c^2\,\pi^2\,\theta^2}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}-\frac{37\,324\,800\,c^2\,\pi\,\theta^3}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\frac{4\,665\,600\,c^2\,\theta^4}{64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4}+\left(9\,331\,200\,\pi\,\sqrt{\left(256\,c^4\,\pi^5\,\theta-448\,c^4\,\pi^4\,\theta^2+304\,c^4\,\pi^3\,\theta^3-100\,c^4\,\pi^2\,\theta^4+16\,c^4\,\pi\,\theta^5-c^4\,\theta^6\right)}\right)\Big/\left(64\,\pi^4-96\,\pi^3\,\theta+52\,\pi^2\,\theta^2-12\,\pi\,\theta^3+\theta^4\right)\right)}\right\}\right\},\ \{\theta,\ -45\,\pi,\ 45\,\pi\}]$$


1.0
−1.0
0.5
0.0
−0.5
−1.0
−0.5
0.0
0.5
1.0
1.0
0.5
0.0
−0.5
−1.0

$$
\begin{aligned}
&\texttt{RevolutionPlot3D}\Big[\\
&\Big\{-0.5\grave{}\ \sqrt{\left(\frac{1.6772928647657984\grave{}*\hat{}24\,\theta}{12.566370614359172\grave{}-1.\grave{}\ \theta}+2.\grave{}\ \sqrt{\left(\frac{7.033278385485648\grave{}*\hat{}47\,\theta^2}{(12.566370614359172\grave{}-1.\grave{}\ \theta)^2}-\right.}\right.}\\
&\qquad \Big(4.\grave{}\ \big(2.2095695706493594\grave{}*\hat{}48\,\theta^3-3.516639192742824\grave{}*\hat{}47\\
&\qquad\qquad \theta^4+5.596905105957129\grave{}*\hat{}46\,\theta^5-4.4538755681467266\grave{}*\hat{}45\\
&\qquad\qquad \theta^6\big)\Big)\Big/\left((12.566370614359172\grave{}-1.\grave{}\ \theta)^3\,\theta\right)\Big)\Big),\\
&0.5\grave{}\ \sqrt{\left(\frac{1.6772928647657984\grave{}*\hat{}24\,\theta}{12.566370614359172\grave{}-1.\grave{}\ \theta}+2.\grave{}\ \sqrt{\left(\frac{7.033278385485648\grave{}*\hat{}47\,\theta^2}{(12.566370614359172\grave{}-1.\grave{}\ \theta)^2}-\right.}\right.}\\
&\qquad \Big(4.\grave{}\ \big(2.2095695706493594\grave{}*\hat{}48\,\theta^3-3.516639192742824\grave{}*\hat{}47\\
&\qquad\qquad \theta^4+5.596905105957129\grave{}*\hat{}46\,\theta^5-4.4538755681467266\grave{}*\hat{}45\\
&\qquad\qquad \theta^6\big)\Big)\Big/\left((12.566370614359172\grave{}-1.\grave{}\ \theta)^3\,\theta\right)\Big)\Big),\\
&.5\ \sqrt{\left(\frac{1.6772928647657984\grave{}*\hat{}24\,\theta}{12.566370614359172\grave{}-1.\grave{}\ \theta}-2.\grave{}\ \sqrt{\left(\frac{7.033278385485648\grave{}*\hat{}47\,\theta^2}{(12.566370614359172\grave{}-1.\grave{}\ \theta)^2}-\right.}\right.}\\
&\qquad \Big(4.\grave{}\ \big(2.2095695706493594\grave{}*\hat{}48\,\theta^3-3.516639192742824\grave{}*\hat{}47\\
&\qquad\qquad \theta^4+5.596905105957129\grave{}*\hat{}46\,\theta^5-4.4538755681467266\grave{}*\hat{}45\,\theta^6\big)\Big)\Big/\\
&\qquad \left((12.566370614359172\grave{}-1.\grave{}\ \theta)^3\,\theta\right)\Big)\Big)\Big\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\Big]
\end{aligned}
$$



$$\frac{\sqrt{2\,c^2\,\pi - \frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}} = \text{velocity}$$

$((1080/\pi)\,\theta) = \text{time}$

$v * t = \eta$

$$\text{Solve}\left[\frac{\sqrt{2\,c^2\,\pi - \frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}} == c,\ \theta\right]$$

$\{\{\theta \to 0.\},\ \{\theta \to 6.28319\}\}$

$t = \theta / k == (\theta\, r) / (r\, k) == (2\,\pi\, r - 2\,\pi\, x) / (r\, k)$

Solve[θ / k

$$\text{Solve}\left[t == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\hat{}2 - \eta\hat{}2)}\right) \Big/ (r\,k),\ t\right]$$

$$\left\{\left\{t \to -\frac{2\left(-\pi\,r + \pi\,\sqrt{r^2 - \eta^2}\right)}{k\,r}\right\}\right\}$$

$$\text{Solve}\left[t == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)}\right) \Big/ (r\,k),\ k\right]$$

$$\left\{\left\{k \to \frac{2\,\pi\left(r - \sqrt{r^2 - \eta^2}\right)}{r\,t}\right\}\right\}$$

$$\text{Solve}\left[t == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)}\right) \Big/ (r\,k),\ r\right]$$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,k\,\pi\,t - k^2\,t^2}}\right\},\ \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,k\,\pi\,t - k^2\,t^2}}\right\}\right\}$$

$$\text{Solve}\left[\left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)}\right) \Big/ (r\,k) == \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) \Big/ k,\ k\right]$$

$$\{\{\}\}$$

$$\text{Solve}\left[\left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)}\right) \Big/ (r\,k) == \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) \Big/ k,\ r\right]$$

$$\text{Solve}\left[2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)} == 2\,\pi\,r - (r\,k)\,t,\ \eta\right]$$

$$\text{Solve}\left[(2\,\pi\,r - (r\,k)\,t)\,/\,(2\,\pi) == \sqrt{(r\wedge 2 - \eta\wedge 2)},\ \eta\right]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,k\,\pi\,r^2\,t - k^2\,r^2\,t^2}}{2\,\pi} == \frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi},\ k\right]$$

$$\{\{\}\}$$

$$\text{Solve}[((2\,\pi\,r - (r\,k)\,t)\,/\,(2\,\pi))\wedge 2 == (r\wedge 2 - \eta\wedge 2),\ \eta]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,k\,\pi\,r^2\,t - k^2\,r^2\,t^2}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{4\,k\,\pi\,r^2\,t - k^2\,r^2\,t^2}}{2\,\pi}\right\}\right\}$$

$$\text{Solve}[((2\,\pi\,r - (r\,k)\,t)\,/\,(2\,\pi))\wedge 2 == (r\wedge 2 - \eta\wedge 2),\ \eta]$$

$$\text{Solve}\left[((2\,\pi\,r - (r\,k)\,t)\,/\,(2\,\pi))\wedge 2 == \sqrt{(r\wedge 2 - \eta\wedge 2)}\wedge 2,\ \eta\right]$$

$$\text{Solve}\left[t == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r\wedge 2 - \eta\wedge 2)}\right) \Big/ (r\,k),\ \eta\right]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi - k\,t}}{2\,\pi},\ t\right]$$

$$\left\{\left\{t \to \frac{4\,\pi - \theta}{k}\right\},\ \left\{t \to \frac{\theta}{k}\right\}\right\}$$

$$\text{Solve}\left[\eta == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi - k\,t}}{2\pi},\ k\right]$$

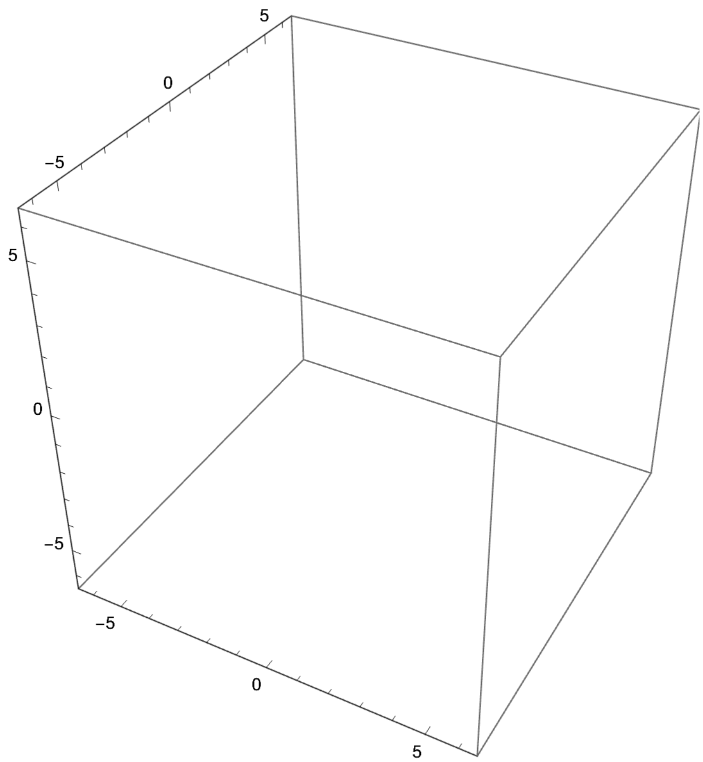
$$\Big\{\Big\{k \to \Big(-\pi\,t\,\big(-64\pi^2\theta^2 + 32\pi\theta^3 - 4\theta^4 + 128\pi^3\theta\,\text{Sin}[\beta]^2 - 32\pi^2\theta^2\,\text{Sin}[\beta]^2 - 64\pi^4\,\text{Sin}[\beta]^4\big) - \sqrt{\Big(\pi^2 t^2\,\big(-64\pi^2\theta^2 + 32\pi\theta^3 - 4\theta^4 + 128\pi^3\theta\,\text{Sin}[\beta]^2 - 32\pi^2\theta^2\,\text{Sin}[\beta]^2 - 64\pi^4\,\text{Sin}[\beta]^4\big)^2 + 4\pi^2 t^2\eta^2\theta\,\big(-1024\pi^4\theta + 1536\pi^3\theta^2 - 832\pi^2\theta^3 + 192\pi\theta^4 - 16\theta^5 - 1024\pi^4\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 1280\pi^3\theta\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] - 512\pi^2\theta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 64\pi\theta^3\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] - 1024\pi^5\,\text{Sin}[\beta]^2 + 1280\pi^4\theta\,\text{Sin}[\beta]^2 - 512\pi^3\theta^2\,\text{Sin}[\beta]^2 + 64\pi^2\theta^3\,\text{Sin}[\beta]^2\big)\,\big(16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4 - 32\pi^3\theta\,\text{Sin}[\beta]^2 + 8\pi^2\theta^2\,\text{Sin}[\beta]^2 + 16\pi^4\,\text{Sin}[\beta]^4\big)\Big)}\Big) \Big/ \Big(2\,t^2\,\big(16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4 - 32\pi^3\theta\,\text{Sin}[\beta]^2 + 8\pi^2\theta^2\,\text{Sin}[\beta]^2 + 16\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big\},$$

$$\Big\{k \to \Big(-\pi\,t\,\big(-64\pi^2\theta^2 + 32\pi\theta^3 - 4\theta^4 + 128\pi^3\theta\,\text{Sin}[\beta]^2 - 32\pi^2\theta^2\,\text{Sin}[\beta]^2 - 64\pi^4\,\text{Sin}[\beta]^4\big) + \sqrt{\Big(\pi^2 t^2\,\big(-64\pi^2\theta^2 + 32\pi\theta^3 - 4\theta^4 + 128\pi^3\theta\,\text{Sin}[\beta]^2 - 32\pi^2\theta^2\,\text{Sin}[\beta]^2 - 64\pi^4\,\text{Sin}[\beta]^4\big)^2 + 4\pi^2 t^2\eta^2\theta\,\big(-1024\pi^4\theta + 1536\pi^3\theta^2 - 832\pi^2\theta^3 + 192\pi\theta^4 - 16\theta^5 - 1024\pi^4\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 1280\pi^3\theta\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] - 512\pi^2\theta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 64\pi\theta^3\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta] - 1024\pi^5\,\text{Sin}[\beta]^2 + 1280\pi^4\theta\,\text{Sin}[\beta]^2 - 512\pi^3\theta^2\,\text{Sin}[\beta]^2 + 64\pi^2\theta^3\,\text{Sin}[\beta]^2\big)\,\big(16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4 - 32\pi^3\theta\,\text{Sin}[\beta]^2 + 8\pi^2\theta^2\,\text{Sin}[\beta]^2 + 16\pi^4\,\text{Sin}[\beta]^4\big)\Big)}\Big) \Big/ \Big(2\,t^2\,\big(16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4 - 32\pi^3\theta\,\text{Sin}[\beta]^2 + 8\pi^2\theta^2\,\text{Sin}[\beta]^2 + 16\pi^4\,\text{Sin}[\beta]^4\big)\Big)\Big\}\Big\}$$

$$
\text{ContourPlot3D}\Big[
\Big(-\pi\, t\, \big(-64\,\pi^2\,\theta^2+32\,\pi\,\theta^3-4\,\theta^4+128\,\pi^3\,\theta\,\text{Sin}[\beta]^2-32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2-64\,\pi^4\,\text{Sin}[\beta]^4\big)+
$$

$$
\sqrt{\Big(\pi^2\,t^2\,\big(-64\,\pi^2\,\theta^2+32\,\pi\,\theta^3-4\,\theta^4+128\,\pi^3\,\theta\,\text{Sin}[\beta]^2-32\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2-64\,\pi^4\,\text{Sin}[\beta]^4\big)^2+
4\,\pi^2\,t^2\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2\theta\,\big(-1024\,\pi^4\,\theta+1536\,\pi^3\,\theta^2-832\,\pi^2\,\theta^3+192\,\pi\,\theta^4-
16\,\theta^5-1024\,\pi^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+1280\,\pi^3\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]-
512\,\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+64\,\pi\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]-
1024\,\pi^5\,\text{Sin}[\beta]^2+1280\,\pi^4\,\theta\,\text{Sin}[\beta]^2-512\,\pi^3\,\theta^2\,\text{Sin}[\beta]^2+64\,\pi^2\,\theta^3\,\text{Sin}[\beta]^2\big)
\big(16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4-32\,\pi^3\,\theta\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2+16\,\pi^4\,\text{Sin}[\beta]^4\big)\Big)}\Big)\Big/
$$

$$
\big(2\,t^2\,\big(16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4-32\,\pi^3\,\theta\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta^2\,\text{Sin}[\beta]^2+16\,\pi^4\,\text{Sin}[\beta]^4\big)\big),\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{t,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -2\,\pi,\ 2\,\pi\}\Big]
$$



$$\text{Solve}\left[\frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\pi - k\,t}}{2\pi} == \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, k\right]$$

$$\left\{\left\{k \to \frac{4\pi - \theta}{t}\right\}, \left\{k \to \frac{\theta}{t}\right\}\right\}$$

$$t = \theta / k = \theta \Big/ \frac{4\pi - \theta}{t}$$

$$\text{Solve}\left[\theta \Big/ \frac{4\pi - \theta}{t} == t, t\right]$$

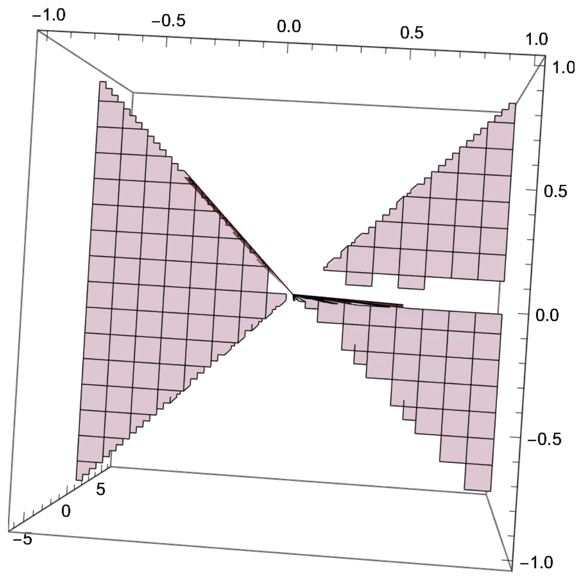
$$\{\{t \to 0\}\}$$

$$\text{Solve}\left[\theta \Big/ \frac{4\pi - \theta}{t} == t, \theta\right]$$

$$\{\{\theta \to 2\pi\}\}$$

```
Solve[θ r == y r - y √(r^2 - η^2) , y]
```

$$\left\{\left\{y \to -\frac{r\,\theta}{-r+\sqrt{r^2-\eta^2}}\right\}\right\}$$



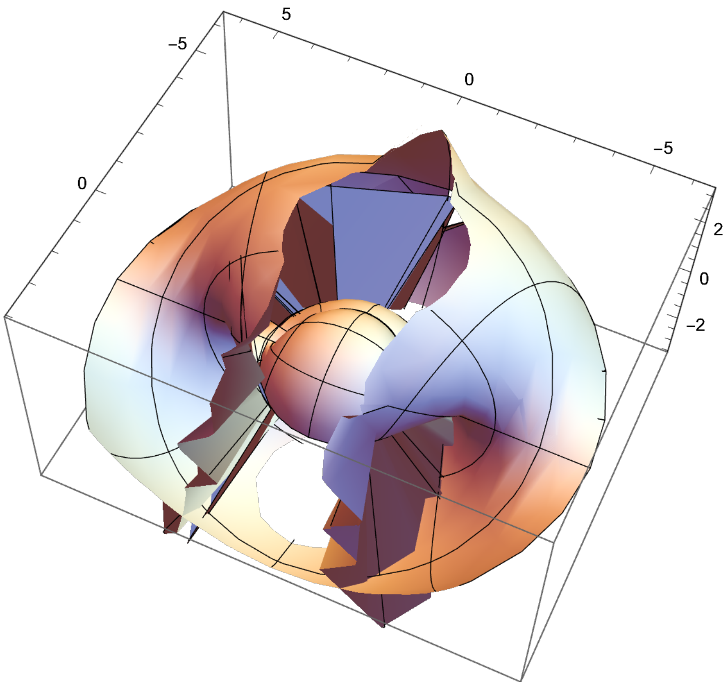
$$\frac{r\,\theta}{-r+\sqrt{r^2-\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}}$$

$$r := \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}==\frac{\sqrt{k}\,r\,\sqrt{t}\,\sqrt{4\,\pi-k\,t}}{2\,\pi},k\right]$$

$$\left\{\left\{k\to\frac{4\,\pi-\theta}{t}\right\},\left\{k\to\frac{\theta}{t}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{r\,\theta}{-r+\sqrt{r^2-\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}, \{\beta, -2\pi, 2\pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}=h$$

$$\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}=h$$

$$\text{Solve}\left[\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}==\eta, \eta\right]$$

$$\left\{\left\{\eta\to\frac{\sqrt{r\,(-2\pi+2\pi r+k\,t)}}{\sqrt{2\pi}}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}==\eta, k\right]$$

$$\left\{\left\{k\to-\frac{2\left(-\pi r+\pi r^2-\pi\eta^2\right)}{r\,t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}, k\right]$$

$$\left\{\left\{k\to\frac{4\pi^2-4\pi^2 r+4\pi r\,\theta-r\,\theta^2}{2\pi t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{r^\wedge 2-((2\pi r-k\,r\,t)/(2\pi))}==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}, r\right]$$

$$\left\{\{r\to 0\}, \left\{r\to\frac{2\pi\,(2\pi-k\,t)}{(2\pi-\theta)^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\text{r^2 - ((2}\,\pi\,\text{r - k r t) / (2}\,\pi\text{))}} == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ t\right]$$

$$\left\{\left\{t \to \frac{4\,\pi^2 - 4\,\pi^2\,r + 4\,\pi\,r\,\theta - r\,\theta^2}{2\,k\,\pi}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\text{r^2 - ((2}\,\pi\,\text{r - k r t) / (2}\,\pi\text{))}} == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\,\pi - k\,t}}{2\,\pi},\ r\right]$$

$$\left\{\{r \to 0\},\ \left\{r \to \frac{2\,\pi}{2\,\pi - k\,t}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\text{r^2 - ((2}\,\pi\,\text{r - k r t) / (2}\,\pi\text{))}} == \frac{\sqrt{k}\ r\ \sqrt{t}\ \sqrt{4\,\pi - k\,t}}{2\,\pi},\ t\right]$$

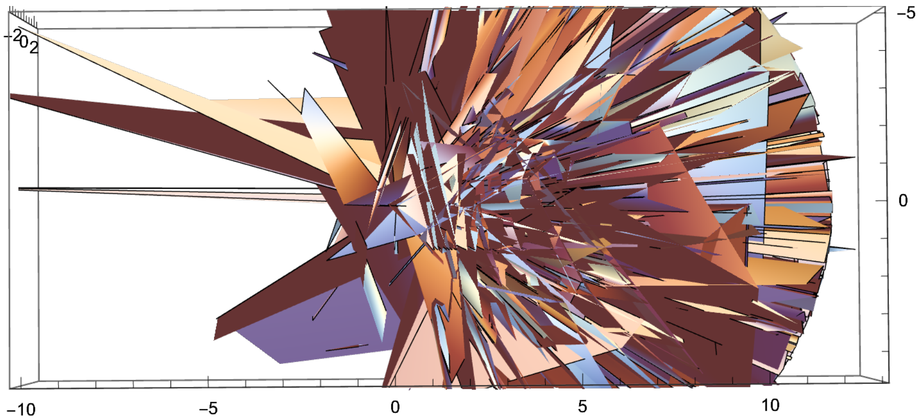
$$\left\{\left\{t \to \frac{2\,\pi}{k}\right\},\ \left\{t \to \frac{2\,\pi\,(-1 + r)}{k\,r}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1 - \frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1 - \frac{(v)^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == r\,\text{Sin}[\beta],\ \theta\right]$$

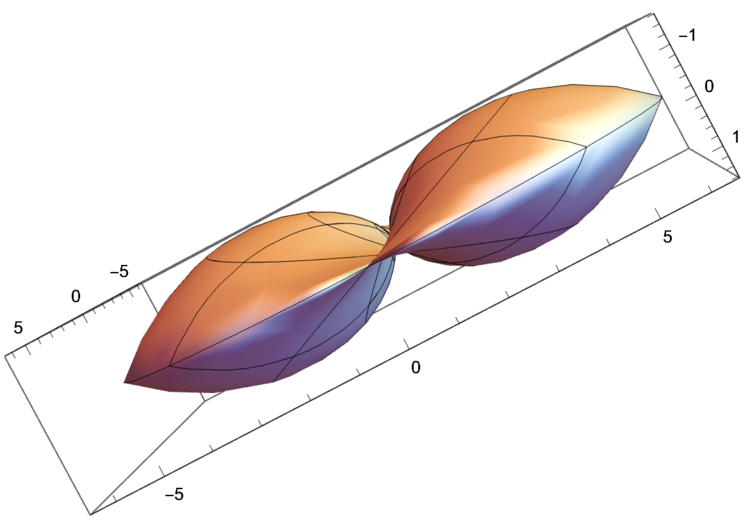
$$\left\{\left\{\theta \to \frac{1}{-8.98755 \times 10^{16} + v^2}\ 0.5\ \left(-1.12941 \times 10^{18} + 12.5664\,v^2 - 1.\ \sqrt{\left(\left(1.12941 \times 10^{18} - 12.5664\,v^2\right)^2 - 4.\ \left(-8.98755 \times 10^{16} + v^2\right)\ \left(-3.54814 \times 10^{18} + 39.4784\,v^2\right)\ \text{Sin}[\beta]^2\right)}\right)\right\},\ \left\{\theta \to \frac{1}{-8.98755 \times 10^{16} + v^2}\ 0.5\ \left(-1.12941 \times 10^{18} + 12.5664\,v^2 + \sqrt{\left(\left(1.12941 \times 10^{18} - 12.5664\,v^2\right)^2 - 4.\ \left(-8.98755 \times 10^{16} + v^2\right)\ \left(-3.54814 \times 10^{18} + 39.4784\,v^2\right)\ \text{Sin}[\beta]^2\right)}\right)\right\}\right\}$$

$$\text{v := }\left(\sqrt{\left(\text{-1.1294090667581471`*^18}\,\theta + \text{8.987551787368176`*^16}\,\theta^2 + \text{3.5481432270250993`*^18 Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{\text{-12.566370614359172`}\ \theta + \theta^2 + \text{39.47841760435743` Sin}[\beta]^2}\right)$$

```
SphericalPlot3D[1/(-8.987551787368176`*^16 + v^2)
  0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
    √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
      4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
        39.47841760435743` v^2) Sin[β]^2)), {β, -π/2, π/2}, {θ, -2π, 2π}]
```




```
SphericalPlot3D[1/(-8.987551787368176`*^16 + v^2)
  0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
    √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
      4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
        39.47841760435743` v^2) Sin[β]^2)), {v, -2π, 2π}, {β, -π, π}]
```




```
c := 2.99792458 (10^8)
```

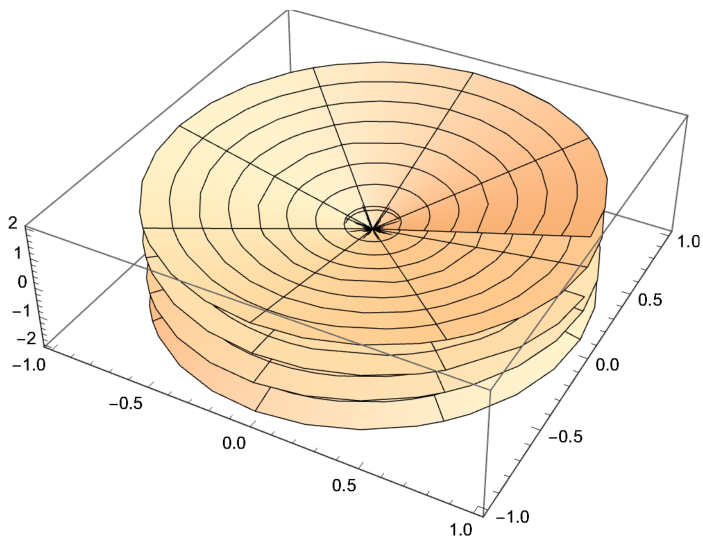
$$\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

```
ArcCos[η / r] == β
```

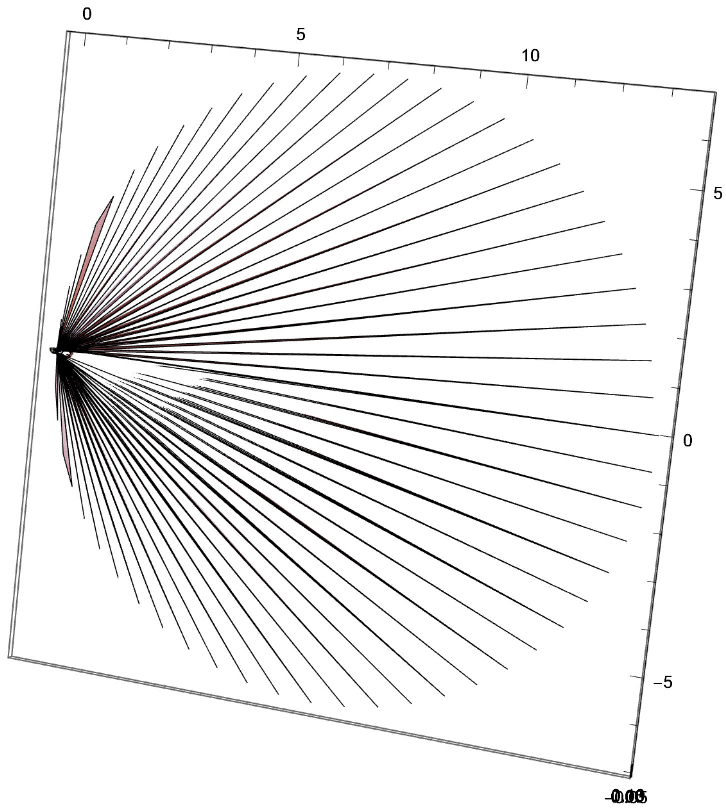
$$\text{Solve}\left[\text{ArcCos}[\eta / r] == \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right], \eta\right]$$

$$\left\{\left\{\eta \to r\,\sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[r\,\sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



```
SphericalPlot3D[r Sqrt[1 - ((4 π - θ) θ)/(4 π^2)], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



$$\eta = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}$$

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} == r\sqrt{1 - \frac{(4\pi - \theta)\,\theta}{4\pi^2}}, \theta\right]$$

$$\left\{\left\{\theta \to \left(2 - \sqrt{2}\right)\pi\right\}, \left\{\theta \to \left(2 + \sqrt{2}\right)\pi\right\}\right\}$$

```
c := 2.99792458 * (10^8)
```

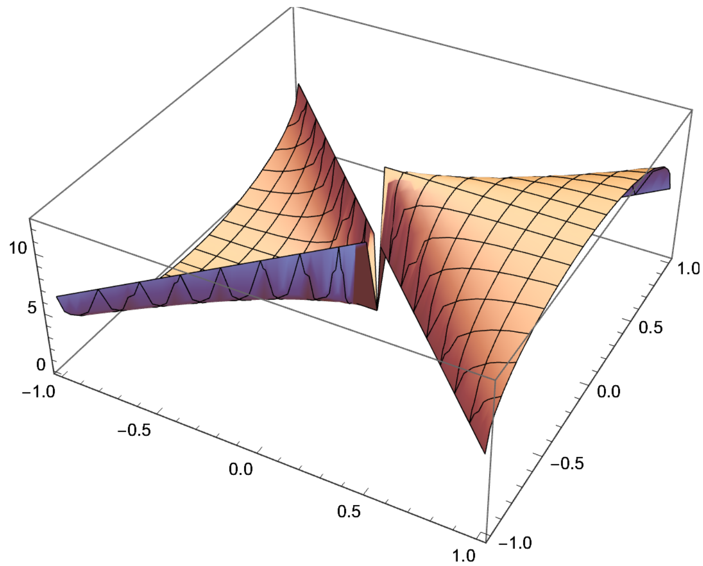
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1 - \frac{(4\pi-\theta)\,\theta}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1 - \frac{(4\pi-\theta)\,\theta}{c^2}}}}\;\sqrt{4\pi r - r\theta}}{2\pi} == \eta, \theta\right]$$

$$\left\{\left\{\theta \to \frac{0.5\left(12.5664\, r^2 - 12.5664\, r\sqrt{1.\, r^2 - 1.\, \eta^2}\right)}{r^2}\right\},\right.$$

$$\left.\left\{\theta \to \frac{0.5\left(12.5664\, r^2 + 12.5664\, r\sqrt{1.\, r^2 - 1.\, \eta^2}\right)}{r^2}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{0.5\grave{}\left(12.566370614359172\grave{}\ r^2+12.566370614359172\grave{}\ r\sqrt{1.\grave{}\ r^2-1.\grave{}\ \eta^2}\right)}{r^2},\right.$$

$$\left.\{r,-1,1\},\{\eta,-1,1\}\right]$$

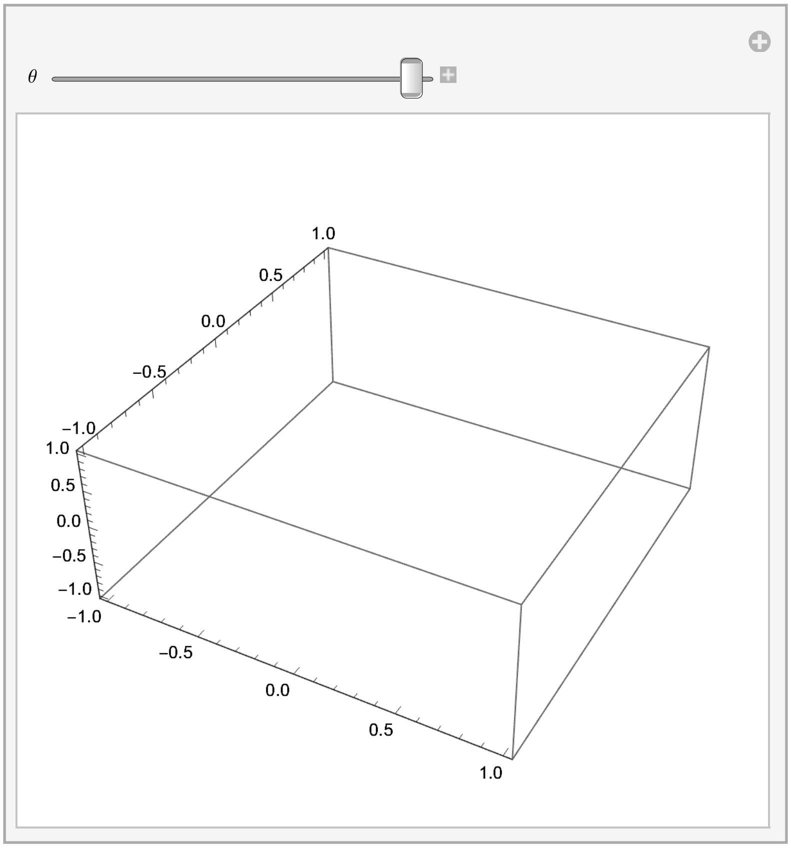


$$r=\sqrt{x^\wedge 2+y^\wedge 2+z^\wedge 2}=\sqrt{x^\wedge 2+y^\wedge 2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}{}^\wedge 2}$$

$$\text{Solve}\left[r==\sqrt{x^\wedge 2+y^\wedge 2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}{}^\wedge 2},r\right]$$

$$\left\{\left\{r\to-\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\},\left\{r\to\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}\right\}\right\}$$

$$\text{Manipulate}\left[\text{Plot3D}\left[\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\{x,-1,1\},\{y,-1,1\}\right],\{\theta,-2\pi,2\pi\}\right]$$



Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

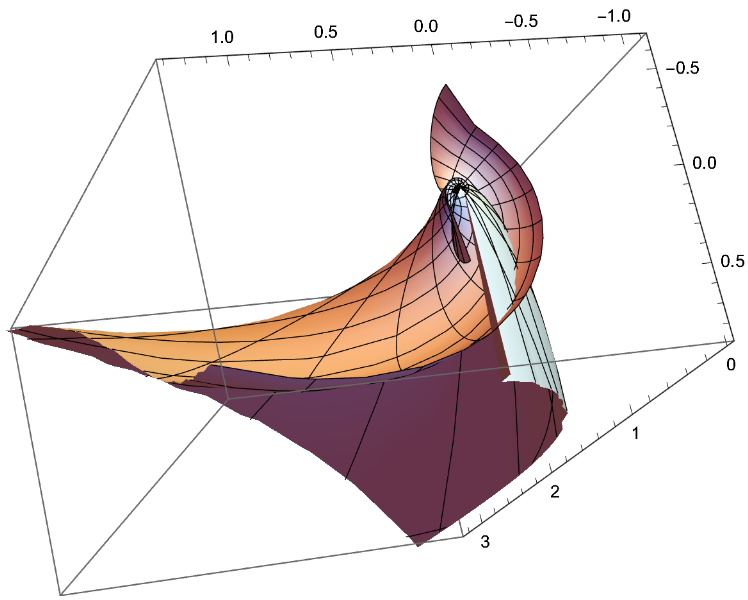
Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)^2+\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{Solve}\left[\frac{r\,\sqrt{\pi^2-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\,\sqrt{1-\text{Sin}[\theta]^2}}\right]^2}}{\pi}==r\,\text{Sin}[\beta],\ \beta\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{1}{\pi}\left(\sqrt{\left(\left(\pi-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\,\sqrt{1-\text{Sin}[\theta]^2}}\right]\right)\left(\pi+\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\,\sqrt{1-\text{Sin}[\theta]^2}}\right]\right)\right)}\right)\right]\right\}\right\}$$

$$c:=2.99792458\left(10^8\right)$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==r,\ v\right]$$

$$\text{Solve}\left[\frac{r\sqrt{1-\left(\frac{v^2}{c^2}\right)}\sqrt{\pi^2-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\text{Sin}\left[\theta\Big/\sqrt{1-\left(\frac{v^2}{c^2}\right)}\right]^2}}\right]^2}}{\pi}==r\,\text{Sin}[\beta],v\right]$$

Solve::tdep : The equations appear to involve the variables to be solved for in an essentially non–algebraic way. ≫

$$\text{Solve}\left[\frac{1}{\pi}r\sqrt{1-1.11265\times10^{-17}v^2}\sqrt{\pi^2-\text{ArcCos}\left[\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{1-\text{Sin}\left[\frac{\theta}{\sqrt{1-1.11265\times10^{-17}v^2}}\right]^2}}\right]^2}==r\,\text{Sin}[\beta],v\right]$$

$$r:=\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

$$\text{Solve}\left[\frac{\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}{\left(2\pi r-r\theta-2\pi\sqrt{r^2-\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}}\right)}==t,v\right]$$

Power::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==\eta,v\right]$$

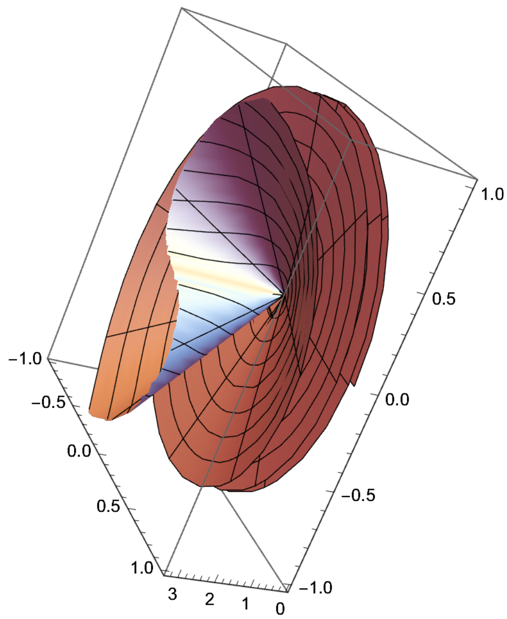
Set::write : Tag Times in $\frac{\sqrt{\frac{\theta}{\sqrt{1-\ll24\gg v^2}}}\sqrt{\frac{\ll1\gg}{\ll1\gg}}\sqrt{\frac{4\pi(\ll1\gg)}{\ll1\gg}-\frac{\theta(\ll1\gg)}{\ll1\gg}}}{2\pi}$ is Protected. ≫

Solve::eqf : η is not a well–formed equation. ≫

$\text{Solve}[\eta, v]$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r,v\right]$$

$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\sqrt{\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)^2+\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



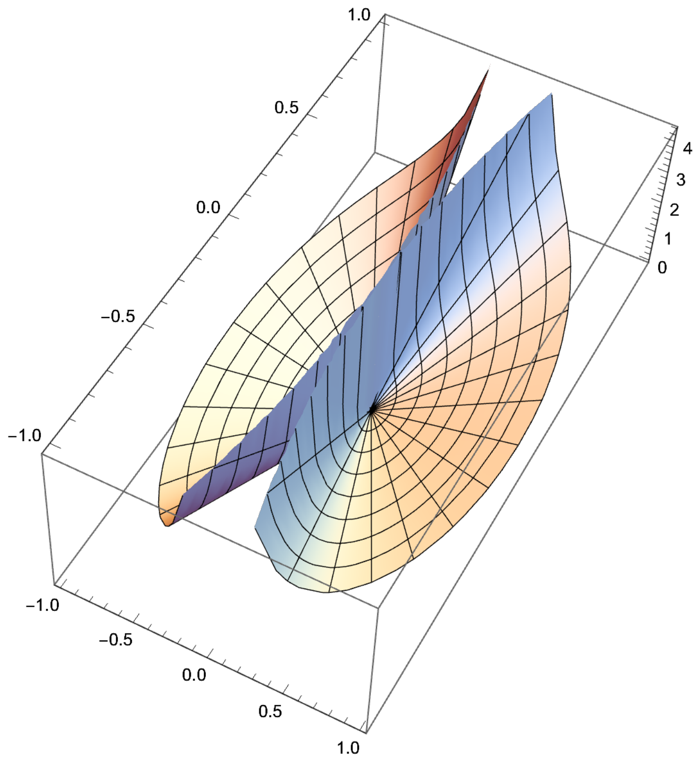
$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\sqrt{\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)^2+\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)^2}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{1}{\sqrt{4\,\pi^2 - 4\,\pi\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}\right.$$

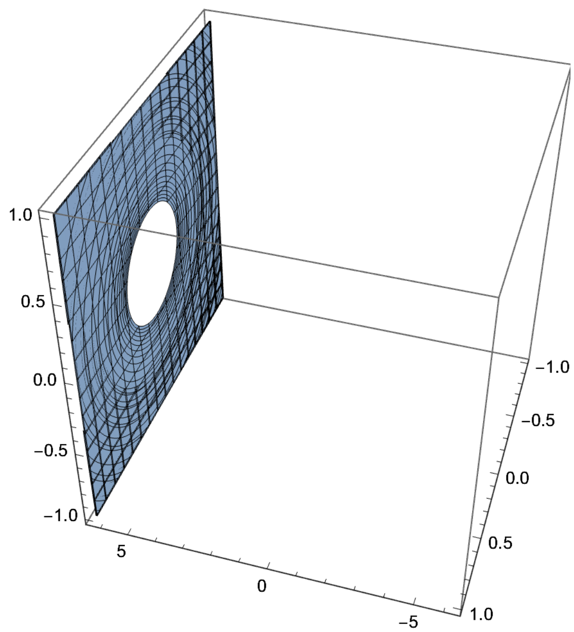
$$2\,\pi\sqrt{\left(\left(\frac{2\,\pi\,r - r\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right)^2 + \right.}$$

$$\left.\left(\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\,r^2\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) - r^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\right)^2\right),$$

$$\left.\{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{ContourPlot3D}\left[\frac{2\pi\sqrt{x^2+(y)^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}, \{x,-1,1\}, \{y,-1,1\}, \{\theta,-2\pi,2\pi\}\right]$$



$$z == r\,\text{Cos}[\beta]$$

$$\text{Solve}\left[r == \frac{2\pi\sqrt{\left(\frac{2\pi r - r\theta}{2\pi}\right)^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}}, r\right]$$

{}

$$\text{Solve}\left[r == \sqrt{\frac{2\pi r - r\theta}{2\pi}\text{^}2 + y\text{^}2 + \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\text{^}2}, r\right]$$

{}

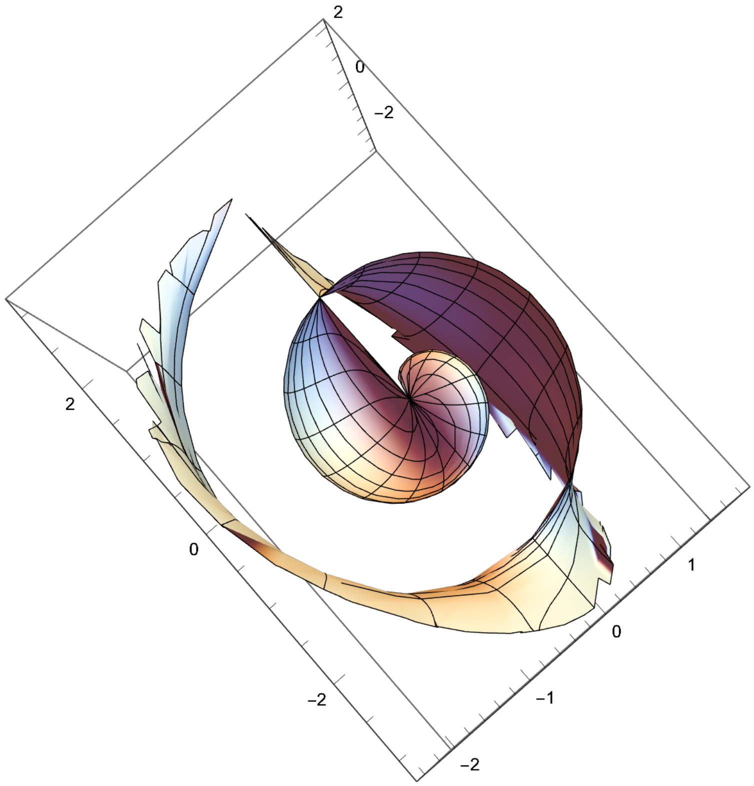
$$\beta == \text{ArcCos}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} \Big/ r\right]$$

$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == r\,\text{Sin}[\beta]\,\text{Cos}[\phi], \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi \to -\text{ArcCos}\left[\frac{(2\pi-\theta)\,\text{Csc}[\beta]}{2\pi}\right]\right\}, \left\{\phi \to \text{ArcCos}\left[\frac{(2\pi-\theta)\,\text{Csc}[\beta]}{2\pi}\right]\right\}\right\}$$

```
SphericalPlot3D[ArcCos[((2 π - θ) Csc[β])/(2 π)], {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

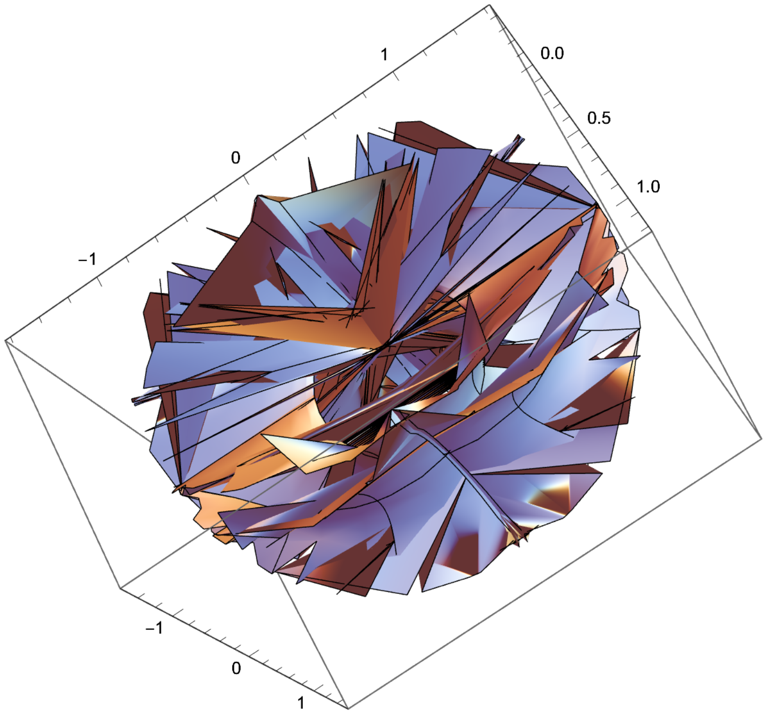



```
Solve[(2 π r - r θ)/(2 π) == r Sin[β] Cos[ϕ], β]
```

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{(2\pi - \theta)\ \text{Sec}[\phi]}{2\pi}\right]\right\}\right\}$$

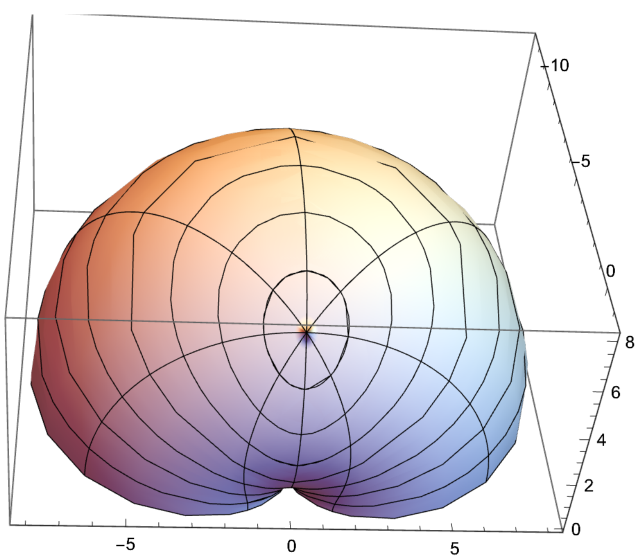
```
SphericalPlot3D[ArcSin[(2 π - θ) Sec[ϕ] / (2 π)], {θ, -2 π, 2 π}, {ϕ, -π, π}]
```

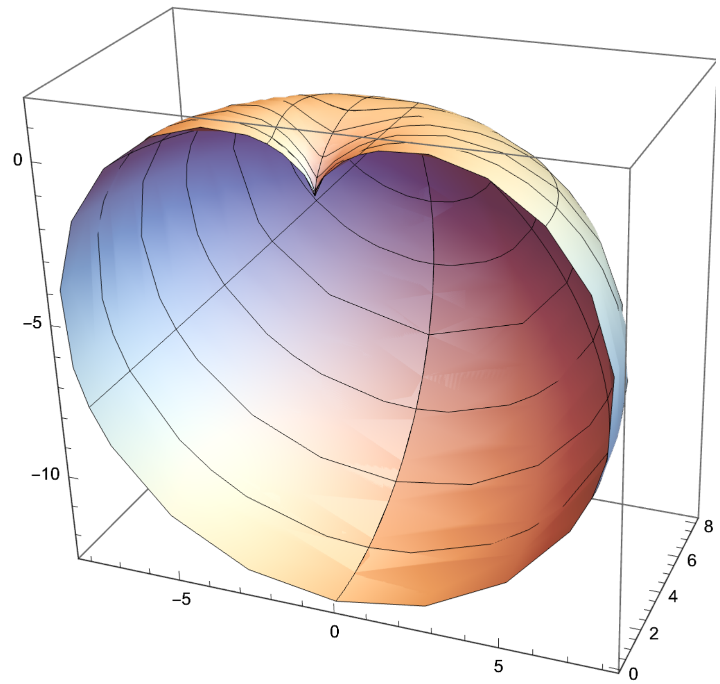



```
Solve[(2 π r - r θ) / (2 π) == r Sin[β] Cos[ϕ], θ]
```

{{θ → -2 π (-1 + Cos[ϕ] Sin[β])}}

```
SphericalPlot3D[-2 π (-1 + Cos[ϕ] Sin[β]), {β, -π / 2, π / 2}, {ϕ, -2 π, 2 π}]
```





$$\texttt{r :=} \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}$$

$$\texttt{Solve}\left[\frac{2\pi r - r\theta}{2\pi} == r\,\texttt{Sin}[\beta]\,\texttt{Cos}[\phi],\ \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi\to-\texttt{ArcCos}\left[\frac{(2\pi-\theta)\,\texttt{Csc}[\beta]}{2\pi}\right]\right\},\ \left\{\phi\to\texttt{ArcCos}\left[\frac{(2\pi-\theta)\,\texttt{Csc}[\beta]}{2\pi}\right]\right\}\right\}$$

$$\texttt{Solve}\left[\frac{2\pi r - r\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}{2\pi} == r\,\texttt{Sin}[\beta]\,\texttt{Cos}[\phi],\ \phi\right]$$

Solve::ifun : Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. ≫

$$\left\{\left\{\phi\to-\texttt{ArcCos}\left[-\texttt{Csc}[\beta]\sqrt{1-\texttt{Sin}[\beta]^2}\right]\right\},\ \left\{\phi\to\texttt{ArcCos}\left[-\texttt{Csc}[\beta]\sqrt{1-\texttt{Sin}[\beta]^2}\right]\right\}\right\}$$

$$\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}$$

$$\texttt{r :=} \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}[\beta]+4\pi^2\,\texttt{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\texttt{Sin}[\beta]^2+8\pi^2\theta\,\texttt{Sin}[\beta]^2\right)$$

$$r = \sqrt{x^\wedge 2 + y^\wedge 2 + z^\wedge 2} = \sqrt{x^\wedge 2 + y^\wedge 2 + \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^\wedge 2} ==$$

$$\sqrt{(r\,\text{Sin}[\theta]\,\text{Cos}[\phi])^\wedge 2 + (r\,\text{Sin}[\theta]\,\text{Sin}[\phi])^\wedge 2 + (r\,\text{Cos}[\theta])^\wedge 2}$$

$$\sqrt{(r\,\text{Sin}[\theta]\,\text{Cos}[\phi])^\wedge 2 + (r\,\text{Sin}[\theta]\,\text{Sin}[\phi])^\wedge 2 + (r\,\text{Cos}[\theta])^\wedge 2} == r$$

$$\text{Solve}\left[r == \sqrt{x^\wedge 2 + y^\wedge 2 + z^\wedge 2},\ z\right]$$

$$\left\{\left\{z \to -\frac{1}{2}\sqrt{\left(-4\,x^2 - 4\,y^2 + \frac{1}{(2\,\pi-\theta)^2} - \frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)\,(4\,\pi-\theta)^2} - \frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2\,(4\,\pi-\theta)} - \frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(4\,\pi-\theta)^2\,\theta} + \frac{\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2} + \frac{\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\theta}\right)}\right\},\right.$$

$$\left.\left\{z \to \frac{1}{2}\sqrt{\left(-4\,x^2 - 4\,y^2 + \frac{1}{(2\,\pi-\theta)^2} - \frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)\,(4\,\pi-\theta)^2} - \frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2\,(4\,\pi-\theta)} - \frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(4\,\pi-\theta)^2\,\theta} + \frac{\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2} + \frac{\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\theta}\right)}\right\}\right\}$$

$$\text{Solve}\left[r == \sqrt{x^\wedge 2 + y^\wedge 2 + \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^\wedge 2},\ y\right]$$

{{}}

$$\text{Solve}\left[r == \sqrt{x^\wedge 2 + y^\wedge 2 + \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^\wedge 2},\ x\right]$$

{{}}

$$\text{Solve}\left[r == \sqrt{x^\wedge 2 + y^\wedge 2 + \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^\wedge 2},\ x\right]$$

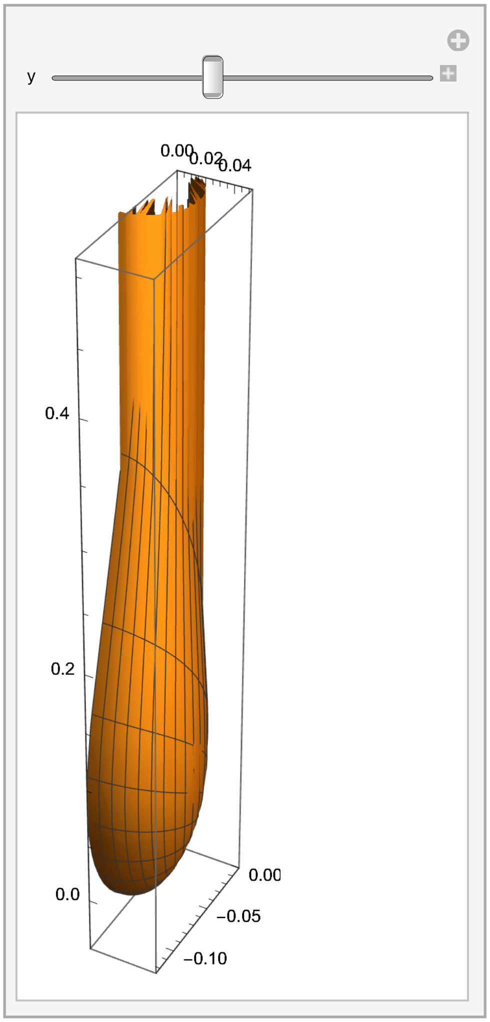
$$\text{Solve}\Big[\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\Big)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)==\sqrt{x\,\hat{}\,2+y\,\hat{}\,2+\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\hat{}\,2}\,,\;x\Big]$$

$$\left\{\left\{x\to-\frac{\sqrt{1-16\,\pi^2\,y^2-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{4\,\pi-\theta}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\,\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\,\pi}\right\},\left\{x\to\frac{\sqrt{1-16\,\pi^2\,y^2-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{4\,\pi-\theta}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\,\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\,\pi}\right\}\right\}$$

```
Manipulate[
 SphericalPlot3D[
```

$$\frac{\sqrt{1-16\pi^2 y^2-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}}}{4\pi},$$

```
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}], {y, -1, 1}]
```



$$\text{Solve}\left[\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)==\sqrt{x\hat{}2+y\hat{}2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\hat{}2},\ x\right]$$

$$\left\{\left\{x\to-\frac{1}{4\pi}\left(\sqrt{\left(-16\pi^2y^2+\frac{4\pi^2}{(2\pi-\theta)^2}-16\pi r^2\theta+4r^2\theta^2-\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)^2}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\pi^2\,\text{Sin}[\beta]^2}{(2\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\right)}\right)\right\},\right.$$

$$\left.\left\{x\to\frac{1}{4\pi}\left(\sqrt{\left(-16\pi^2y^2+\frac{4\pi^2}{(2\pi-\theta)^2}-16\pi r^2\theta+4r^2\theta^2-\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)^2}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\pi-\theta}-\frac{\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\pi^2\,\text{Sin}[\beta]^2}{(2\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\right)}\right)\right\}\right\}$$

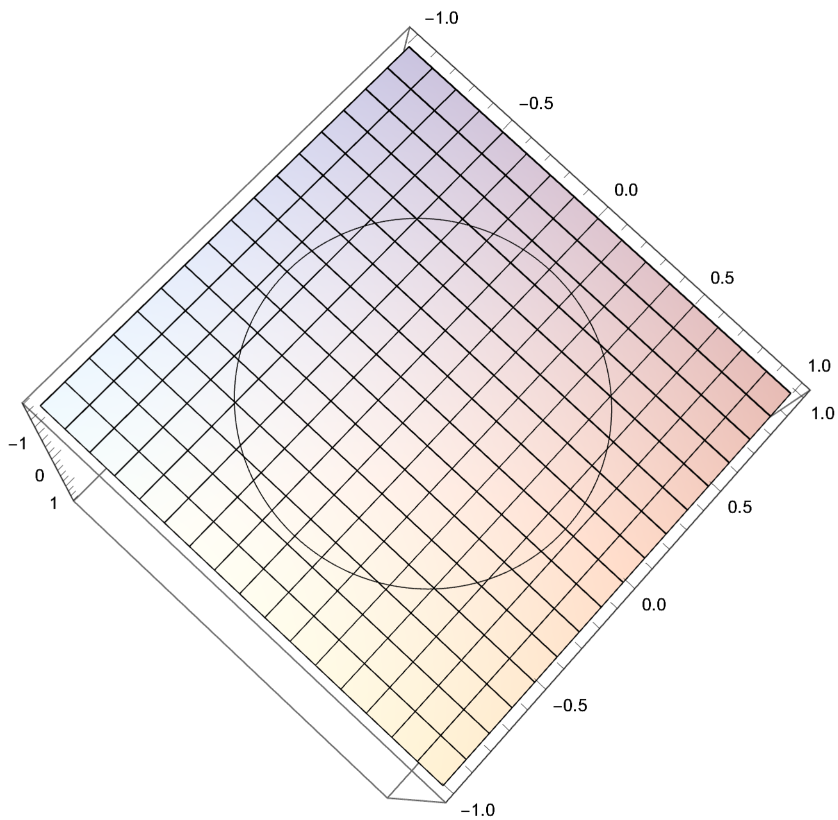
$$\frac{1}{2}\sqrt{\left(-4x^2-4y^2+\frac{1}{(2\pi-\theta)^2}-\frac{2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)\,(4\pi-\theta)^2}-\frac{2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)^2\,(4\pi-\theta)}-\frac{4\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(4\pi-\theta)^2\,\theta}+\frac{\text{Sin}[\beta]^2}{(2\pi-\theta)^2}+\frac{\text{Sin}[\beta]^2}{(4\pi-\theta)\,\theta}\right)}$$

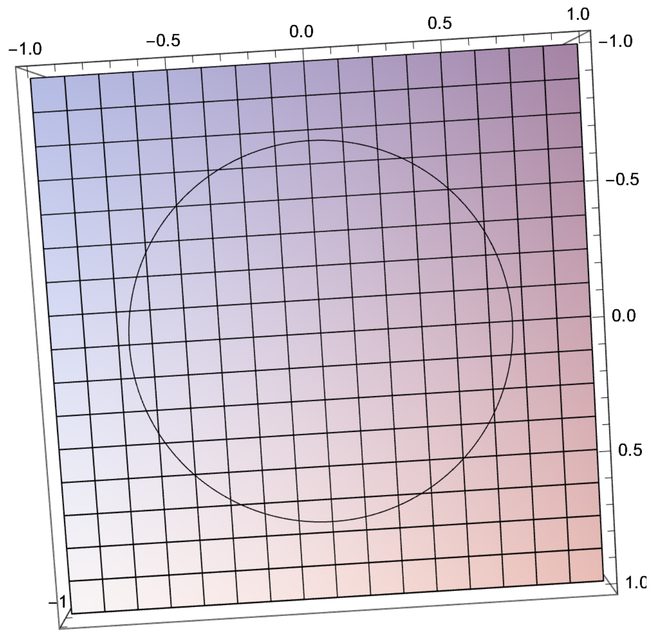
$$\theta:=2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

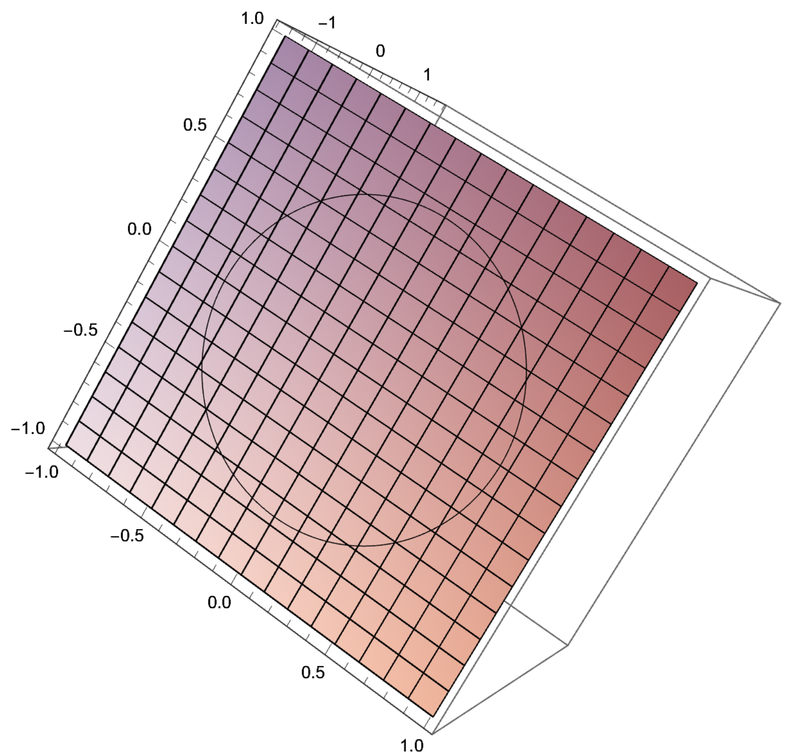
ContourPlot3D[

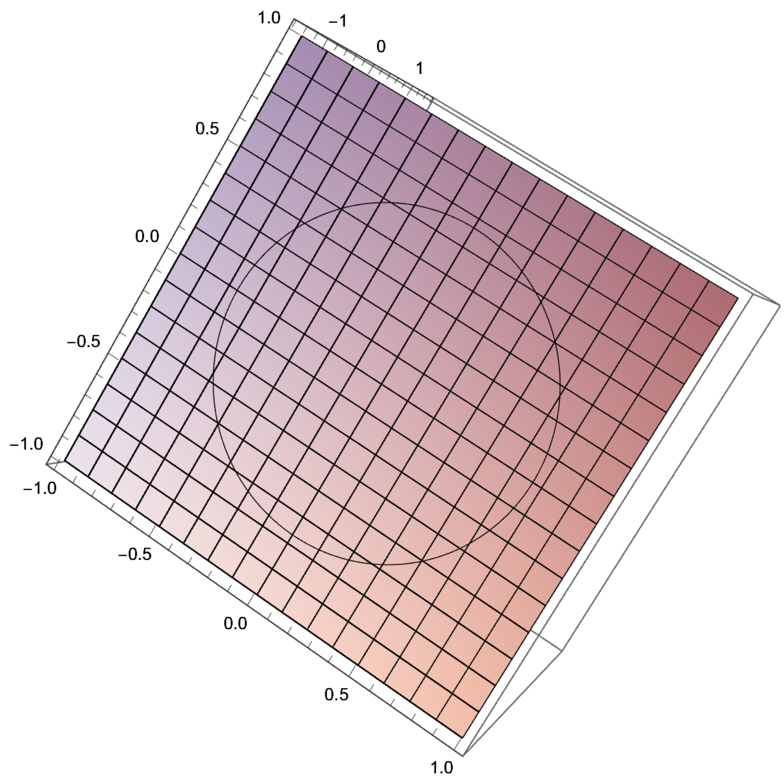
$$\frac{1}{2}\sqrt{\left(-4\,x^2-4\,y^2+\frac{1}{(2\,\pi-\theta)^2}-\frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)\,(4\,\pi-\theta)^2}-\frac{2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2\,(4\,\pi-\theta)}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(4\,\pi-\theta)^2\,\theta}+\frac{\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}+\frac{\text{Sin}[\beta]^2}{(4\,\pi-\theta)\,\theta}\right)},$$

{x, -1, 1}, {y, -1, 1}, {β, -π / 2, π / 2}]

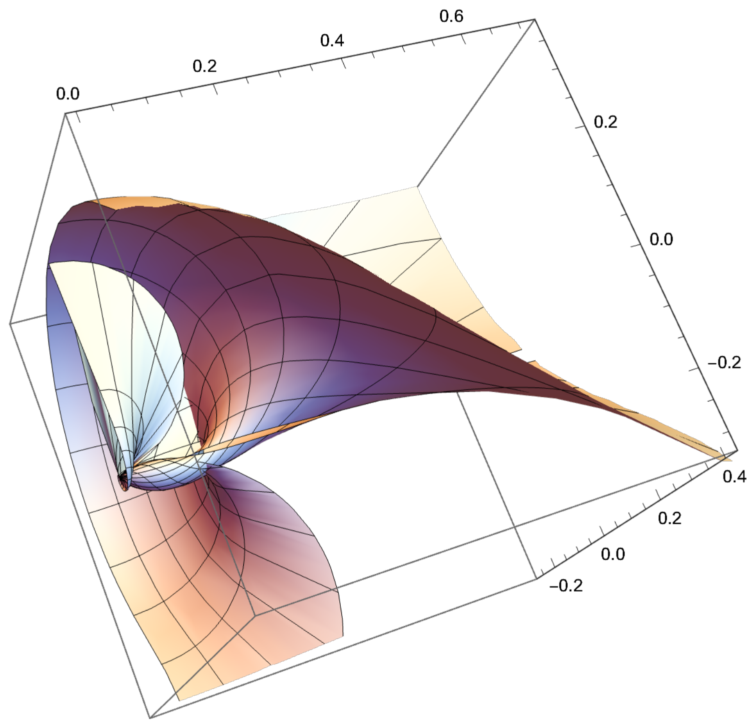



-1.0
-0.5
0.0
0.5
1.0
-1.0
-0.5
0.0
0.5
1.0
-1


1.0
0.5
0.0
-0.5
-1.0
-1
0
1
-1.0
-0.5
0.0
0.5
1.0

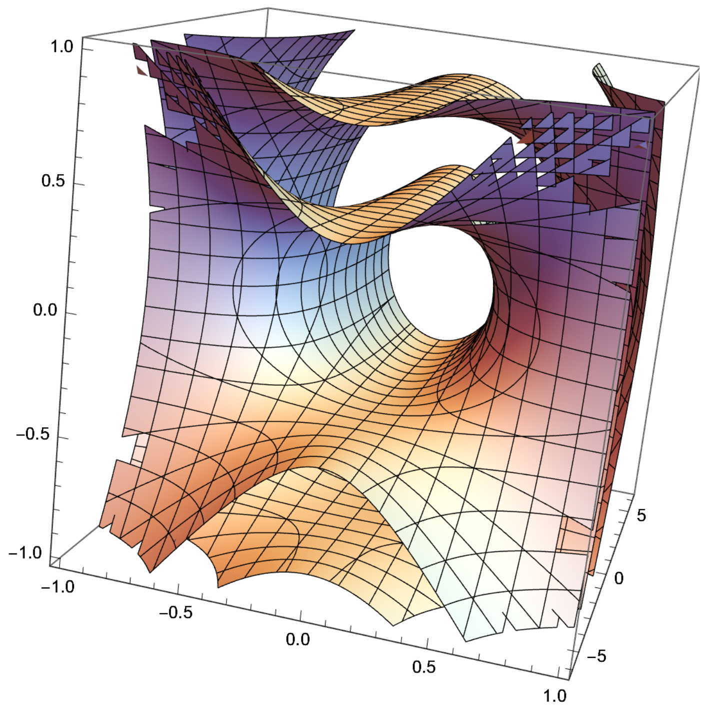

1.0
−1
0
1
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0

```
SphericalPlot3D[Sqrt[((r Sin[β] Cos[ArcCos[((2 π - θ) Csc[β])/(2 π)]])^2 +
    (r Sin[β] Sin[ArcCos[((2 π - θ) Csc[β])/(2 π)]])^2 + (r Cos[β])^2)],
  {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



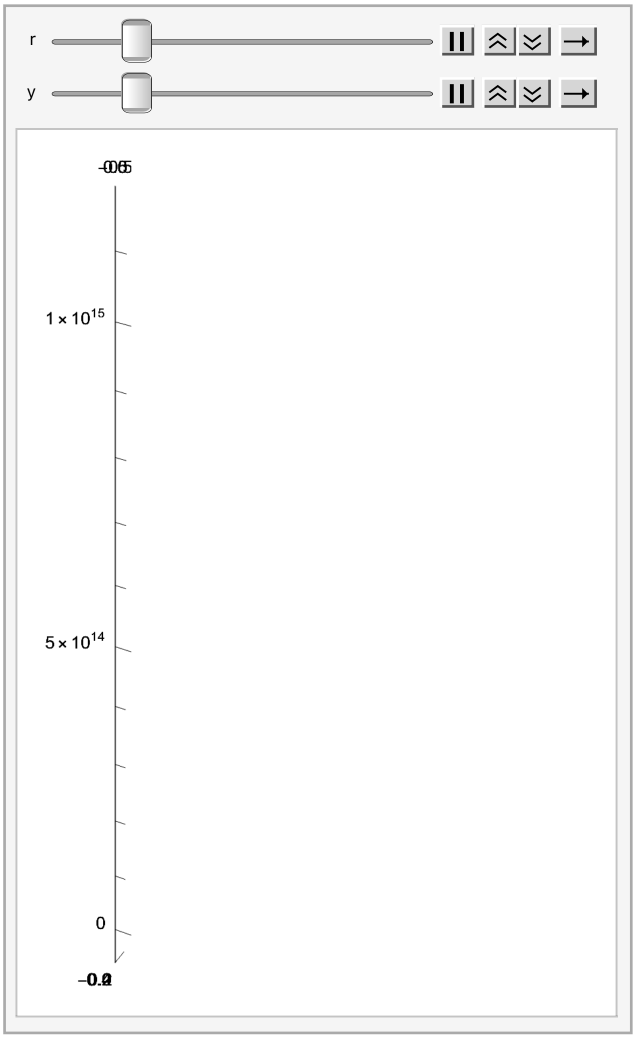

```
ContourPlot3D[Sqrt[x^2 + y^2 + z^2], {x, -1, 1}, {y, -2 π, 2 π}, {x, -1, 1}]
```

$$\texttt{ContourPlot3D}\left[\sqrt{r^{\wedge}2 + x^{\wedge}2 + \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}^{\wedge}2},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{x,\ -1,\ 1\}\right]$$



$$\texttt{ContourPlot3D}\left[\sqrt{r^{\wedge}2 + x^{\wedge}2 + z^{\wedge}2},\ \{r,\ -1,\ 1\},\ \{z,\ -1,\ 1\},\ \{x,\ -1,\ 1\}\right]$$

$$\text{Animate}\Big[\text{SphericalPlot3D}\Big[\frac{1}{4\pi}\left(\sqrt{\left(-16\,\pi^2\,y^2+\frac{4\,\pi^2}{(2\,\pi-\theta)^2}-16\,\pi\,r^2\,\theta+4\,r^2\,\theta^2-\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{4\,\pi-\theta}-\frac{\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{\theta}+\frac{4\,\pi^2\,\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}+\frac{\pi\,\text{Sin}[\beta]^2}{4\,\pi-\theta}+\frac{\pi\,\text{Sin}[\beta]^2}{\theta}\right)}\right),$$
$$\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\Big],\{r,-1,1\},\{y,-1,1\}\Big]$$



$$\text{Solve}\left[r == \sqrt{\left(x\,^\wedge 2 + y\,^\wedge 2 + \left(\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 r^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2 \theta + 4\pi^2 r^2 \theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2 (4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right)^\wedge 2\right)}, y\right]$$

$$\left\{\left\{y \to -\frac{1}{4\pi^2}\left(\sqrt{\left(-48\pi^4 r^2 - 16\pi^4 x^2 + \frac{256\pi^5 r^2}{4\pi-\theta} - 16\pi^3 r^2\theta - 4\pi^2 r^2\theta^2 - r^2\theta^4 - 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} + \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} - 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right\},\right.$$

$$\left.\left\{y \to \frac{1}{4\pi^2}\left(\sqrt{\left(-48\pi^4 r^2 - 16\pi^4 x^2 + \frac{256\pi^5 r^2}{4\pi-\theta} - 16\pi^3 r^2\theta - 4\pi^2 r^2\theta^2 - r^2\theta^4 - 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} + \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} - 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right)\right\}\right\}$$

```
Export["lldradius.avi"
```

$$\text{Export}\Big["\text{lldradius.avi}", \text{Animate}\Big[\text{Plot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(-48\pi^4 r^2 - 16\pi^4 x^2 + \frac{256\pi^5 r^2}{4\pi-\theta} - 16\pi^3 r^2\theta - 4\pi^2 r^2\theta^2 - r^2\theta^4 - 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} + \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} - 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\Big], \{x, -1.3, 1.3\}\Big]\Big]$$

```
lldradius.avi
```

$$\text{Manipulate}\Big[\text{Plot3D}\Big[\frac{1}{4\pi^2}\left(\sqrt{\left(-48\pi^4 r^2 - 16\pi^4 x^2 + \frac{256\pi^5 r^2}{4\pi-\theta} - 16\pi^3 r^2\theta - 4\pi^2 r^2\theta^2 - r^2\theta^4 - 16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta} + \frac{64\pi^4 r\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta} - 8\pi^2 r\theta\sqrt{r^2(4\pi-\theta)\theta}\right)}\right), \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\Big], \{x, -1, 1\}\Big]$$

$$\sqrt{x^2+y^2+z^2}$$

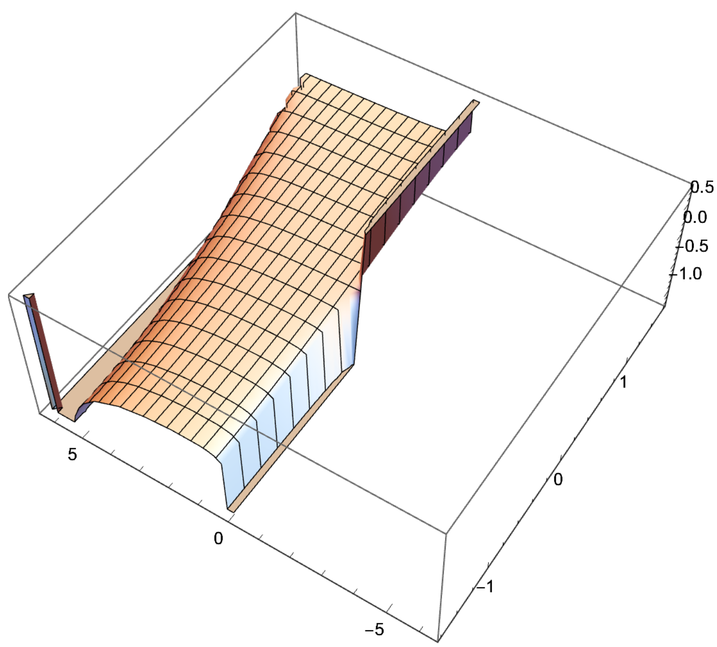
$$\text{Solve}\left[\sqrt{x^2+y^2+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}^2} == \frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}},\ r\right]$$

$$\left\{\left\{r\to-\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}\right\},\right.$$
$$\left.\left\{r\to\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}\right\}\right\}$$

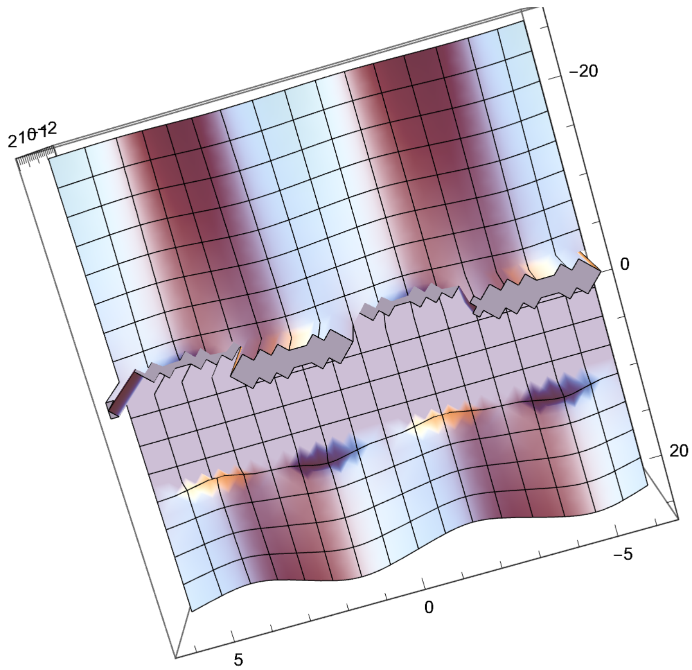
$$\sqrt{\frac{\pi}{2}}\sqrt{\frac{2\pi\eta^2}{(4\pi-\theta)^2}-\frac{2x^2}{4\pi-\theta}-\frac{2y^2}{4\pi-\theta}+\frac{\eta^2}{4\pi-\theta}+\frac{2\pi\eta^2}{\theta^2}-\frac{2x^2}{\theta}-\frac{2y^2}{\theta}+\frac{\eta^2}{\theta}}$$

$$\text{Solve}\left[\frac{2\pi\sqrt{x^2+y^2}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}} ==\right.$$

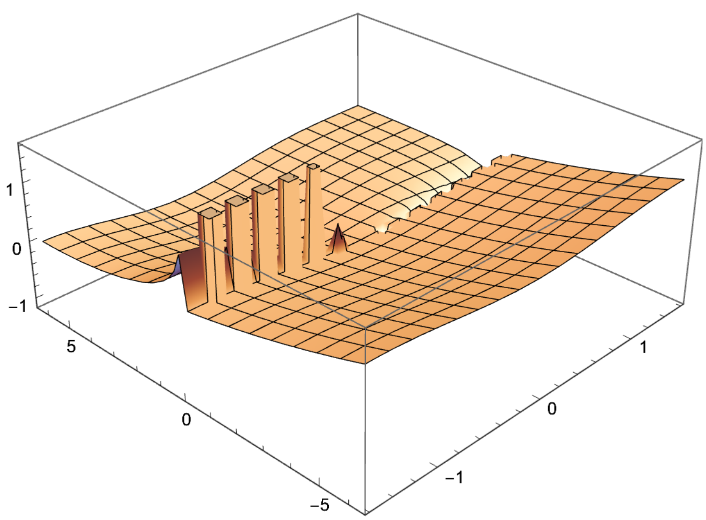
$$\text{Plot3D}\Big[\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)\Big/$$
$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right),\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\pi,2\pi\}\Big]$$



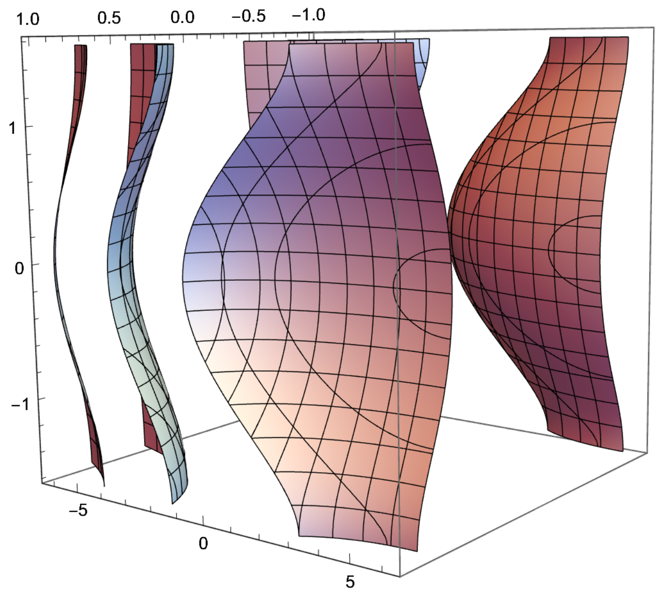
```
Plot3D[0.00633256 Im[-12.5664 θ + θ^2 + 6.28319 Sqrt[(12.5664 - 1. θ) θ] Sin[β] +
    39.4784 Sin[β]^2 - (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / (12.5664 - 1. θ) -
    (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / θ], {β, -6.3, 6.3}, {θ, -26, 26}]
```




```
Plot3D[0.00633256 Re[-12.5664 θ + θ^2 + 6.28319 Sqrt[(12.5664 - 1. θ) θ] Sin[β] +
    39.4784 Sin[β]^2 - (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / (12.5664 - 1. θ) -
    (19.7392 Sqrt[(12.5664 - 1. θ) θ] Sin[β]^3) / θ], {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



$$\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,{}^\wedge 2 + \frac{2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\,r\ - 2\,\pi\,r}{2\,\pi}\,{}^\wedge 2,\right.$$
$$\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$2\,\pi\left(\sqrt{\left(r\,{}^\wedge 2 - \left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right){}^\wedge 2\right)}\right)\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right) =$$

$$2\,\pi\left(\sqrt{\left(\left(r\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\right){}^\wedge 2 - \left(\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\right){}^\wedge 2\right)}\right)$$

$$\text{Solve}\Big[$$
$$r\,\theta == \left(2\,\pi\,r\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\right) - 2\,\pi\left(\left(\sqrt{}\,(r\,{}^\wedge 2 - \eta\,{}^\wedge 2)\right)\right)\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right), \theta\Big]$$

$$\left\{\left\{\theta \to -\frac{2\left(-\pi\,r\,\sqrt{\frac{c^2-v^2}{c^2}} + \pi\,\sqrt{\frac{c^2-v^2}{c^2}}\,\sqrt{r^2 - \eta^2}\right)}{r}\right\}\right\}$$

$$\text{Solve}\Big[(\theta\,r) == \left(2\,\pi\,r\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\right) -$$
$$2\,\pi\left(\sqrt{}\left(\left(r\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\right){}^\wedge 2 - \left(\left(\sqrt{1 - ((v\,{}^\wedge 2)\,/\,(c\,{}^\wedge 2))}\right)\eta\right){}^\wedge 2\right)\right), \eta\Big]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta + c^2\,r^2\,\theta^2}}{2\,\pi\,\sqrt{-c^2 + v^2}}\right\}, \left\{\eta \to \frac{\sqrt{-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta + c^2\,r^2\,\theta^2}}{2\,\pi\,\sqrt{-c^2 + v^2}}\right\}\right\}$$

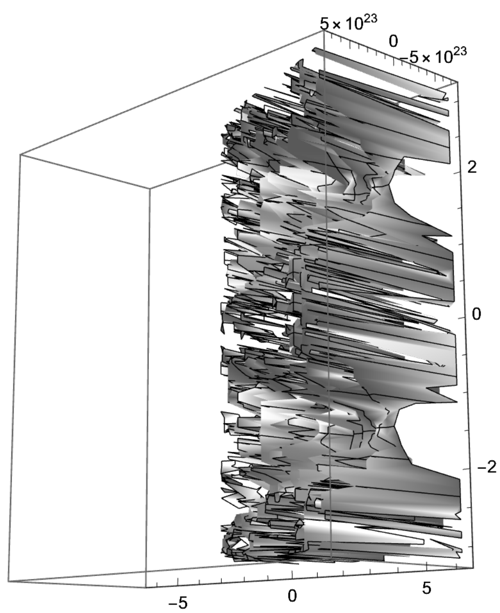
$$\text{Solve}\left[\frac{\sqrt{-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+c^2\,r^2\,\theta^2}}{2\,\pi\,\sqrt{-c^2+v^2}}==\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,c\right]$$

$$\left\{\left\{c\to-\frac{\sqrt{-16\,\pi^2\,v^2+8\,\pi\,v^2\,\theta-v^2\,\theta^2}}{2\,\sqrt{2\,\pi}\,\sqrt{-2\,\pi+\theta}}\right\},\left\{c\to\frac{\sqrt{-16\,\pi^2\,v^2+8\,\pi\,v^2\,\theta-v^2\,\theta^2}}{2\,\sqrt{2\,\pi}\,\sqrt{-2\,\pi+\theta}}\right\}\right\}$$

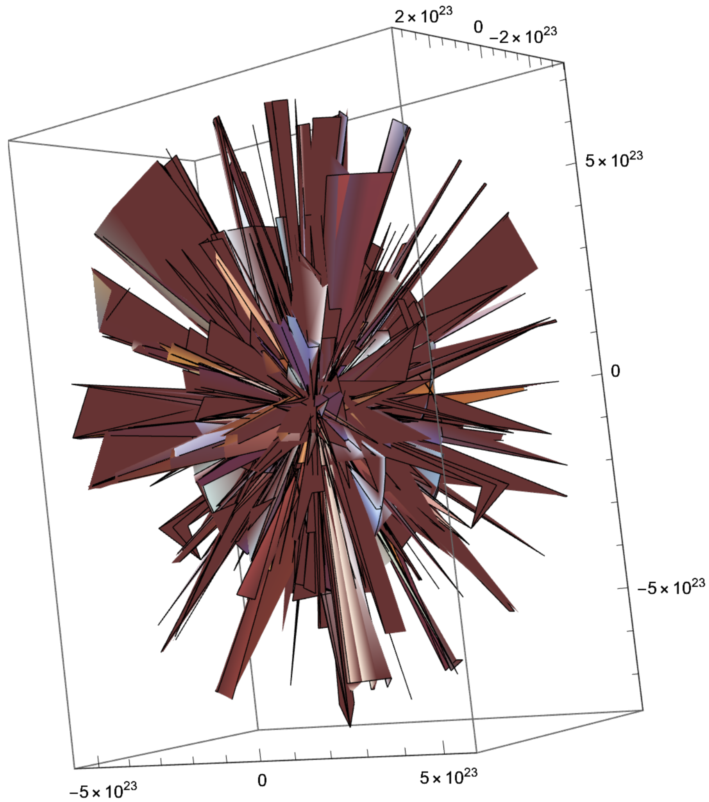
$$\text{Solve}\left[\frac{\sqrt{-4\,c^2\,\pi\,r^2\,\sqrt{\frac{c^2-v^2}{c^2}}\,\theta+c^2\,r^2\,\theta^2}}{2\,\pi\,\sqrt{-c^2+v^2}}==\frac{\sqrt{\frac{4\,c\,\pi\,r^2\,\sqrt{\frac{(c-v)\,(c+v)}{c^2}}\,\theta}{c-v}+\frac{4\,c\,\pi\,r^2\,\sqrt{\frac{(c-v)\,(c+v)}{c^2}}\,\theta}{c+v}-\frac{c\,r^2\,\theta^2}{c-v}-\frac{c\,r^2\,\theta^2}{c+v}}}{2\,\sqrt{2}\,\pi},\,v\right]$$

$$\{\{\}\}$$

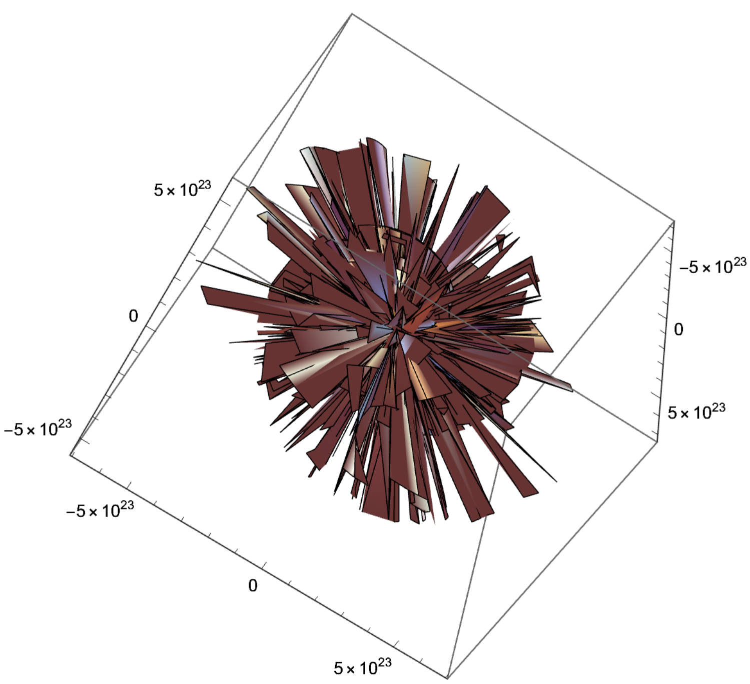
```
Plot3D[{(ⅈ (2.99792458 * 10^8)^3 √θ) /
   (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18 θ +
            8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
     ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
            8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) √(-4 π + θ)),
  -(ⅈ (2.99792458 * 10^8)^3 √θ) / (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18
             θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
         (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
      ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
             8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
         (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
      √(-4 π + θ))}, {θ, -2 π, 2 π}, {β, -π, π}]
```



```
SphericalPlot3D[
 {(i (2.99792458 * 10^8)^3 √θ) / (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18
          θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
    ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) √(-4 π + θ)),
  -(i (2.99792458 * 10^8)^3 √θ) / (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18
          θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
    ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
    √(-4 π + θ))}, {θ, -2 π, 2 π}, {β, -π, π}]
```


2 × 10^23
0
−2 × 10^23
5 × 10^23
0
−5 × 10^23
−5 × 10^23
0
5 × 10^23

```
SphericalPlot3D[
 {(ⅈ (2.99792458 * 10^8)^3 √θ) / (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18
        θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
     ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
       (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) √(-4 π + θ)),
  -(ⅈ (2.99792458 * 10^8)^3 √θ) / (((2.99792458 * 10^8) - (√(-1.1294090667581471`*^18
          θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
      ((2.99792458 * 10^8) + (√(-1.1294090667581471`*^18 θ +
           8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))
      √(-4 π + θ))}, {β, -π, π}, {θ, -2 π, 2 π}]
```



Instantaneous) is equal to the phenomenal velocity at the position where the height of the cone has folded all the way up!

$$\text{Solve}\left[\left(\sqrt{\left(3.5481432270250993`*^{\wedge}18\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 1.1294090667581471`*^{\wedge}18\, r^2\theta + 8.987551787368176`*^{\wedge}16\, r^2\theta^2\right)}\right) \Big/ \left(\sqrt{\left(39.47841760435743`\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 12.566370614359172`\, r^2\theta + r^2\theta^2\right)}\right) == \frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta} - \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}, r\right]$$

$$\{\{r \to -0.159155\sqrt{12.5664 - 1.\,\theta}\,\sqrt{\theta}\}, \{r \to 0.159155\sqrt{12.5664 - 1.\,\theta}\,\sqrt{\theta}\}\}$$

$$\text{Solve}\left[0.15915494309189535`\sqrt{12.566370614359172` - 1.`\,\theta}\,\sqrt{\theta} == \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}, \theta\right]$$

$$\{\{\theta \to 6.28319 - 2.52755\times 10^{-8}\, i\}, \{\theta \to 6.28319 + 2.52755\times 10^{-8}\, i\}\}$$

$$\text{Solve}\left[-0.15915494309189535`\sqrt{12.566370614359172` - 1.`\,\theta}\,\sqrt{\theta} == \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}, \theta\right]$$

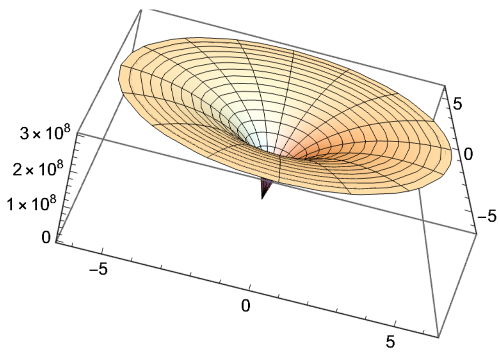
$$\{\{\theta \to -2.60258\}, \{\theta \to 15.169\}\}$$

$$\text{Solve}\left[\left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18\ (\eta)^2 - 1.1294090667581471\grave{}*\hat{}18\ r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\ r^2\,\theta^2\right)\right) \Big/ \left(\sqrt{}\left(39.47841760435743\grave{}\ (\eta)^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2\right)\right) == \frac{2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta} - \frac{4\pi r^2 - 2 r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}},\ r\right]$$

$$\left\{\left\{r \to -3.50592\times10^{-11}\sqrt{2.32749\times10^{37} - 1.85216\times10^{36}\,\theta}\ \sqrt{\theta}\right\}, \left\{r \to 3.50592\times10^{-11}\sqrt{2.32749\times10^{37} - 1.85216\times10^{36}\,\theta}\ \sqrt{\theta}\right\}\right\}$$

$$3.5059170406658596\grave{}*\hat{}{-11}\ \sqrt{2.3274923516835676\grave{}*\hat{}37 - 1.8521595638950995\grave{}*\hat{}36\,\theta}\ \sqrt{\theta}$$

$$\text{RevolutionPlot3D}\left[3.5059170406658596\grave{}*\hat{}{-11}\ \sqrt{2.3274923516835676\grave{}*\hat{}37 - 1.8521595638950995\grave{}*\hat{}36\,\theta}\ \sqrt{\theta},\ \{\theta, -2\pi, 2\pi\}\right]$$



$$0.15915494309189535\grave{}\ \sqrt{12.566370614359172\grave{} - 1.\grave{}\ \theta}\ \sqrt{\theta}$$

$$3.5059170406658596\grave{}*\hat{}{-11}\ \text{Solve}\ \sqrt{2.3274923516835676\grave{}*\hat{}37 - 1.8521595638950995\grave{}*\hat{}36\,\theta}\ \sqrt{\theta} == 0.15915494309189535\grave{}\ \sqrt{12.566370614359172\grave{} - 1.\grave{}\ \theta}\ \sqrt{\theta}$$

$$\text{Solve}\left[\sqrt{2.3274923516835676\grave{}*\hat{}37 - 1.8521595638950995\grave{}*\hat{}36\,\theta}\ \sqrt{\theta} == 0.15915494309189535\grave{}\ \sqrt{12.566370614359172\grave{} - 1.\grave{}\ \theta}\ \sqrt{\theta},\ \theta\right]$$

$$\{\{\theta \to 0.\}, \{\theta \to 12.5664\}\}$$

$$\text{Solve}\left[\left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18\ (\eta)^2 - 1.1294090667581471\grave{}*\hat{}18\ r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\ r^2\,\theta^2\right)\right) \Big/ \left(\sqrt{}\left(39.47841760435743\grave{}\ (\eta)^2 - 12.566370614359172\grave{}\ r^2\,\theta + r^2\,\theta^2\right)\right) == \frac{2\pi\,\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta} - \frac{4\pi r^2 - 2 r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}},\ \theta\right]$$

$$\{\}$$

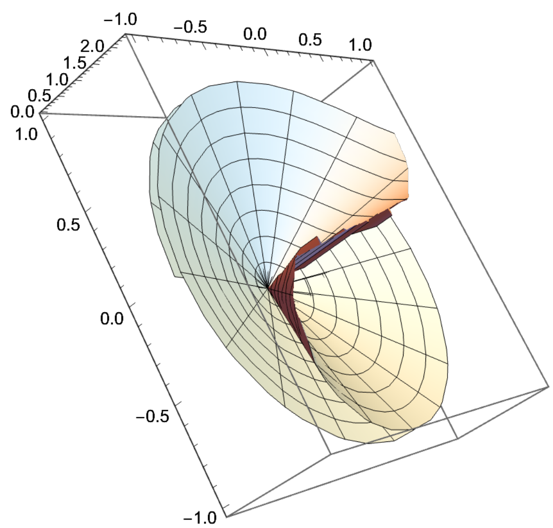
$$\text{Solve}\left[\left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2-1.1294090667581471\grave{}*\hat{}18\,r^2\theta+8.987551787368176\grave{}*\hat{}16\,r^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2-12.566370614359172\grave{}\,r^2\theta+r^2\theta^2\right)}\right)==\frac{2\pi\,\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}}{\theta}-\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\theta\right]$$

$$\{\{\theta\to 0.5\,(12.5664-12.5664\sqrt{1.-1.\,r}\sqrt{1.+r})\},\{\theta\to 0.5\,(12.5664+12.5664\sqrt{1.-1.\,r}\sqrt{1.+r})\}\}$$

$$\text{Solve}\left[0.5\grave{}\left(12.566370614359172\grave{}+12.566370614359172\grave{}\sqrt{1.\grave{}-1.\grave{}\,r}\sqrt{1.\grave{}+r}\right)==2\pi,r\right]$$

$$\{\{r\to -1.\},\{r\to 1.\}\}$$

$$\text{RevolutionPlot3D}\left[\frac{2\pi\,\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}}{\theta}-\frac{4\pi r^2-2r^2\theta}{2\sqrt{4\pi r^2\theta-r^2\theta^2}},\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[\left(\sqrt{\left(3.5481432270250993\grave{}*\text{^}18\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 1.1294090667581471\grave{}*\text{^}18\, r^2\theta + 8.987551787368176\grave{}*\text{^}16\, r^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 12.566370614359172\grave{}\, r^2\theta + r^2\theta^2\right)}\right) == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} - \frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta}, \theta\right]$$

$$\{\{\theta \to 0.5\,(12.5664 - 12.5664\sqrt{1. - 1.\,r}\,\sqrt{1. + r})\}, \{\theta \to 0.5\,(12.5664 + 12.5664\sqrt{1. - 1.\,r}\,\sqrt{1. + r})\}\}$$

$$\text{Solve}\left[\left(\sqrt{\left(3.5481432270250993\grave{}*\text{^}18\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 1.1294090667581471\grave{}*\text{^}18\, r^2\theta + 8.987551787368176\grave{}*\text{^}16\, r^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 - 12.566370614359172\grave{}\, r^2\theta + r^2\theta^2\right)}\right) == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} - \frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta}, r\right]$$

$$\{\{r \to -0.159155\sqrt{12.5664 - 1.\,\theta}\,\sqrt{\theta}\}, \{r \to 0.159155\sqrt{12.5664 - 1.\,\theta}\,\sqrt{\theta}\}\}$$

$$\text{Solve}\left[\frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta} - \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} - \frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta}, r\right]$$

$$\{\}$$

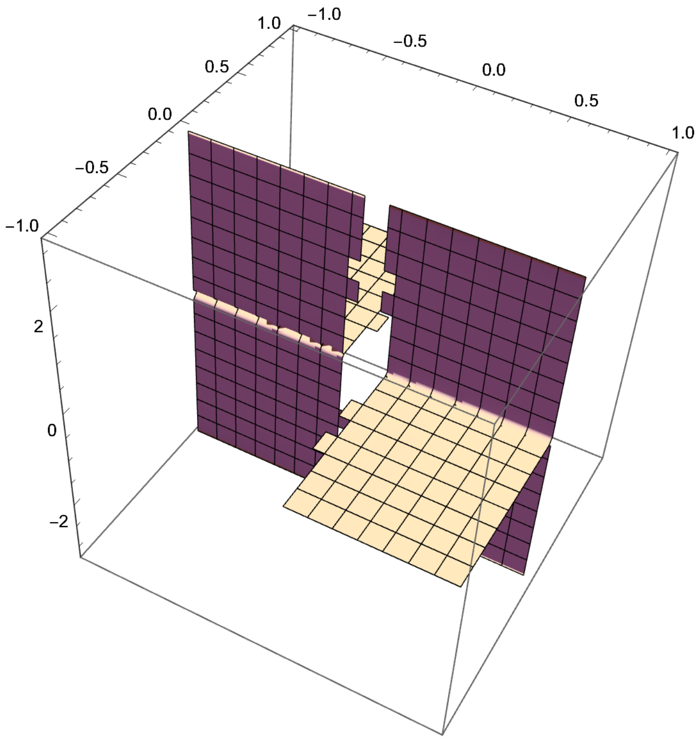
$$\text{Solve}\left[\frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta} - \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} == \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} - \frac{2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}}{\theta}, \theta\right]$$

$$\{\}$$

"Thus the height of an object is specified by the monocular optical stimulus within a scale factor. This means that the ratios of heights of two or more objects are specified."

$$H = \frac{A}{a} \text{Sin}[\alpha]^\wedge 2 = \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}$$

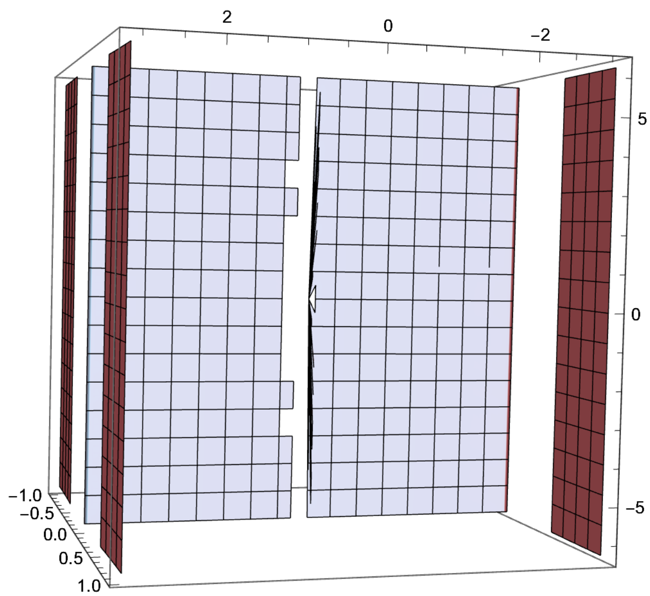
$$\text{ContourPlot3D}\left[\frac{A}{a} \text{Sin}[\alpha]^\wedge 2, \{a, -1, 1\}, \{A, -1, 1\}, \{\alpha, -\pi, \pi\}\right]$$



$$\text{Solve}\left[\frac{A}{a} \text{Sin}[\alpha]^\wedge 2 == \frac{\sqrt{4 \pi \left(\frac{2 \pi \sqrt{(4 \pi - \theta) \theta}}{(4 \pi - \theta) \theta}\right)^2 \theta - \left(\frac{2 \pi \sqrt{(4 \pi - \theta) \theta}}{(4 \pi - \theta) \theta}\right)^2 \theta^2}}{2 \pi}, A\right]$$

$$\left\{\left\{A \to \frac{a \sqrt{\frac{16 \pi^3}{4 \pi - \theta} - \frac{4 \pi^2 \theta}{4 \pi - \theta}} \text{Csc}[\alpha]^2}{2 \pi}\right\}\right\}$$

$$\texttt{ContourPlot3D}\left[\frac{a\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}\ \texttt{Csc}[\alpha]^2}{2\pi},\ \{a,-1,1\},\ \{\theta,-2\pi,2\pi\},\ \{\alpha,-\pi,\pi\}\right]$$

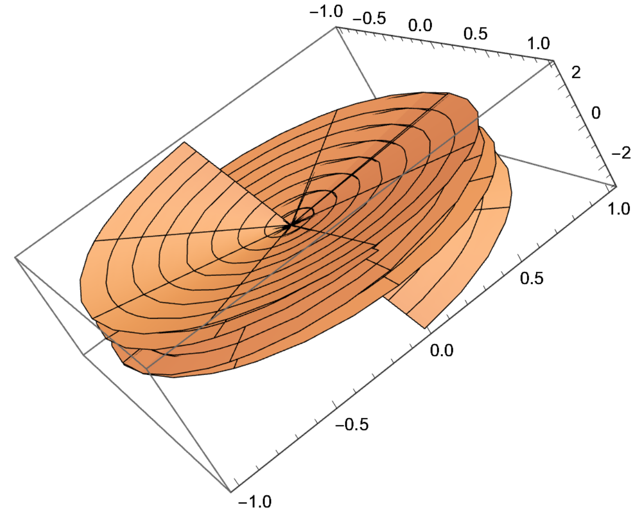


$$\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]$$

$$\texttt{Solve}\left[\frac{A}{a}\ \texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]\right]\texttt{\^{}2} == \frac{\sqrt{4\pi\left(\frac{2\pi\ \sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\right)^2\theta-\left(\frac{2\pi\ \sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\right)^2\theta^2}}{2\pi},\ a\right]$$

$$\left\{\left\{a\to\frac{4\,A\,\pi\,\theta-A\,\theta^2}{4\,\pi^2}\right\}\right\}$$

```
RevolutionPlot3D[(4 A π θ - A θ^2)/(4 π^2), {A, -1, 1}, {θ, -2 π, 2 π}]
```

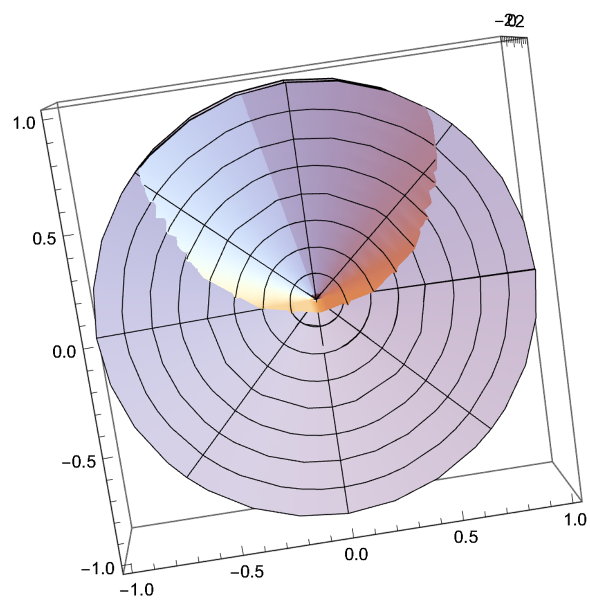


$$\frac{4\,A\,\pi\,\theta - A\,\theta^2}{4\,\pi^2}$$

```
Solve[A/a Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^2 == Sqrt[4 π ((2 π Sqrt[(4 π-θ) θ])/((4 π-θ) θ))^2 θ - ((2 π Sqrt[(4 π-θ) θ])/((4 π-θ) θ))^2 θ^2]/(2 π), A]
```

$$\left\{\left\{A \to \frac{2\,a\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}{(4\,\pi - \theta)\,\theta}\right\}\right\}$$

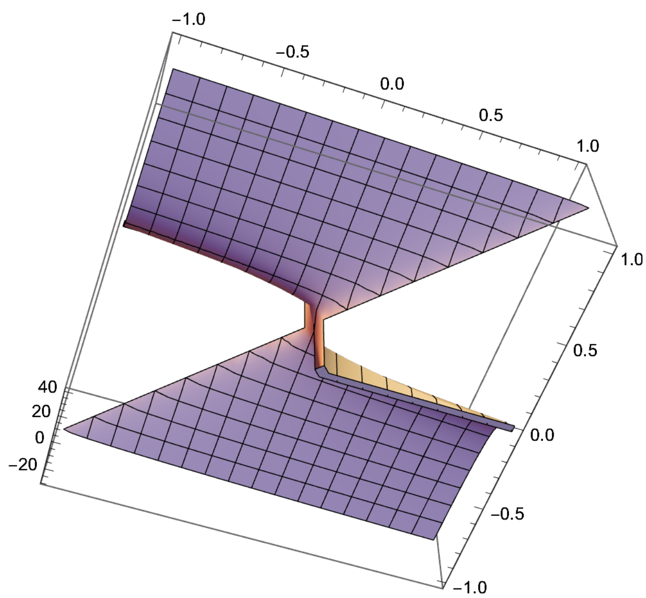
```
RevolutionPlot3D[(2 a π Sqrt[(16 π^3)/(4 π-θ) - (4 π^2 θ)/(4 π-θ)])/((4 π - θ) θ), {a, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[\frac{A}{a}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right]\text{^}2 == \frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi},\,\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\left(A-\sqrt{-a\,A+A^2}\right)\pi}{A}\right\},\left\{\theta\to\frac{2\left(A+\sqrt{-a\,A+A^2}\right)\pi}{A}\right\}\right\}$$

$$\text{Plot3D}\left[\frac{2\left(A+\sqrt{-a\,A+A^2}\right)\pi}{A},\,\{A,\,-1,\,1\},\,\{a,\,-1,\,1\}\right]$$



$$\text{Solve}\left[\frac{A}{a}\,\text{Sin}[\alpha]\text{^}2 == \frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi},\,a\right]$$

$$\left\{\left\{a\to A\,\text{Sin}[\alpha]^2\right\}\right\}$$

$$A\,\text{Sin}[\alpha]^2$$

$$\text{Solve}\left[\frac{A}{H}\,\text{Sin}[\alpha]\text{^}2 == A\,\text{Sin}[\alpha]^2,\,H\right]$$

$$\{\{H\to 1\}\}$$

$$w = \frac{A\text{^}2}{H\text{^}2}\,((\text{Sin}[\alpha])\text{^}3) ==$$

$$\left(\frac{A}{H}\,\text{Sin}[\alpha]\right)\frac{A}{H}\,\text{Sin}[\alpha]\text{^}2 ==$$

Relatisticη :=

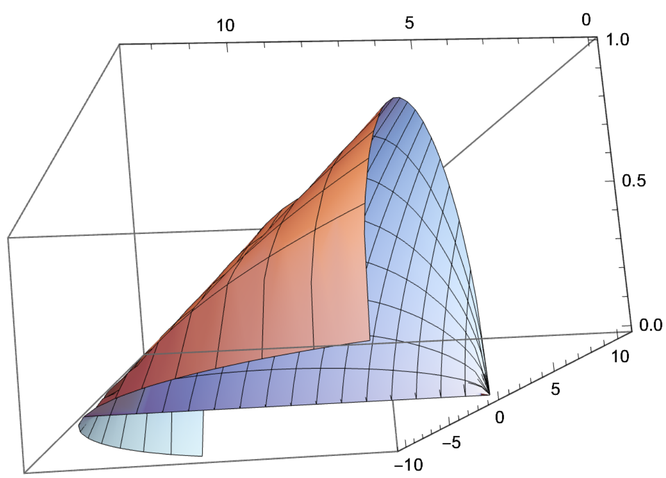
$$\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right) \Big/ \left(\sqrt{1 - \left(\left(\left(\left(\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right) \Big/ \left((1080/\pi)\,\theta\right)\right)\text{^}2\right) \Big/ \left(c\text{^}2\right)\right)}\right)$$

$$\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right) \Big/ \left(\sqrt{1 - \left(\left(\left(\left(\frac{2\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)}{\sqrt{4\,\pi\,\theta - \theta^2}}\right) \Big/ \left((1080/\pi)\,\theta\right)\right)\text{^}2\right) \Big/ \left(c\text{^}2\right)\right)}\right)$$

RevolutionPlot3D[

$$\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right) \Big/ \left(\sqrt{1 - \left(\left(\left(\left(\frac{2\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)}{\sqrt{4\,\pi\,\theta - \theta^2}}\right) \Big/ \left((1080/\pi)\,\theta\right)\right)\text{^}2\right) \Big/ \left(c\text{^}2\right)\right)}\right),$$

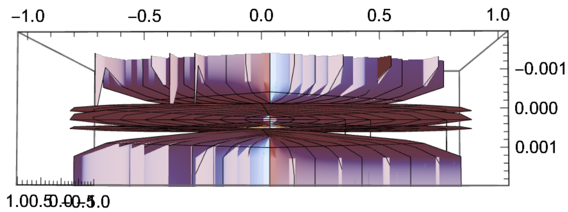
{θ, -4 π, 4 π}, {r, -1, 1}]



$$D\left[\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\ r,\ \theta\right]$$

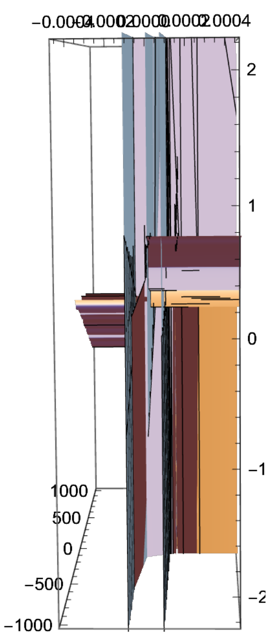
$$\frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)^2\left(8\,\pi\,r\,\theta - 2\,r\,\theta^2\right)}{5760\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)^{5/2}} - \frac{\left(8\,\pi\,r - 4\,r\,\theta\right)\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4320\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)^{3/2}} + \frac{r^2\left(8\,\pi\,r\,\theta - 2\,r\,\theta^2\right)}{4320\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)^{3/2}} - \frac{r}{1080\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$\text{RevolutionPlot3D}\Big[-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8640\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\Big]$$



$$\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{5760\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{\left(8\,\pi\,r-4\,r\,\theta\right)\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r}{1080\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

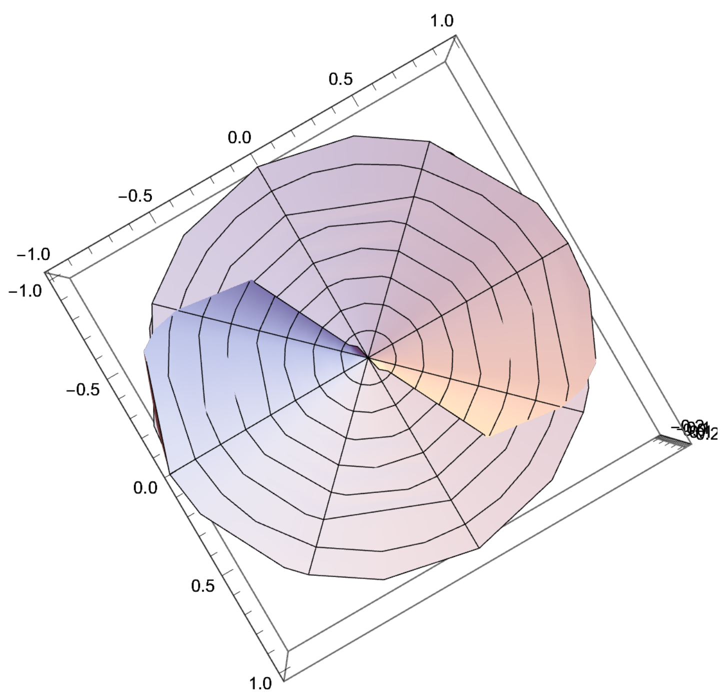
$$\text{RevolutionPlot3D}\Big[\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{5760\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{\left(8\,\pi\,r-4\,r\,\theta\right)\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r}{1080\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{r,-1000,1000\},\ \{\theta,-14\,\pi,14\,\pi\}\Big]$$



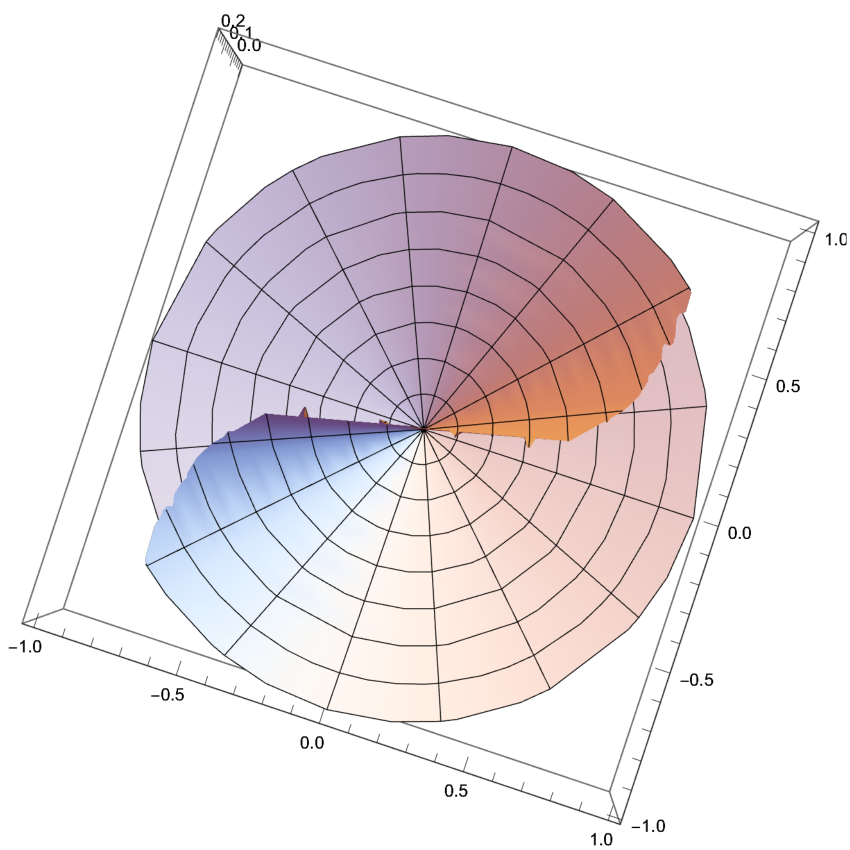
$$\mathrm{D}\left[\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)\left(\sqrt{1 - \left(\left(\left(\left(\frac{2\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)}{\sqrt{4\,\pi\,\theta - \theta^2}}\right)\Big/\ ((1080/\pi)\ \theta)\right)\hat{}\,2\right)\Big/\ (c\hat{}\,2)\right)}\right),\ \theta\right]$$

$$\left(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\ \left(-\frac{9.41479\times10^{-23}\ \left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{\theta^2\ \left(4\,\pi\,\theta - \theta^2\right)} + \frac{9.41479\times10^{-23}\ (4\,\pi - 2\,\theta)\ \left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\ \left(4\,\pi\,\theta - \theta^2\right)^2} + \frac{1.88296\times10^{-22}\ \left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^3\ \left(4\,\pi\,\theta - \theta^2\right)}\right)\right)\Big/\left(4\,\pi\ \sqrt{1 - \frac{9.41479\times10^{-23}\ \left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\ \left(4\,\pi\,\theta - \theta^2\right)}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\ \sqrt{1 - \frac{9.41479\times10^{-23}\ \left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\ \left(4\,\pi\,\theta - \theta^2\right)}}}{4\,\pi\ \sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$\text{RevolutionPlot3D}\Big[-\Bigg(\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\,\Bigg(-\frac{9.414794144460832\grave{}*\hat{}{-23}\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}+\frac{9.414794144460832\grave{}*\hat{}{-23}\,(4\,\pi-2\,\theta)\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.8829588288921663\grave{}*\hat{}{-22}\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^3\,\left(4\,\pi\,\theta-\theta^2\right)}\Bigg)\Bigg)\Big/\left(4\,\pi\left(1-\frac{9.414794144460832\grave{}*\hat{}{-23}\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}\right)^{3/2}\right)+\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\,\sqrt{1-\frac{9.414794144460832\grave{}*\hat{}{-23}\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}}},\;\{r,-1,1\},\{\theta,-4\,\pi,4\,\pi\}\Big]$$



```
RevolutionPlot3D[(Sqrt[4 π r^2 θ - r^2 θ^2] (-(9.414794144460832`*^-23 (4 π r^2 - 2 r^2 θ))/(θ^2 (4 π θ - θ^2)) +
      (9.414794144460832`*^-23 (4 π - 2 θ) (4 π r^2 θ - r^2 θ^2))/(θ^2 (4 π θ - θ^2)^2) +
      (1.8829588288921663`*^-22 (4 π r^2 θ - r^2 θ^2))/(θ^3 (4 π θ - θ^2))))/
   (4 π Sqrt[1 - (9.414794144460832`*^-23 (4 π r^2 θ - r^2 θ^2))/(θ^2 (4 π θ - θ^2))] +
    ((4 π r^2 - 2 r^2 θ) Sqrt[1 - (9.414794144460832`*^-23 (4 π r^2 θ-r^2 θ^2))/(θ^2 (4 π θ-θ^2))])/
     (4 π Sqrt[4 π r^2 θ - r^2 θ^2])),
 {r, -1, 1}, {θ, -2 π, 2 π}]
```



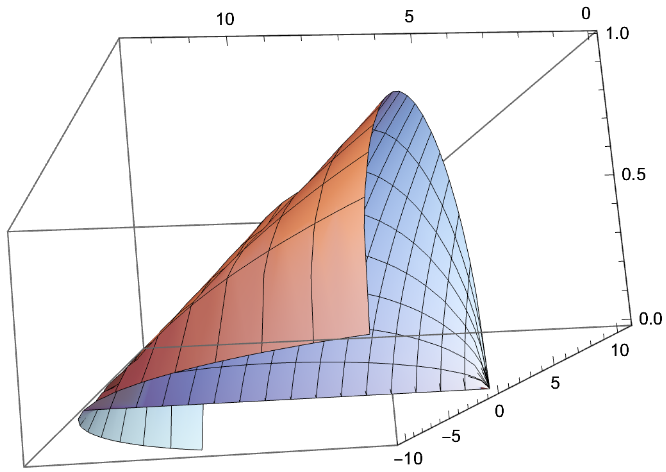

```
Relatisticη :=
 (Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π)) / (Sqrt[1 - ((((2 π η)/Sqrt[4 π θ - θ^2]) / ((1080 / π) θ))^2) / (c^2)])
```

$$\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right) \Big/ \left(\sqrt{1 - \left(\left(\left(\left(\frac{2\pi\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right)}{\sqrt{4\pi\theta - \theta^2}}\right) \Big/ ((1080/\pi)\ \theta)\right)\text{^}2\right) \Big/ (c\text{^}2)\right)}\right)$$

RevolutionPlot3D[

$$\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right) \Big/ \left(\sqrt{1 - \left(\left(\left(\left(\frac{2\pi\left(\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right)}{\sqrt{4\pi\theta - \theta^2}}\right) \Big/ ((1080/\pi)\ \theta)\right)\text{^}2\right) \Big/ (c\text{^}2)\right)}\right),$$

{θ, -4 π, 4 π}, {r, -1, 1}]

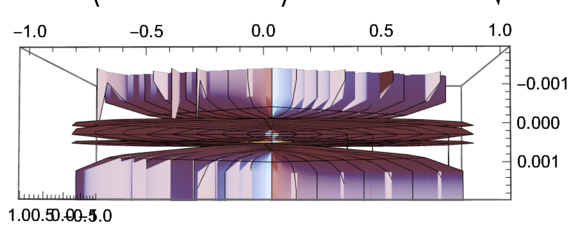


$$D\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}}, r, \theta\right]$$

$$\frac{(4\pi r^2 - 2 r^2 \theta)^2 (8\pi r\theta - 2 r\theta^2)}{5760 (4\pi r^2 \theta - r^2 \theta^2)^{5/2}} - \frac{(8\pi r - 4 r\theta)(4\pi r^2 - 2 r^2 \theta)}{4320 (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{r^2 (8\pi r\theta - 2 r\theta^2)}{4320 (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} - \frac{r}{1080\sqrt{4\pi r^2 \theta - r^2 \theta^2}}$$

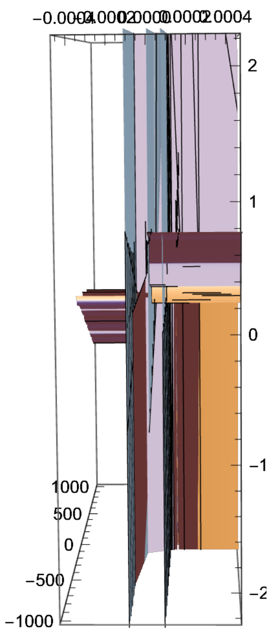
RevolutionPlot3D[

$$-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r\theta - 2 r\theta^2)}{8640 (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r\theta}{4320\sqrt{4\pi r^2 \theta - r^2 \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}]$$



$$\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{5760\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{\left(8\,\pi\,r-4\,r\,\theta\right)\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r}{1080\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

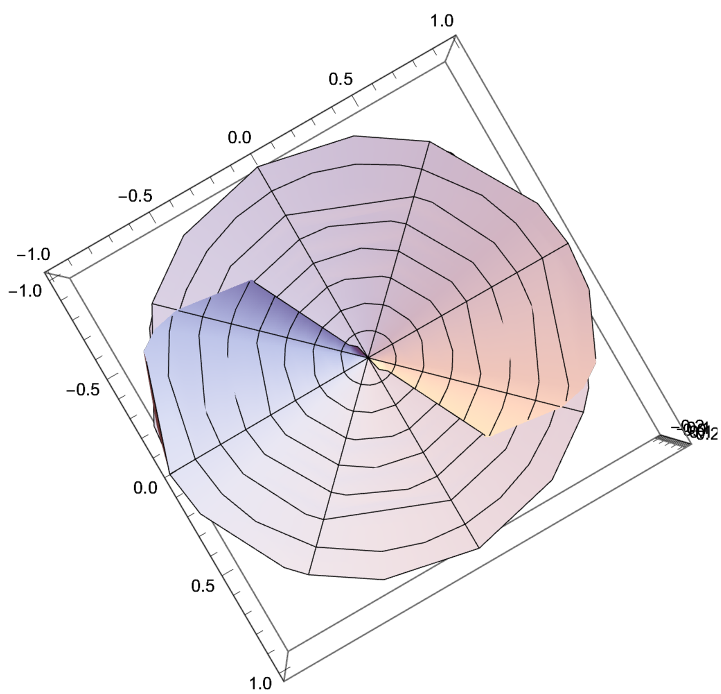
$$\text{RevolutionPlot3D}\Big[\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{5760\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{\left(8\,\pi\,r-4\,r\,\theta\right)\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{4320\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r}{1080\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{r,\ -1000,\ 1000\},\ \{\theta,\ -14\,\pi,\ 14\,\pi\}\Big]$$



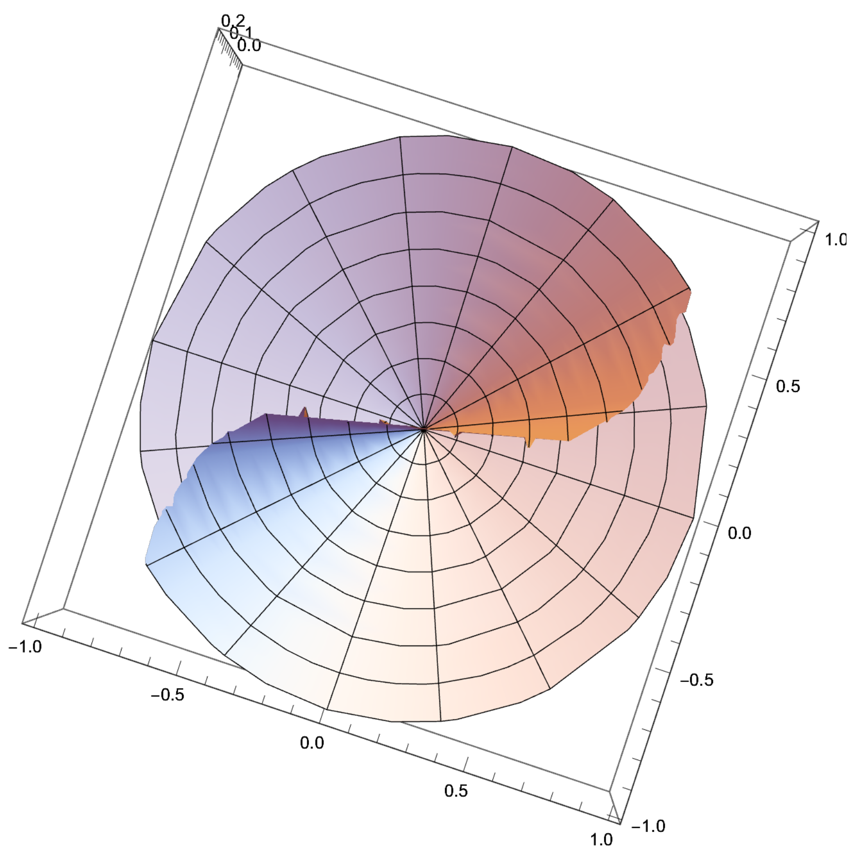
$$\mathrm{D}\left[\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)\left(\sqrt{1 - \left(\left(\left(\left(\frac{2\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)}{\sqrt{4\,\pi\,\theta - \theta^2}}\right) \Big/ \left((1080/\pi)\,\theta\right)\right)\text{^}2\right)\Big/ \left(c\text{^}2\right)\right)}\right), \theta\right]$$

$$\left(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\,\left(-\frac{9.41479\times10^{-23}\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{\theta^2\,\left(4\,\pi\,\theta - \theta^2\right)} + \frac{9.41479\times10^{-23}\,(4\,\pi - 2\,\theta)\,\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta - \theta^2\right)^2} + \frac{1.88296\times10^{-22}\,\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^3\,\left(4\,\pi\,\theta - \theta^2\right)}\right)\right)\Big/ \left(4\,\pi\,\sqrt{1 - \frac{9.41479\times10^{-23}\,\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta - \theta^2\right)}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\,\sqrt{1 - \frac{9.41479\times10^{-23}\,\left(4\,\pi\,r^2\,\theta - r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta - \theta^2\right)}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$\text{RevolutionPlot3D}\Bigg[-\left(\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\,\left(-\frac{9.414794144460832\grave{}*\wedge\text{-}23\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}+\frac{9.414794144460832\grave{}*\wedge\text{-}23\,(4\,\pi-2\,\theta)\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.8829588288921663\grave{}*\wedge\text{-}22\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^3\,\left(4\,\pi\,\theta-\theta^2\right)}\right)\right)\Bigg/\left(4\,\pi\,\left(1-\frac{9.414794144460832\grave{}*\wedge\text{-}23\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}\right)^{3/2}\right)+\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\,\sqrt{1-\frac{9.414794144460832\grave{}*\wedge\text{-}23\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)}{\theta^2\,\left(4\,\pi\,\theta-\theta^2\right)}}},\ \{r,-1,1\},\{\theta,-4\,\pi,4\,\pi\}\Bigg]$$



$$\text{RevolutionPlot3D}\left[\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{9.414794144460832`*^{\wedge}-23\left(4\pi r^2 - 2r^2\theta\right)}{\theta^2\left(4\pi\theta-\theta^2\right)} + \frac{9.414794144460832`*^{\wedge}-23\,(4\pi-2\theta)\left(4\pi r^2\theta - r^2\theta^2\right)}{\theta^2\left(4\pi\theta-\theta^2\right)^2} + \frac{1.8829588288921663`*^{\wedge}-22\left(4\pi r^2\theta - r^2\theta^2\right)}{\theta^3\left(4\pi\theta-\theta^2\right)}\right)\right)\Big/\left(4\pi\sqrt{1-\frac{9.414794144460832`*^{\wedge}-23\left(4\pi r^2\theta - r^2\theta^2\right)}{\theta^2\left(4\pi\theta-\theta^2\right)}}\right) + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1-\frac{9.414794144460832`*^{\wedge}-23\left(4\pi r^2\theta-r^2\theta^2\right)}{\theta^2\left(4\pi\theta-\theta^2\right)}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}},\ \{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$



Information and Layout

A Series of Useful Functions for the Student of Perception

by Parker Emmerson including influence from conversations with Tom Toleno, Andrew Berisha, and Alsten Daniels

© Parker Emmerson October 25, 2009

This paper will refer to the book, *The Blackwell Reading in Philosophy Publication Entitled Perception* edited by Robert Schwartz. It is referred to throughout the paper as (BRP, Page Number). The book is an anthology of multiple thinkers in the field of perceptual philosophy.

This paper will refer to the book, *Phenomenology of Perception* by Merleau-Ponty. It is referred to throughout the paper as (PoP, Page Number)

I. Intro

In this series of chapters, we will discuss how the visual system perceives the world through samples of the ambient optic array. On some levels, we can say that arithmetic and the body of science called mathematics does not depend at all on any psychological process. Husserl was the first to specifically begin exploring the framework for transcendental phenomenology by discussing this truth. However, on a more in depth level, applied mathematics depends greatly on the observer. How is anyone to come to any meaningful series of relations without using some cognitive process of observation or at least realizing that their expression of truth depends on observation? When we say 1+1=2, this is not a truth that depends on cognition. It has meaning that already exists in the world. However, when we observe a truth about the universe that is slightly more complex and depends on the phenomenon of validity of our perceptions in space, we observe how different elements of a system fit together by necessity. There is no longer one direct path to showing meaning already exists in the world, but a series of valid expressions that we can relate to one another in order to visualize the meaning of the structuring of light, substance, time or space and gain knowledge about expressions, which are useful tools for the computational approach to visual perception.

Gibson said in Perception of the Visual World, that "Space perception (from which time is inseparable) is not, therefore, a division of the subject matter of perception but the first problem to consider, without a solution for which other problems remain unclear" (vii). He goes on to say that "What we lack, however, is an application of the psychophysical methods to perception" (viii). Psychophysical methods of perception are related to the environment in which perception evolved to its current level of accuracy, quarkiness, and illusionary aspects. Our perception of time is related to the environmental description of time, which is cyclic and continues out in every direction. We have evolved with a cyclic

percepiton of time through the seasons, day, night, and cycles of the moon. Light effects the seasons, because it allows plants to grow, it gives warmth to the air, and it influences our sleep schedules.

It is a purely theoretical notion that the eye is ever in a fixed position. Eye movements are involuntary, but can be controlled. However, making one' s eye very still is difficult. We still see depth with one eye, and this is because the eye makes motions to receive the impression of depth to perception from the environment, because it associates spatiotemporal continuity to observations of the mind in addition to detecting the gradient of light and the shading involved relating to the hue of objects (the array of color). The stimulus of light is an external stimulus. It is one whose nature is not yet known. The physicist may think of it in terms of wave-particle duality. Yet, with the following mathematical account, I would like to strongly encourage thinkers in the field of theoretical physics to consider other interpretations of light. Interpretations that do not pin it down to saying, "it is a wave, it is a particle, it is both of these, and at the same time a duality," are important for developing progressive scientific theories. We may not know exactly why light is what it is, but we can know how it travels in form and visualization of the shape of its pattern.

II. Postulates and Strucuture for Notating a Sample of the Ambient Optic Array

$C = 2\pi r$
This is the circumference of our initial circle with radius r. (133)

$C_2 = 2\pi r_1$
This is the circumference of our second circle,
the base of the cone with radius r_1. (134)

$r^2 = r_1^2 + \eta^2$
This is the initial radius squared expressed during transition to be the slant of the cone in terms of the height of the cone, η, and the radius of the base of the cone, r_1. (135)

$r = \pm\sqrt{(r_1^2 + \eta^2)}$
The initial radius can be calculated through the Pythagorean Theorem. The initial radius is always the slant of the cone when there is a cone. (136)

$s = \theta r$
In this expression,
we define an arc length to be equal to a radius of an angle measure,
θ, and that thus,
$s / \theta = r$ (137)

The arc length is expressed to be the difference of circumferences =
Initial Circumference − Circumference of the base of the cone =
$C - C_2 = 2\pi r - 2\pi r_1 = \theta r$ (138)

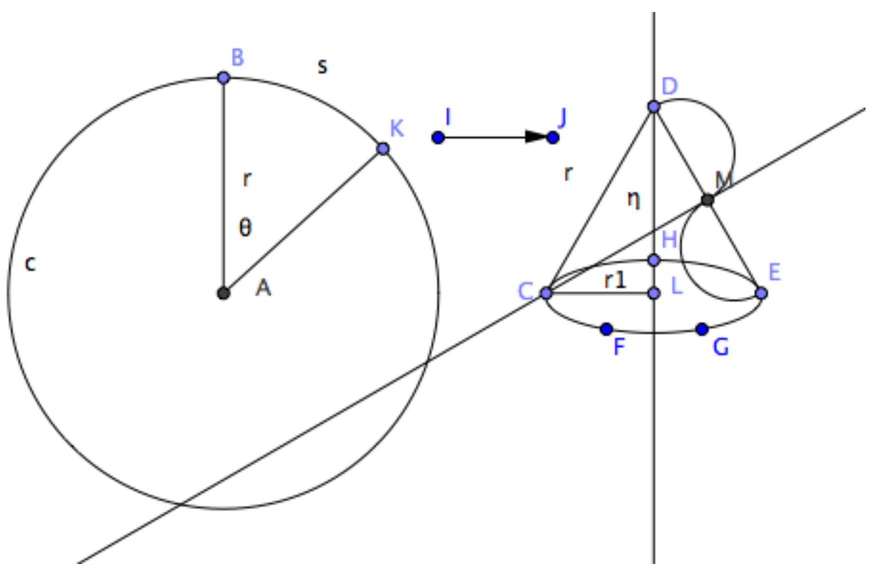
The radius of the base of a cone is equal to r_1,
and we can similarly solve for it.
r_1^2 == r^2 - η^2
$r_1 = \pm\sqrt{(r^2 - \eta^2)}$ (139)

In general, we say that $\eta \leq r$. More specifically,
when there is a cone, $\eta \leq r$, and when there is an initial circle, $\eta = r$. (140)

τ = time = τ (seconds) = $\theta / 2\pi$, because this ensures that
there is a maximum height of the cone equal to the initial radius. (141)

The elapse of 1 second = 1 revolution of the system
τ (seconds) = $\theta / 2\pi$
This equation ensures that when we put a revolution equal to 2π radians
into the equation for the angle theta, we will get one second.
We also note that any arc length can be
described by an angle of distance, θr. (142)

The model of space - time proposed only requires the acceptance of three fundamental truths. Firstly, that the length that comes from a change in circumferences can be equal to an arc length, secondly, that the Pythagorean theorem will hold up for making calculations within the modular, and thirdly, that ellapsed time is in terms of a cyclic continuum in the sense that we can measure it in terms of degrees of a circle.



The model describes the dynamic between subjective and objective reality in a simple and useful manner of perception (observation). The light is always considered to be directed toward the perceiver, whose locus of perception is either the point of the cone of the field of vision, or the reception of a combined wavelength of light when the height is equal to the initial radius. This provides a framework for notating how light travels, carrying information of the energy and velocity of light, which in turn provides the, "immediate basis for visual perception" (The Visual World, 55) when there is an

exposed receptor cell to the light. On receptors chemical compounds of receptors, Gibson has said that, "Like the substances used in photographic emulshions, these are capable of reacting differentially to the energy and wavelength of light" (The Visual World, 48), and that "nothing gets into the eye except radiant energy" (The Visual World, 54). He has also revealed that

The distance away from the area of the array that the perceiver samples during action of the visual system is equal to the height of the cone. Within the area of the sample, there is a contained amount of information about layout. The problem of including both the wave-length interpretation and the sampling interpretation within the structuring of the ambient array arises when we consider that the wavelength has not gone through the entire transition with respect to the ecological structure of the area when there is a sampling, but is realistically compiled by the visual system into an image. The problem can be partially resolved by considering that the visual system samples very many specific receptions of light or regions of layout from the sampled area within a general sample. These wave-lengths give information to the perceiver in terms of saturation, hue, brightness and thus, contour.

I will now do some algebra to conclude what the height of the cone is in terms of the initial parameters. It can eventually be reduced to a single variable when ideas like differentials of distance and frequency are included in the setting up of the equalities. This will lead to numerous *nested equations* that describe different parameters of the information being delivered within a visual system. We consider that the radius is equal to a single wavelength, not half a wavelength, because we are discussing the time it takes to travel a distance of one wavelength of light, and that wavelength travels through the height of the cone. Although, the shape of the diameter can later be shown through three-dimensional graphs to have the shape of a sine wave.

Solve[r_1^2 + η^2 == r^2, η]

$$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\} \tag{143}$$

We say that the amount of θr = s, taken out of the circle is the change in the circle's circumference that is the base of the cone. The change is equal to s = 2πr-2πr $_1$.

Notice that θ = ((2 π r) / r) - ((2 π r $_1$) / r), because we divide by r on both sides.

We will focus on the positive solutions for the height of the cone.

Solve$\left[\eta == \sqrt{r^2 - r_1^2}, r_1\right]$

$$\left\{\left\{r_1 \to -\sqrt{r^2 - \eta^2}\right\}, \left\{r_1 \to \sqrt{r^2 - \eta^2}\right\}\right\} \tag{144}$$

This is the change in circumference with the substituted expression for r_1 in terms of h and r.

$$r\,\theta == s == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)\text{^}2 - \eta\text{^}2)} = 2\,\pi\,(r) - 2\,\pi\,r_1 \tag{145}$$

θ == (2 π r) / r - (2 π r $_1$) / r) = ((2 π r) / r) - $\left(\left(2\,\pi\,\sqrt{-\eta^2 + r^2}\right) \big/ \, r\right)\Big)$

Solve$\left[\theta * r == 2\,\pi\,(r) - 2\,\pi\,\sqrt{((r)\text{^}2 - \eta\text{^}2)}, \eta\right]$

$$\left\{\left\{\eta \to -\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}\right\} \quad (146)$$

$$\text{Solve}\left[\eta == \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, r\right]$$

$$\left\{\left\{r \to -\frac{2 \pi \eta}{\sqrt{4 \pi \theta - \theta^2}}\right\}, \left\{r \to \frac{2 \pi \eta}{\sqrt{4 \pi \theta - \theta^2}}\right\}\right\} \quad (147)$$

```
Solve[θ * r == 2 π (r) - 2 π r1, r1]
```

$$\left\{\left\{r_1 \to \frac{2 \pi r - r \theta}{2 \pi}\right\}\right\}$$

III. Light through the Arc and Height

There is information available in the stimulation, so there is also information communicated to the perceiver. A change in the environment, when measuring size, is the revolution of the system in time through the distance of the combined, effective wavelength of light (a revolving of the system in time). The change of layout is ongoing, and a parameter of that structure is invariant, so the disruption in the array by contour, edge, etc. specifies the event. That event transitions and transforms through its path to the perceiver. Gibson said about the ambient array that, "The theory of direct perception presupposes the sampling of the ambient array by the ocular system. What is this sampling process?" (BRP 165).

$\left\{\left\{\eta \to -\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}\right\}$ is the height of a cone in terms of a difference of circumferences, invariant through r, because it is always the slant of the cone and also the value that the base of the cone cannot reach, because once it reaches that value, it is no longer a cone, but collapses to a circle. (148)

Looking at solutions for θ from both the positive and negative solutions for reflective η.

By knowledge of total time through perception, we say that the absolute value of the negative solutions for angular transformation plus the absolute value of the positive solutions for theta are related to total time of perception in both a stationary and relative system. This is shown much later, but it is useful to note about the reflection of time for such purposes later in the paper.

$$\left\{\left\{\eta \to -\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}, \left\{\eta \to \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right\}\right\}$$

$$\text{Solve}\left[\eta == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,\pi\left(r^2 - \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}, \left\{\theta \to \frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}\right\} \tag{149}$$

$$\text{Solve}\left[\eta == -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta\right]$$

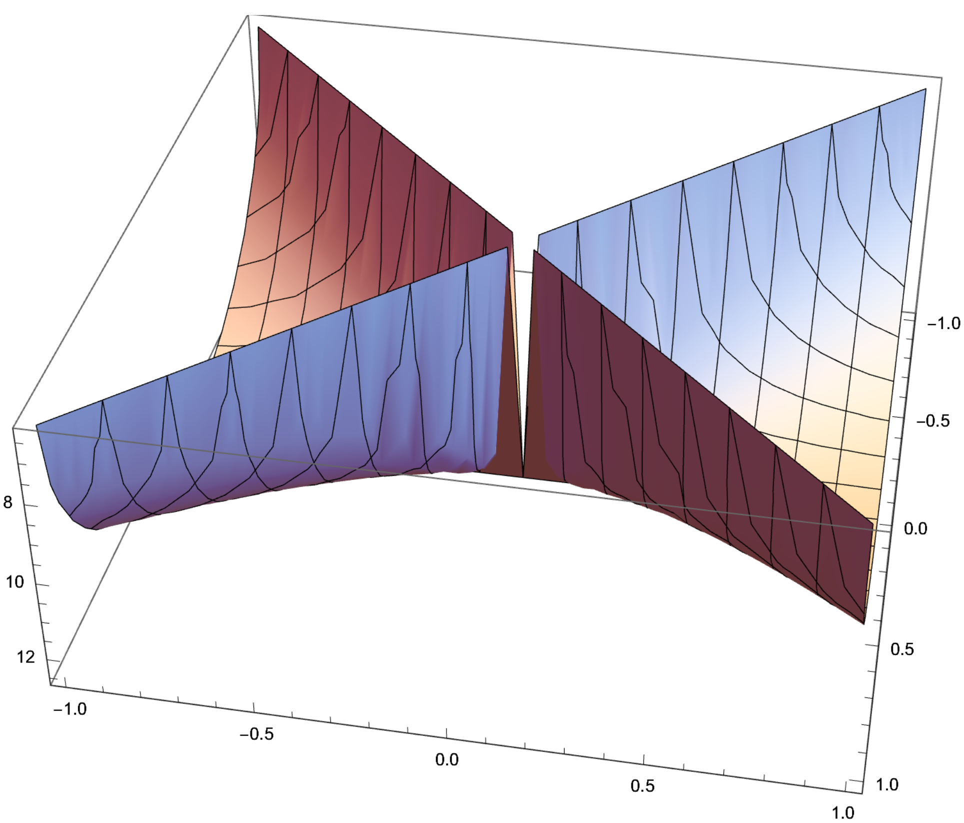
$$\left\{\left\{\theta \to \frac{2\,\pi\left(r^2 - \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}, \left\{\theta \to \frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right\}\right\}$$

When the height of the cone reaches the locus of perception, the height has fulfilled its initial condition of the initial radius.

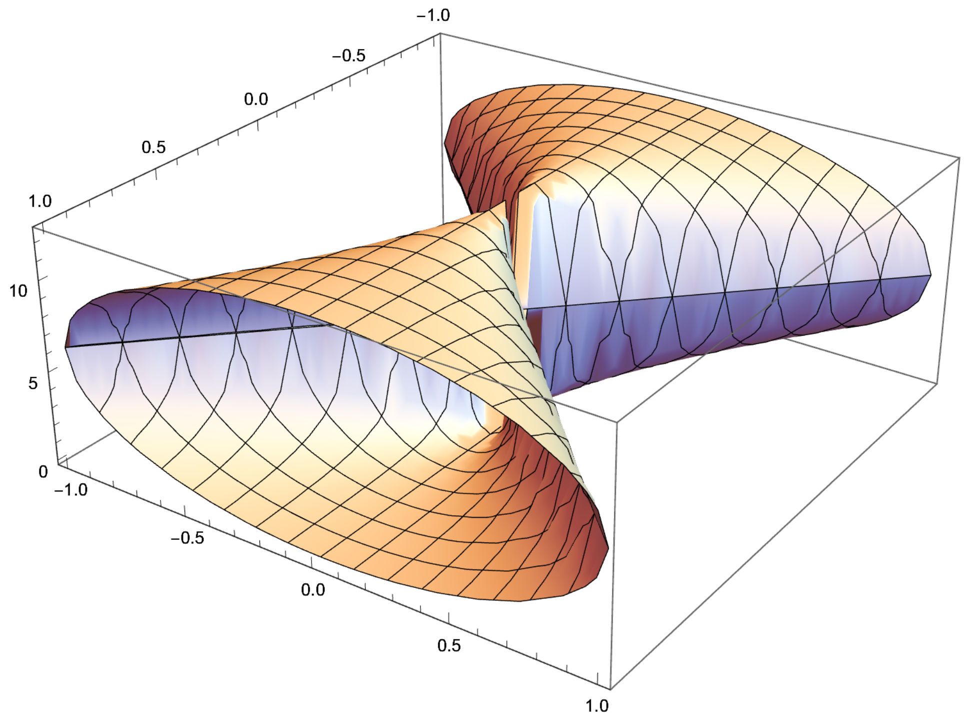
$$\text{Solve}\left[\text{Abs}\left[\frac{2\,\pi\left(r^2 - \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right] == \text{Abs}\left[\frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}\right], \eta\right]$$

$$\{\{\eta \to -r\}, \{\eta \to r\}\}$$

$$\text{Plot3D}\left[\frac{2\,\pi\left(r^2 + \sqrt{r^4 - r^2\,\eta^2}\right)}{r^2}, \{r, -1, 1\}, \{\eta, -1, 1\}\right]$$



$$\text{Plot3D}\left[\left\{\frac{2\,\pi\left(r^2-\sqrt{r^4-r^2\,\eta^2}\right)}{r^2},\ \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}\right\},\ \{r,-1,1\},\ \{\eta,-1,1\}\right]$$



Looking at solutions for r from positive solution for η

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}==\eta,\ r\right]$$

$$\left\{\left\{r\to-\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right\},\ \left\{r\to\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}\right\}\right\} \tag{150}$$

The radius in terms of the height of a cone is designated by the variable r.

$$\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\Theta-\Theta^2}}=r=\frac{2\,\pi*r*\text{Sin}[\beta]}{\sqrt{4\,\pi\,\Theta-\Theta^2}} \tag{151}$$

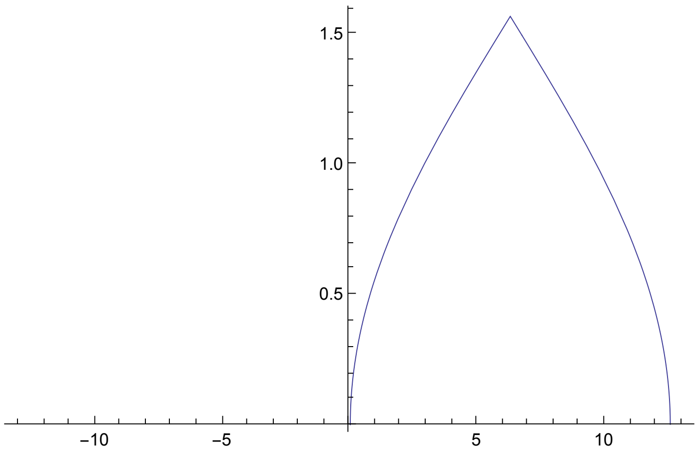
Note that whatever r is equal to, the equation simplifies to $1=\frac{2\,\pi\ \text{Sin}[\beta]}{\sqrt{4\,\pi\,\Theta-\Theta^2}}$ (152)

We can solve this equation for β, the angle made by the slant of the cone and the base of the cone, in terms of theta (the amount of angle involved in folding the circle up into the third dimension when the slant is always equal to the radius.

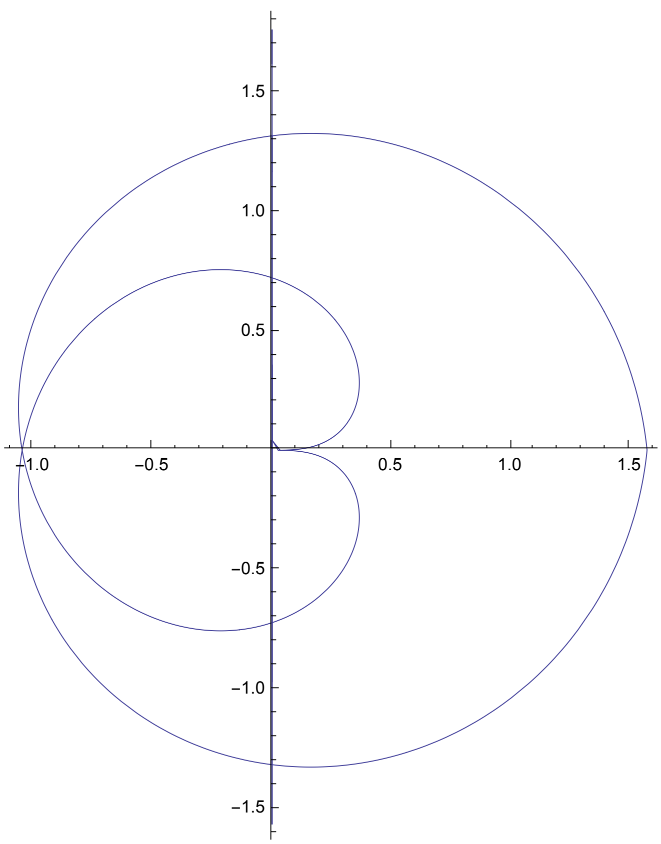
$$\text{Solve}\left[1==\frac{2\,\pi\ \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \beta\right]$$

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right\}\right\} \tag{153}$$

```
Plot[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)], {θ, -13, 13}]
```

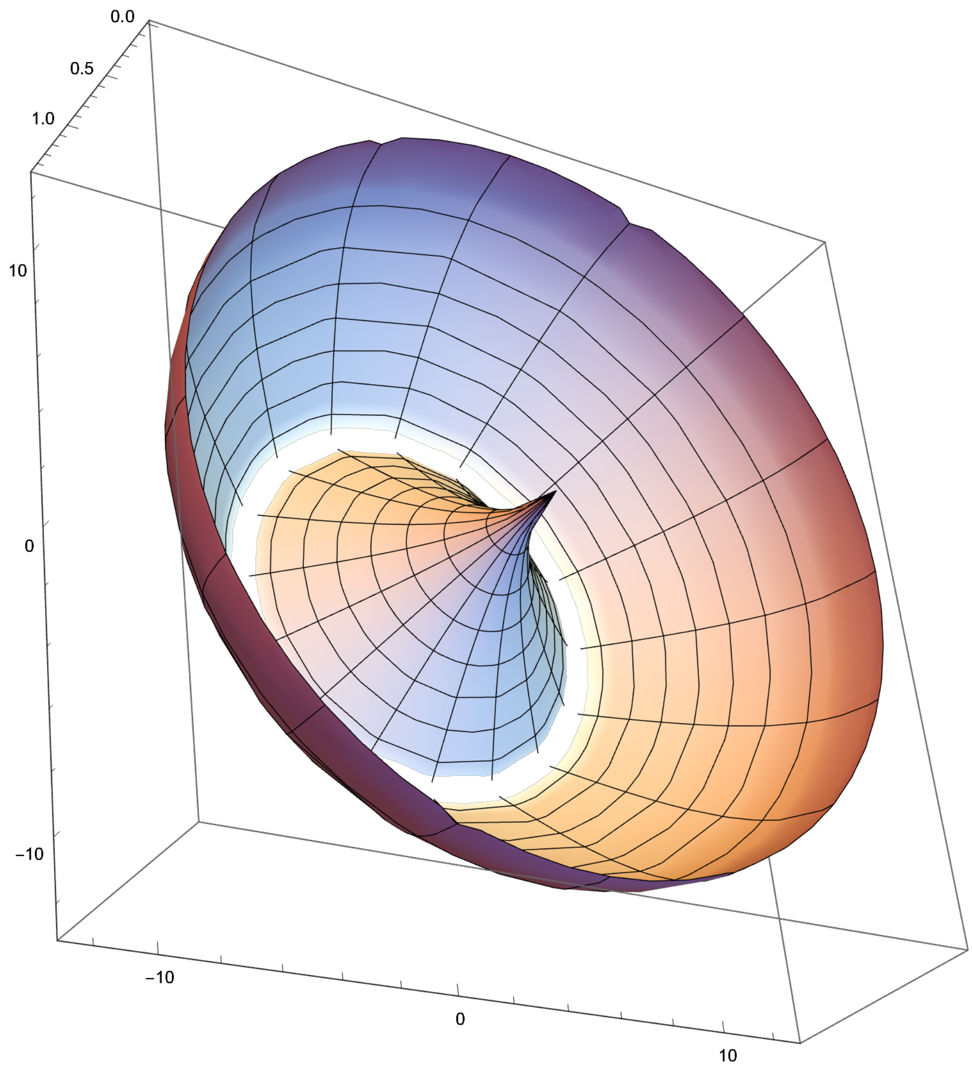



```
PolarPlot[{ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]}, {θ, -13, 13}]
```



```
RevolutionPlot3D[ArcSin[Sqrt[(4 π - θ) θ] / (2 π)], {θ, -13, 13}]
```

$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\,\{\theta,\,-13,\,13\}\right]$$



The single point in the field of optical flow, light traveling through the ambient array, I propose, is represented by the three dimensional revolution graph of a change in radius over time through transformation to being the height of the cone from the two angular variants of the system. A revolution delivers information to the perceiver given the intensity, hue, etc. of light. A single revolution of the system is equivalent to the flow of combined light in the ambient array at location of the station point of perception in the ambient optic array.

There are ways of solving for the radius in terms of purely the angle, *θ*. We will examine these nested sets of ways of understanding the point of view. By nested, we mean that depending on how in

depth one goes into observing the world or extrapolating a function of light in the array, one will see different visual representations of the structuring of that information that are more or less informationally dense. This will lead to a series of functions that give us introspection into the structuring of light in terms of a cyclic perspective on time. For the system, it is important to realize that in the normal course of parameterizing the motion in the case at hand, θ does not go beyond 4π (i.e. that it sends the height of the cone up to its maximum value and back down over the course of two revolutions of a circle), and that β would not be able to be easily thought of beyond π or 2π (it has a value of π at the maximum height of the transition, and a value of 2π once the cone comes back down from the height).

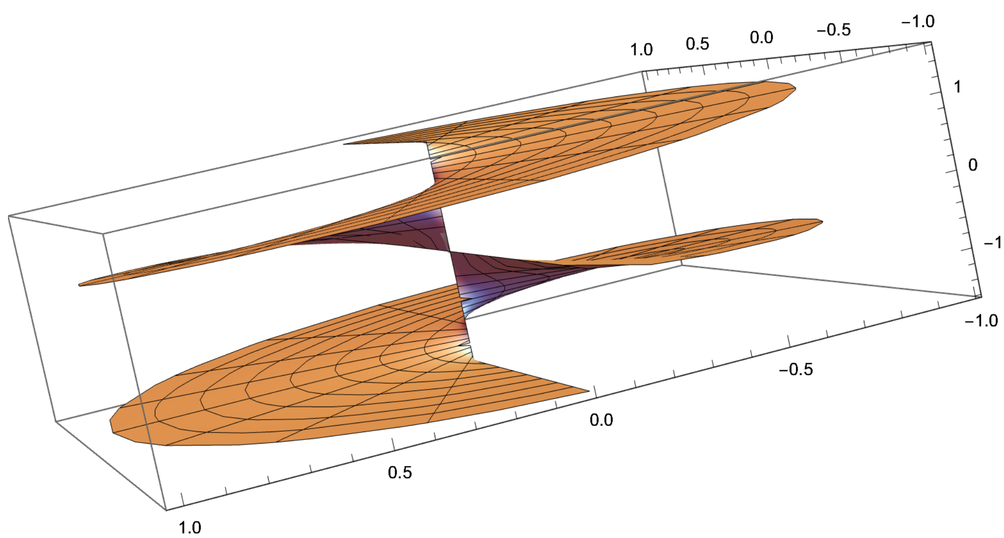
To understand more how these equations are related, we can make substitutions in various ways, all of which are not arbitrary. For instance, we know that the height of the cone is equal to two different functions. We can set these functions equal to each other and extrapolate different visions of the function.

$$\eta = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} = r\,\mathrm{Sin}[\beta]$$

$$\mathrm{Solve}\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} == r\,\mathrm{Sin}[\beta],\ \beta\right]$$

$$\left\{\left\{\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{r^2 (4\pi - \theta)\,\theta}}{2\pi r}\right]\right\}\right\}$$

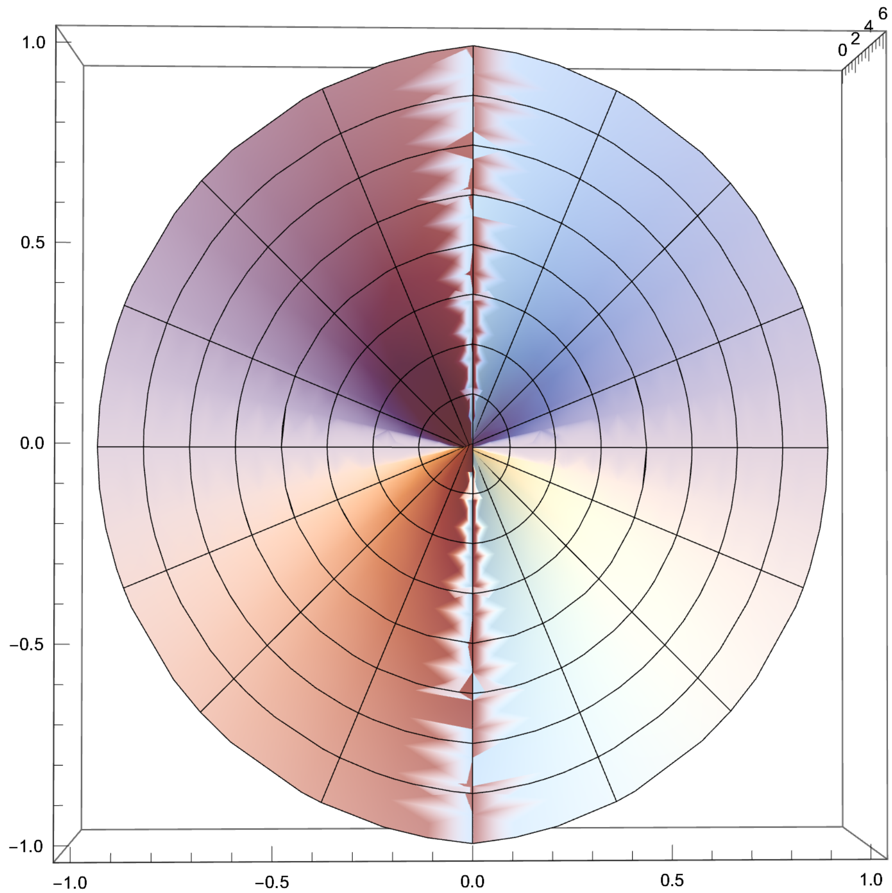
$$\mathrm{RevolutionPlot3D}\left[\mathrm{ArcSin}\left[\frac{\sqrt{r^2 (4\pi - \theta)\,\theta}}{2\pi r}\right], \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



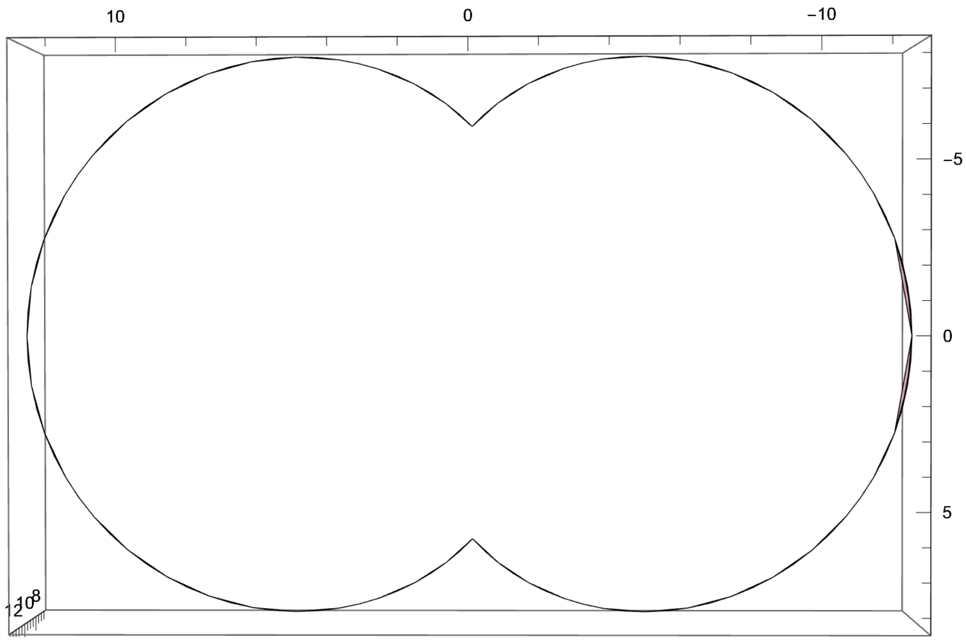
$$\mathbf{Solve}\left[1 == \frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \theta\right]$$

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\ \mathrm{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\ \mathrm{Sin}[\beta]^2}\right)\right\}\right\} \tag{154}$$

$$\mathbf{RevolutionPlot3D}\left[2\left(\pi - \sqrt{\pi^2 - \pi^2\ \mathrm{Sin}[\beta]^2}\right),\ \{r, -1, 1\},\ \{\beta, -\pi, \pi\}\right]$$



```
RevolutionPlot3D[
 {2 (π + √(π² - π² Sin[β]²)), 2 (π + √(π² - π² Sin[β]²))}, {r, -1, 1}, {β, -π, π}]
```



Gibson has said that, "The experience of the visual world is not compounded of a series of visual fields; no one is aware of the *sequence* but only of the total *scene*. Presumably this is because the ocular system detects the invariants over time that specify the scene" (BRP 166). Θ is the variable that is akin to the accumulated time of our system. It is an angle, and if we relate it to measurements made of time cyclically, like those of a clock, we can find how the invariant, which is the initial radius of the system, will guide the information communicated during the pickup of invariants. The time variable contains a contour based on the parameters of the system.

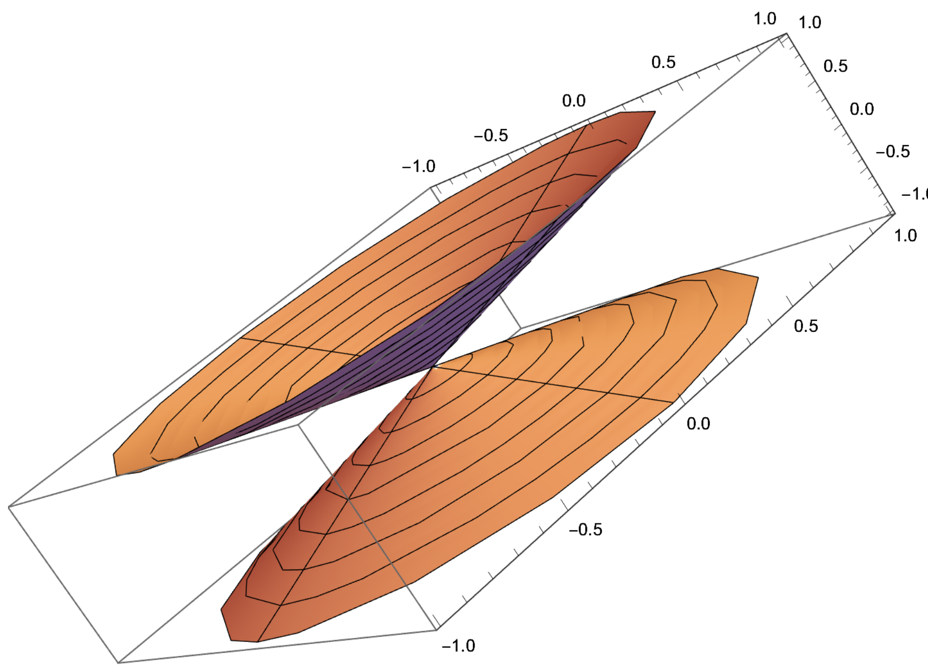
$$r = \frac{2\,\pi * r * \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

The invariant is r, because it is always the slant of the cone during transition of a total combined effective wavelength that immediately effects the receptor. This means that if a wavelength were to change during travel through the modular of space-time due to being part of an ambient array, where light waves effect each other during their paths, the initial wavelength of light is the slant of the cone, even though the resulting height may be longer or shorter than the initial wavelength. What does this tell us about light and how it travels through space or effects a receiving perceiver? Knowledge of the initial condition of the system depends on the recognition of the receptor. To be the combination of constructive and interfering frequencies of light in the array, invariance of r contextually assures that the cummulative effect of the wavelength of light can only be discerened by the subective perceiver, whose perceptual locus is at the maximum height of the cone.

$$\beta = \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right]$$

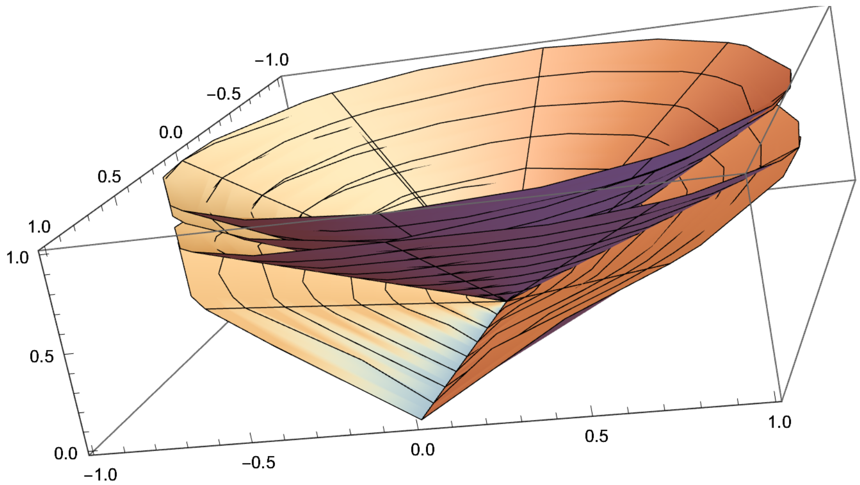
$$\frac{2\pi * r * \text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} = \frac{2\pi * r * \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]\right]}{\sqrt{4\pi\theta - \theta^2}}$$

$$\text{RevolutionPlot3D}\left[\frac{2\pi * r * \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\ \theta}}{2\pi}\right]\right]}{\sqrt{4\pi\theta - \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



$$\eta \to \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$

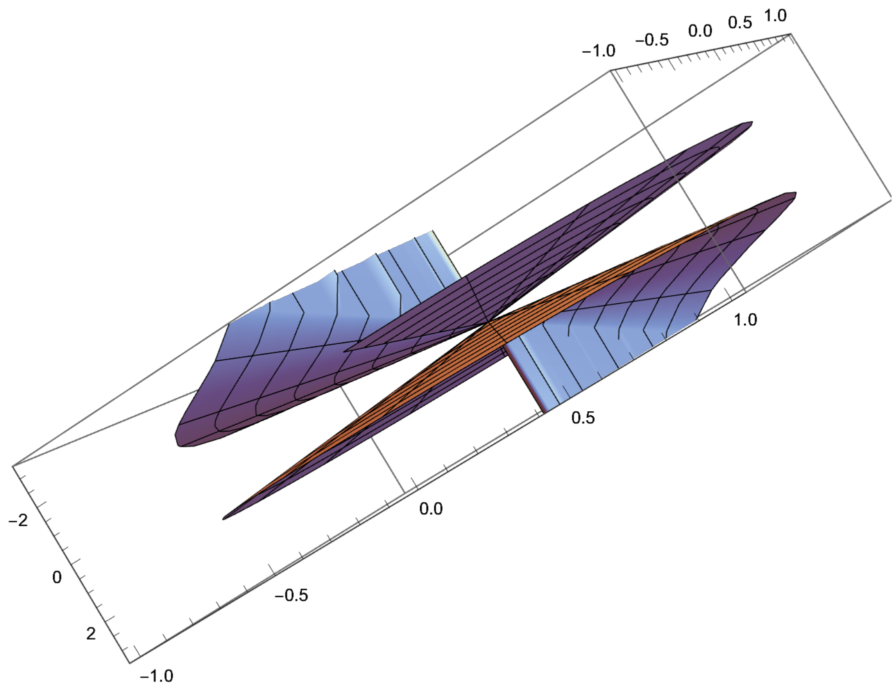


This is how the graph of the height of the cone in non - relativistic terms would look. It can be noted from the following graphs that within the parameters of the system, there is a similar graph to the relativistic length contraction transformation, but beyond the parameters of the system, the graphs begin to look slightly different.

This equation graphs the height of the cone by revolving r through theta. The structure of the array includes the distance, η. H can be equal to the new wavelength of light during a transition with changing wavelength of the structured substance, but it can also be a definitive distance of an object away from the perceiver.

$$r = \frac{2\,\pi * r * \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^{2}}},\ \{\eta,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



When we try to see what the structure of a single point of ambient light is, we acknowledge that this point is potentially infinitely far away at the horizon curve, and potentially infinitely divisible if the wavelength of the light gets infinitesimally small. When we stand on an infinitely large sphere, there is no way to tell how long or far away the horizon is. In order to get interpretations of meaning of other parameters of the system, we say that wavelength can change during a transition (a transition here means traveling the distance of one wavelength).

What can we tell from these models? We can see that parameters of wavelengths of substance traveling through space and time, like light, contain within them information that is already contoured, or from point to point draws out contour through recognizing trends of invariance. When we take a

different angle on them, we see the contour differently. This effect will be even more noticable in later models when we see that there is very subtle contour and shimmering.

It is possible that direct perception does not contradict information processing, because the pickup of information directly acknowledges that there is information in the layout of the world, transferred directly by light stimulus during the perceiving instance. That instance receives the delivery of information based on invariance. That delivery comes from a reflection off the contour through a combination of relations in the guidance of the flux of ambient light. Computational approaches simply would have to change their Philosophy to an ecological context and simply stick to observing the phenomenon of perception (i.e. what I see changing in the environment that can be correlated to objects or people in the world).

IV. The Analogy of a Change in Position Relating to a Change in Contour during the Pickup of Invariants through Time

Gibson has said that, "The theory of information pickup requires perceptual systems, not senses" (BRP 77). Gibson also relates the subtlety of the perceptual system to learning and time. He thinks that we continue learning to perceive in more detail as time goes on. This will be an important idea when discussing the extrapolation of functions into images through an impression from an expression, which relates the information in the array over time to the perceiver.

The wavelength of the light we are discussing is the initial radius of the circle and the maximum height of the cone, whose direction is toward the subjective perceiver. The transition of that single wavelength into the height of a cone occurs over the course of a revolution of a single circle. The parameters of the velocity of its travel, or the travel of any substance, are frequency and wavelength.

$$\text{We state that : } v = \lambda f, \text{ where v is velocity, } \lambda = r \text{ is wavelength, and } 1/\text{time} = f = \text{frequency.} \tag{155}$$

$$\text{Time} = 360\left(\theta_{\text{degrees}}\right) = 2\pi\theta \tag{156}$$

The velocity being discussed is the first derivative of the distance, which is the height of the cone, *η*. A tiny piece of the ambient array would contain within it information regarding information of the surface off of which the light flowing through the array is reflecting. H contains information about the time and initial distance of a wavelength of light. Where *η* is a given height of a cone, and *θ* the amount of accumulated time of during a transition, r**θ*, which is the difference of the change in circumference between two circles that correlates to the height in the third dimension, the radius of the base of the cone changes in a pythagorean relationship to r and *η*.

In the model of perceptual space - time that I am proposing, the parameters involved can always be reduced to a single expression of a function of time, “it is not meaningful to ask merely how strongly a given unit responds to a given stimulus; the more relevant variable is the temporal pattern of the

response” (BRP 244). Is it possible that the firing of the neurons relates strongly to time, because the shape of the stimulus has an invariant correlate geometrically through time?

Merleau Ponty has said of time, "there is one single time which is self-confirmatory, which can bring nothing into existence unless it has already laid that thing's foundations as present and eventual past, and which establishes itself as a stroke" (PoP 421). The time that is self confirmatory is the time at which the height of the cone has gone up to 2 π and come back down over the course of 4 π radians. In time measured in seconds, this would be one minute in S.I. units, but .

Time is the passing of all real moments into each other and all imaginary moments into the real. This ensures the existence of geometry. In this way, we say that being is through embodiment, but meaning of being is through time, after the body decays. There is the present moment, and when we perceive the world, we are not interpreting our experience based on the passed time, but change of time equal to the total difference in past and present time.

However, by a moment, do we not mean a change in time? This is to say that time has positive and negative solutions within a system of geometric correlations. The experiential moment grows to include the past and present, because time has positive and negative solutions within a given sample of the ambient optic array. This is why going into the mind can extend the experience of time while at the same time experiencing vision. This is because time is based in the spatio-temporal continuity of objects, and mind is capable of the pure reception or inception of persona.

Information of variable contour is transferred to the perceiver by the flux of information in ambient light through each point in the optic array, represented by item number four. The rate of this variance is analogous to velocity in a rotational system, like the structuring of light through space - time. This is what is meant by information in the light. Objects can travel through space-time in a continuous way.

Helmholtz proposes that phenomena regarding the visual system can be described by the use of analogy when things begin to look paradoxical. He takes into consideration the psychic faculties and suggests that the processing of the environment and its perceptual phenomena may occur through an unconscious working of analogy in the mind. I find this to be interesting and agreeable. It provides a humanist account through the recognition of biological factors regarding perceptual systems.

Animals on Earth have evolved in a general perception of time in the environment to be cyclic. The day and night, the rhythm of sleep, the change of the seasons, and the cycles of heavenly bodies like the moon all play a role in the environment of evolving animals on Earth. Some more than others, but for humans, most certainly.

Gibson offers an interesting interpretation to the problem of depth perception. Depth perception is at the heart of what we are discussing. The height of the cone, in a more ecological context, is directed toward the perceiver and contains contoured information within it based on the wavelength of light and time ellapsed during transition. This contoured information exists in every point of the array, and ecological contour is based on the pickup of each wavelength in its relation to the others during a sampling of the array.

Gibson says that, "the problem of depth perception is insoluable, because the problem is false" (BRP 166). He also suggests that we are mistaken in thinking that the, "third dimension of the cartesian coordinate system is a phenomenal fact of perception" (BRP 166). Our coordinate system for describing a tiny piece of interactions going on in the ambient array is based, not on a third dimension of cartesian coordinates, but of a single transition of substance through time. It should be noted that at the event of perception, the information of contour in the layout of the world is delivered to the receptors at a length that has only one dimension at the time of reception. The combined effect of, "points of observation in the medium" (BRP 167), as Gibson might put it, transmits the layout of the world to the perceiver by a mesh of interwoven specifiers.

The perceptual space relies on a conscious experience. Math and the body of sciences can be useful in modeling the elements involved in the deliverance of subjective experience if enough relevant contextual information is given to the model. Right now, machines manipulate signals, but do not have the complexity that human experience has, partly because their system does not have the evolutionary resources developed in an environment over time when constantly responding to its inputs.

The facts let me see contour, while also recognizing that contour from a single image could be illusory. We take data available in light, and construct an image from that data of an object, “though such flip - flopping seldom occurs when we are looking at real cats, it sometimes happens with specially constructed figures viewed under restricted conditions” (BRP 278). If we take the information in light and structure to be a fact, I would say that flip - flopping also occurs under the most general conditions and correlates of known facts to perspectival emanations, which specify qualities of a perception. Depth gives us such determined information, guided by objects that deliver layout to the percept, that flip - flopping rarely occurs. This is what defines an object for visual perception is its stability.

V. The Wavelength with Constant Value

$$v = \lambda f = r / \tau = r\ (1 / (\theta / (2\pi))) = \frac{2\pi r}{\theta} = (1 / (1 / (2\pi)))\ D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right] = \frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} \tag{157}$$

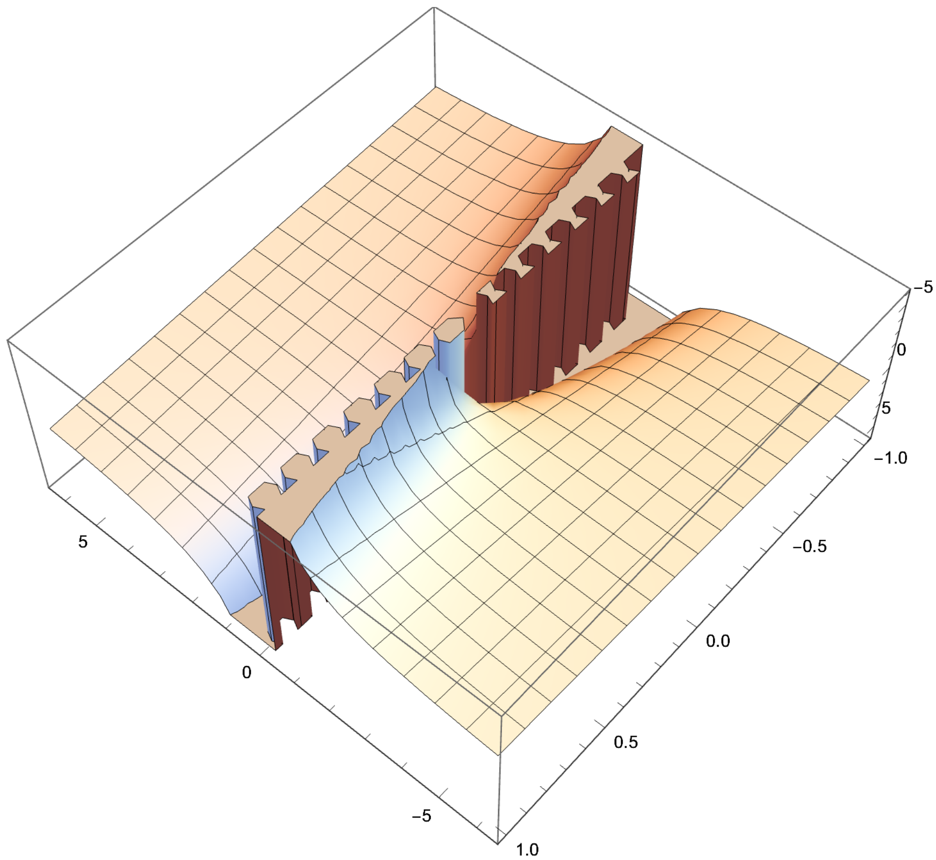
$$2\pi r - 2\pi r_1 = \theta r \tag{158}$$

$$\frac{(2\pi r - 2\pi r_1)}{\theta} = r \tag{159}$$

$$\frac{2\pi r}{\theta} = \frac{2\pi r_1}{\theta} + r \tag{160}$$

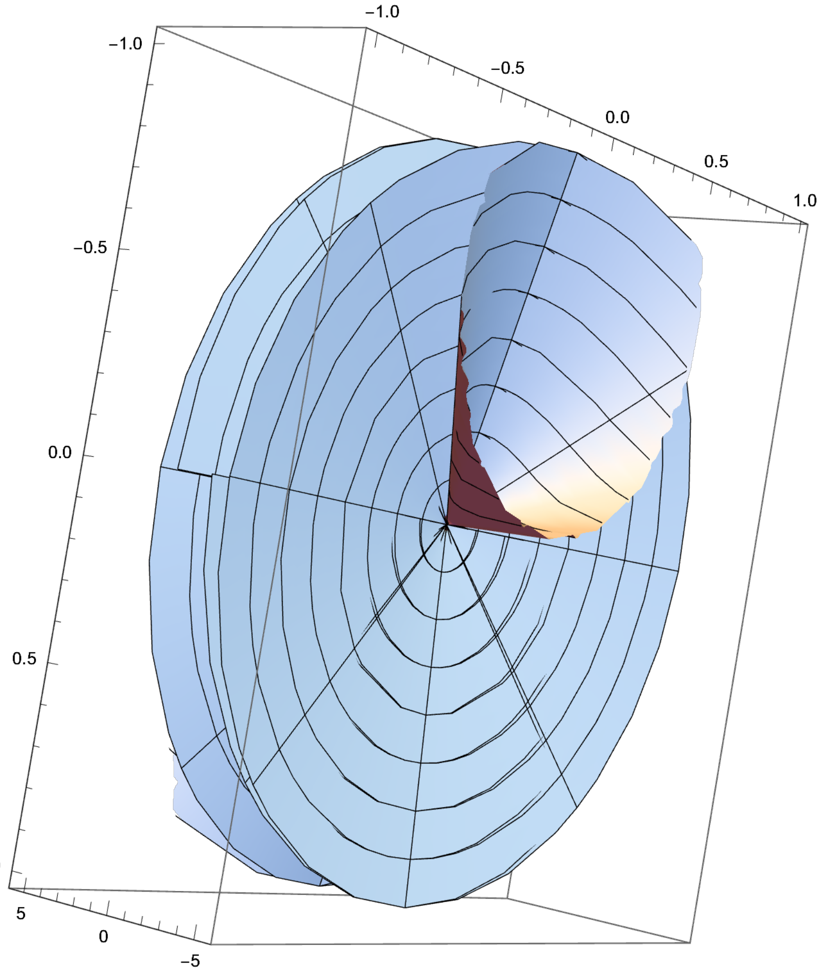
We will try to build up as many functions as possible without resorting to designating something to have a velocity of light or non - light. It is simply a velocity for the time being. This way, we will have access to a realm of general functions of correlated variables.

```
Plot3D[2 π r/θ, {r, -1, 1}, {θ, -2 π, 2 π}]
```



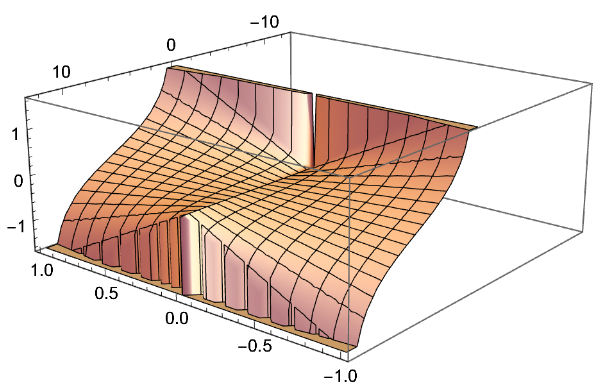
Now we can visually see how velocities would be superpositional. They can fit right on top of each other in this lego - like system while continuing along the same contour.

```
RevolutionPlot3D[2 π r / θ, {r, -1, 1}, {θ, -2 π, 2 π}]
```

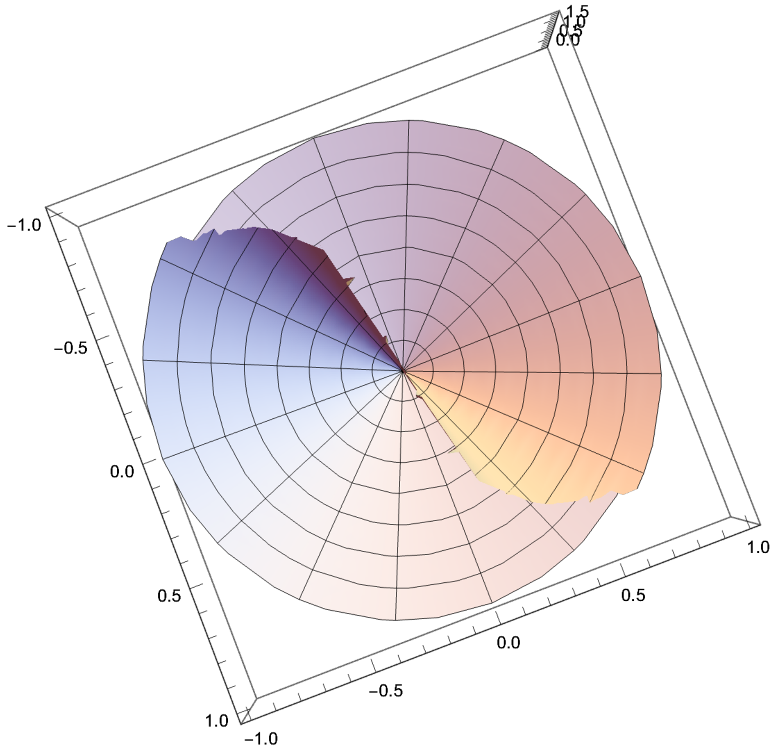


$$\text{Velocity when r is constant} = \frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} \tag{161}$$

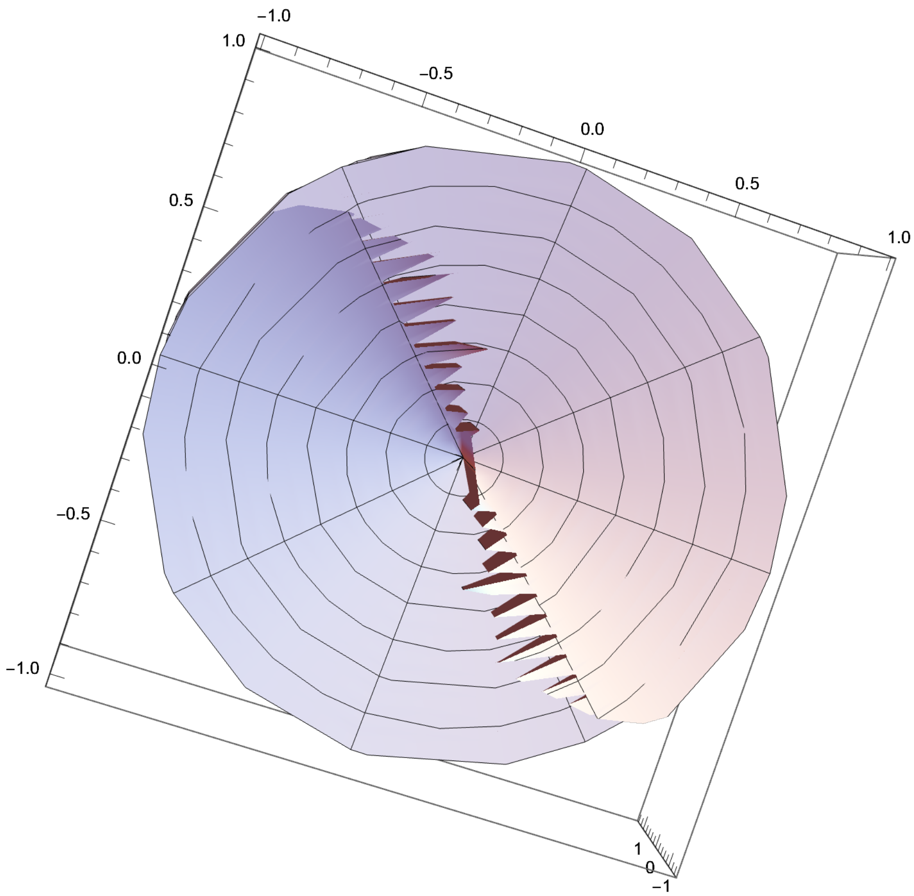
```
Plot3D[(4 π r^2 - 2 r^2 θ) / (2 Sqrt[4 π r^2 θ - r^2 θ^2]), {r, -1, 1}, {θ, -4 π, 4 π}]
```



```
RevolutionPlot3D[(4 π r^2 - 2 r^2 θ)/(2 Sqrt[4 π r^2 θ - r^2 θ^2]), {r, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{RevolutionPlot3D}\left[\frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



We also have access to the equation, $\frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r / (\theta / (2\pi))$, which winds up having the r variable cancel out, and delivers three exact solutions for theta. (162)

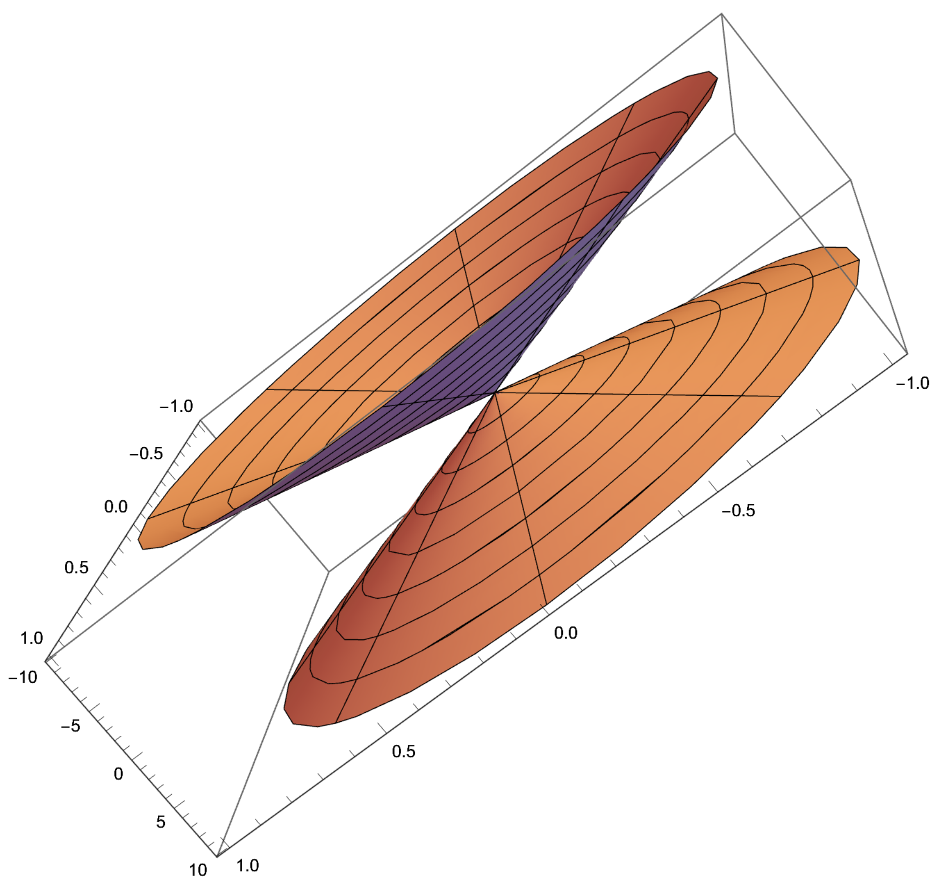
$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{2\sqrt{4\pi r^2 \theta - r^2 \theta^2}} == \frac{2\pi r}{\theta}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right\},\right.$$
$$\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1+i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1-i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right\}, \quad (163)$$
$$\left.\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right\}\right\}$$

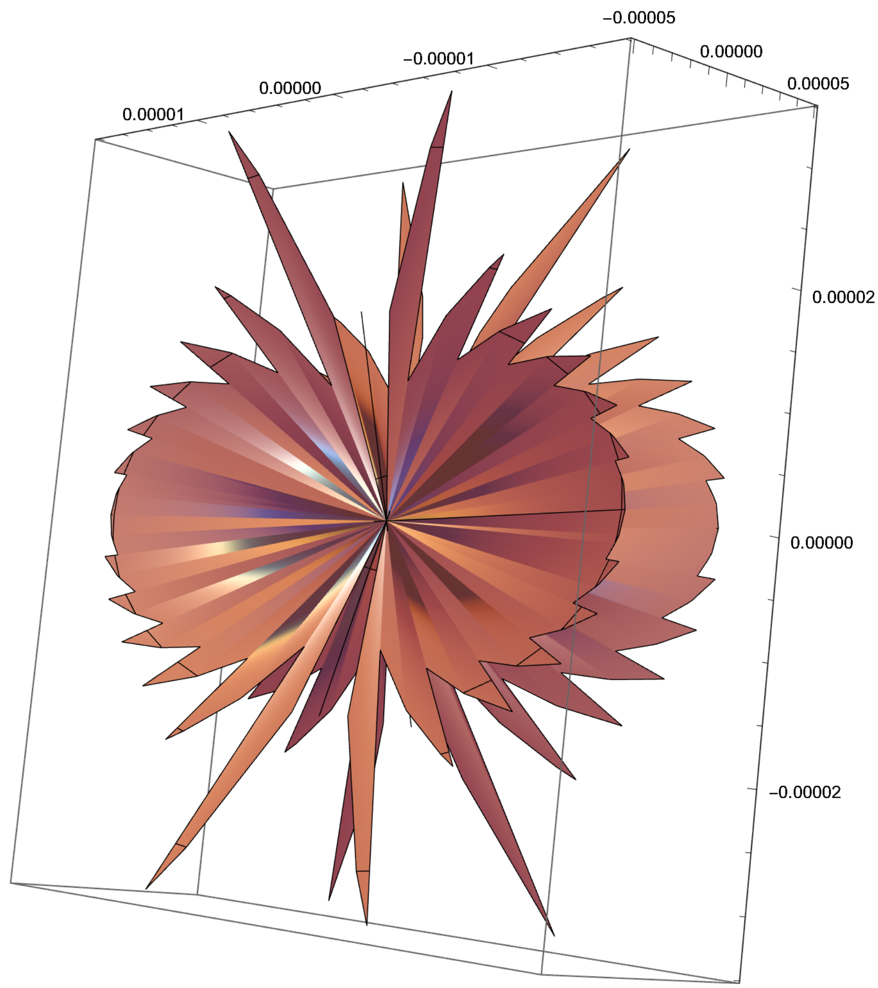
With these exact solutions for theta, we are afforded the opportunity to look at a change in circumferences by multiplying the results by the initial radius. We remember from the initial postulates that the change in circumference of a sample of the ambient array was equal to the initial radius of an angle.

```
RevolutionPlot3D[
```

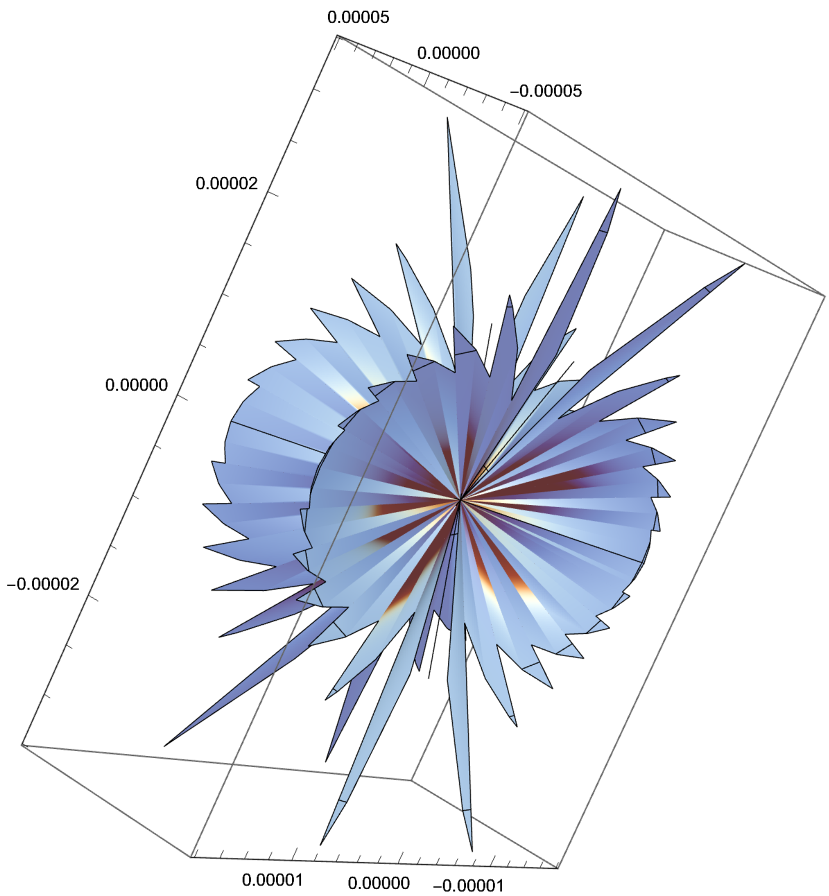
$$r\left(\frac{2}{3}\left(2\pi-\frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}}+\left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right),\ \{r,-1,1\},\ \{\theta,-2\pi,2\pi\}]$$



$$\texttt{RevolutionPlot3D}\left[r\left(\frac{4\,\pi}{3}+\frac{2\left(1+\mathbb{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathbb{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right),\ \{r,-1,1\}\right]$$



$$\text{RevolutionPlot3D}\left[r\left(\frac{4\pi}{3}+\frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right),\{r,-1,1\}\right]$$



We will note that an arc length is equal to r*θ. The change in perceived circumference of the circle is also equal to r*θ. Thus, we will be able to see what the arc length is, because it represents the change in circumference of two circles. In this case, as the circle, viewed from head on, recedes from the perceiver into the distance, it gets smaller. This is a change in amount of surface area taken up on the retinal image, but also a way of visualizing how the imaginary solutions for the time element of waves traveling in space affords a perception of layout.

Light travels through space, but within its travel is the information that the angular element of the system, which is akin to time, conveys specifically about the location of contour in perceptual space through a geometric correlation. This correlation occurs through the complex plane and has the capability of mapping out contour in the visual perception directly by analogy of larger ecology to individual play of ambient light off of a contour. We will try to show this symbolically as well as directly.

When combined, the three imaginary solutions form a cone, but seperately, they exist primarily in the complex plane. It requires all three solutions to deliver information of depth to the perceiver through light in terms of the real. In Gibson' s theory, depth is intimately connected with contour. Contour is delivered by the pickup of the invariant, r, in the ambient array, changing context in a

different way from point to point. Thus, understanding of two truths in the real world like information given to the perceiver of an object by an edge, for instance, is enabled. At the moment of perception, we have a total amount of time equal to 0, but since time continues, and time has passed, there is a total amount of changed time from past to present, which is equal to the absolute value of the negative solutions for time plus the positive solutions. We will not use this interpretation, because it is an in depth introspection into the experience of consciousness, which would require understanding of cognitive systems or possibly spiritual experience, and we are only looking at the phenomenon of the structure of perception.

Mach began by verifying a belief in the space - sense, an area of parameterized space relating the sense of an individual to the stimulus in the world. The space - sense provides a workspace for the individual senses like sense of sight and touch to enable a perceptual experience.“ The perception of Depth depends on extra - occular experiences” (BRP 118) is an idea that makes a great deal of sense to me, because when we experience or perceive truth, we use multiple faculties to make sense of a phenomenon.

The ambient optic array, which is the entire collection of individual points of light, binds single points in the array through the complex plane, and affords the perception of objects, because objects disrupt the array in the real, but the structure of light assures that the imaginary elements of objects correspond to only one real object. Or, if there is a real object, then the imaginary elements of perceiving that object specify a single event of perceiving that object.

The imaginary solutions to perceiving objects through time could change only if the qualia of the layout of objects changed, or the disruption in the array changed to remain allowing the overall combinations of modulars in the single modular of perception through consciousness. We still ask if personality of the perception changed the meaning of the object to layout of the world within the unified modular of perception, would the structuring of the array change or harmonize with the substance? Sampling allows us to determine if the layout is different from structuring, because the array is the environmental context of the perception, and shares a similar structure to each point within it. This is a manner of perception.

The mapping out of contour from information in light shares a similar structure to the measurement of size. I don’t think it makes sense to begin by postulating an object, only postulating that there is the pickup of information that there is contour in the environment. The perception of this contour like it is an actual object, however, is ephemeral and somewhat illusory. All we can have access to for studying vision scientifically or phenomenologically is the percept of contour in a projection to the mind, “My knowledge of the plane crash derives from my knowledge of the newspapers because I did not see the plane crash” (BRP 273). However, to find out how perception operates, we must recognize the conditions necessary for information to be transferred from the environment that it is at least partially a complex environment.

The initial radius changes context, but can it be said to actually change? The wavelength, r, could be said to be changing if we consider that $\Delta r = r - r_1$. Although it is invariant in the context of always being the slant of the cone, it changes when understood to be the base of the cone. It also changes

meaning when we consider the structure in an ecological context. The height of the cone starts at the place where there is an infinitely perceived radius (i.e. no perception, all white eye-caps, or unseen, because it is so far away on the horizon), and goes toward the locus of perception, which is the perceiver. It is reasonable, to think that a wavelength could change during the course of traveling a single wavelength through cominative substances like light or water. When the circle is infinitely far away, it has a perceived radius of 0, and this is the same point at which there is nothing perceived, because channels of sensation eventually disappear after extending in time. Layout and contour come into focus best when during the awareness of time extends into the very small amounts of angular passage per sample.

A relativistic mapping of η looks somewhat different at larger values, but at normal values, it looks exactly the same.

The radius is said to be invariant through the transition from being the initial radius of a circle to being the height of a cone. We set up the equation that says that an arc length of the original circle is equal to a diference in circumferences from transition to a cone, where the Pythagorean Theorem tells us the equation for height in terms of only r and θ, and angular element akin to time. It is always either the original radius of the circle, the slant of the cone, or the height of the cone. The initial radius is constant, but changes context in the system through transition.

VI. An Inherency of Relativity to Invariance

The radius is said to be invariant through the transition from being the initial radius of a circle to being the height of a cone. We set up the equation that says that an arc length of the original circle is equal to a diference in circumferences from transition to a cone, where the Pythagorean Theorem tells us the equation for height in terms of only r and θ, and angular element akin to time. It is always either the original radius of the circle, the slant of the cone, or the height of the cone. The initial radius is constant, but changes context in the system through transition.

What if the system we are talking about is traveling at relativistic speeds? Not the substance within the system, but the actual system, and all of its parameters. They could all be subject to relativity at the same time or during the same motion.

$$\eta \to \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi} \tag{164}$$

$$r' = r \sqrt{1 - ((v)^2 / c^2)} \tag{165}$$

$$t' = (\theta / (2 \pi)) \Big/ \sqrt{1 - ((v)^2 / c^2)} \tag{166}$$

$$t' = \theta' / 2 \pi \tag{167}$$

$$\theta' = \theta \Big/ \sqrt{1-((v)^2/c^2)} \tag{168}$$

$$r' * \theta' = \left(\theta \Big/ \sqrt{1-((v)^2/c^2)}\right)\left(r\sqrt{1-((v)^2/c^2)}\right) \tag{169}$$

$$\left(\theta \Big/ \sqrt{1-((v)^2/c^2)}\right)\left(r\sqrt{1-((v)^2/c^2)}\right) = r\,\theta \tag{170}$$

$$r' * \theta' = r\,\theta = 2\,\pi\,r - 2\,\pi\,r_1 = 2\,\pi\,r - 2\,\pi\sqrt{r\,\hat{}\,2 - \eta\,\hat{}\,2} \tag{171}$$

$$\text{Solve}\left[r\,\theta == 2\,\pi\,r - 2\,\pi\sqrt{r\,\hat{}\,2 - \eta\,\hat{}\,2},\ \eta\right] \tag{172}$$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\}$$

We make the substitution for the prime system.

w := r', ρ := θ'

$$\textbf{Solve}\left[w\,\rho == 2\,\pi\,r - 2\,\pi\sqrt{r\,\hat{}\,2 - \eta\,\hat{}\,2},\ \eta\right]$$

$$\left\{\left\{\eta \to -\frac{\sqrt{w}\ \sqrt{\rho}\ \sqrt{4\,\pi\,r - w\,\rho}}{2\,\pi}\right\},\ \left\{\eta \to \frac{\sqrt{w}\ \sqrt{\rho}\ \sqrt{4\,\pi\,r - w\,\rho}}{2\,\pi}\right\}\right\}$$

Then, once we have solved for η in terms of the prime system, we can resubsitute in for the initial expressions of r' and θ'.

$$\frac{1}{2\,\pi}\sqrt{r\sqrt{1-((v)^2/c^2)}}\ \sqrt{\theta \Big/ \sqrt{1-((v)^2/c^2)}}$$

$$\sqrt{4\,\pi\,r - \left(r\left(\sqrt{1-((v)^2/c^2)}\right)\right)\left(\theta \Big/ \sqrt{1-((v)^2/c^2)}\right)}$$

$$\textbf{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ r\right]$$

{{}}

$$\textbf{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ v\right]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, r\right]$$

{{}}

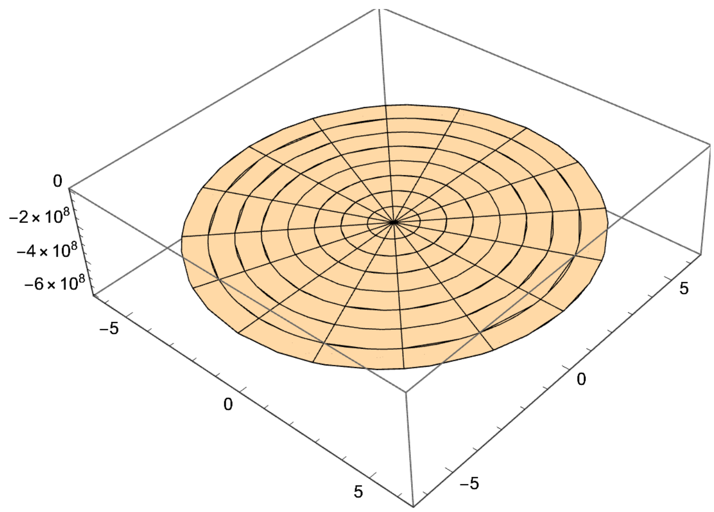
The velocity at the time at which η = r can be found according to theta and the speed of light. We would then substitute expressions for theta in terms of beta in order to visual the equation spherically. This is how our model relates directly to perception. We say that the light (or any substance traveling through the height of the cone) can only be specified by subjective perception or by objectively defining the initial wavelength of the system from the start. The wavelength of light, λ = r, is observed when the cone has completed one cycle of the system in terms of the standard unit of measurement of time. This happens at the distinct situation of η = r, which specifies an event of perception or observation.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r, v\right]$$

```
{{v → -((1.` √(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
    (√(39.47841760435743` - 12.566370614359172` θ + θ^2)))}, {v →
  √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2) /
  √(39.47841760435743` - 12.566370614359172` θ + θ^2)}
 }
```

The positive and negative solutions for velocity have similar, graphical representations in terms of theta.

```
RevolutionPlot3D[-(1.` √(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), {θ, -2 π, 2 π}]
```



From this, we can see how, from our system, we have specified that time is a continuum. It continues on the x axis out infinitely. Our time variable, θ, is in essence, an axis of its own accord.

To see in depth what this observation signifies, we solve for velocity and show expressions for this velocity in terms of theta and beta from the initial conditions of the system. There is a multiplicity of substitutions that we can make. In the end, they will all turn out to have an expression that is envisioned by one of seven different graphical objects. We will give a brief overview of the forms that we find in which substance can travel. We will label them, although each expression for the graphical object will not be given, because there are so many that it would take pages to fill.

We remember from earlier that we can place theta in terms of beta. Each placement of the substitution in a different position of the equation yields another way of perceiving/observing light traveling through space - time. In addition to this, the combination of the functions can occur in the same graphcial representation. We will not go into the multifaceted ways of combining these graphs, but specifically outline a few of the more basic, notable forms.

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2 \,\mathrm{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2 \,\mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

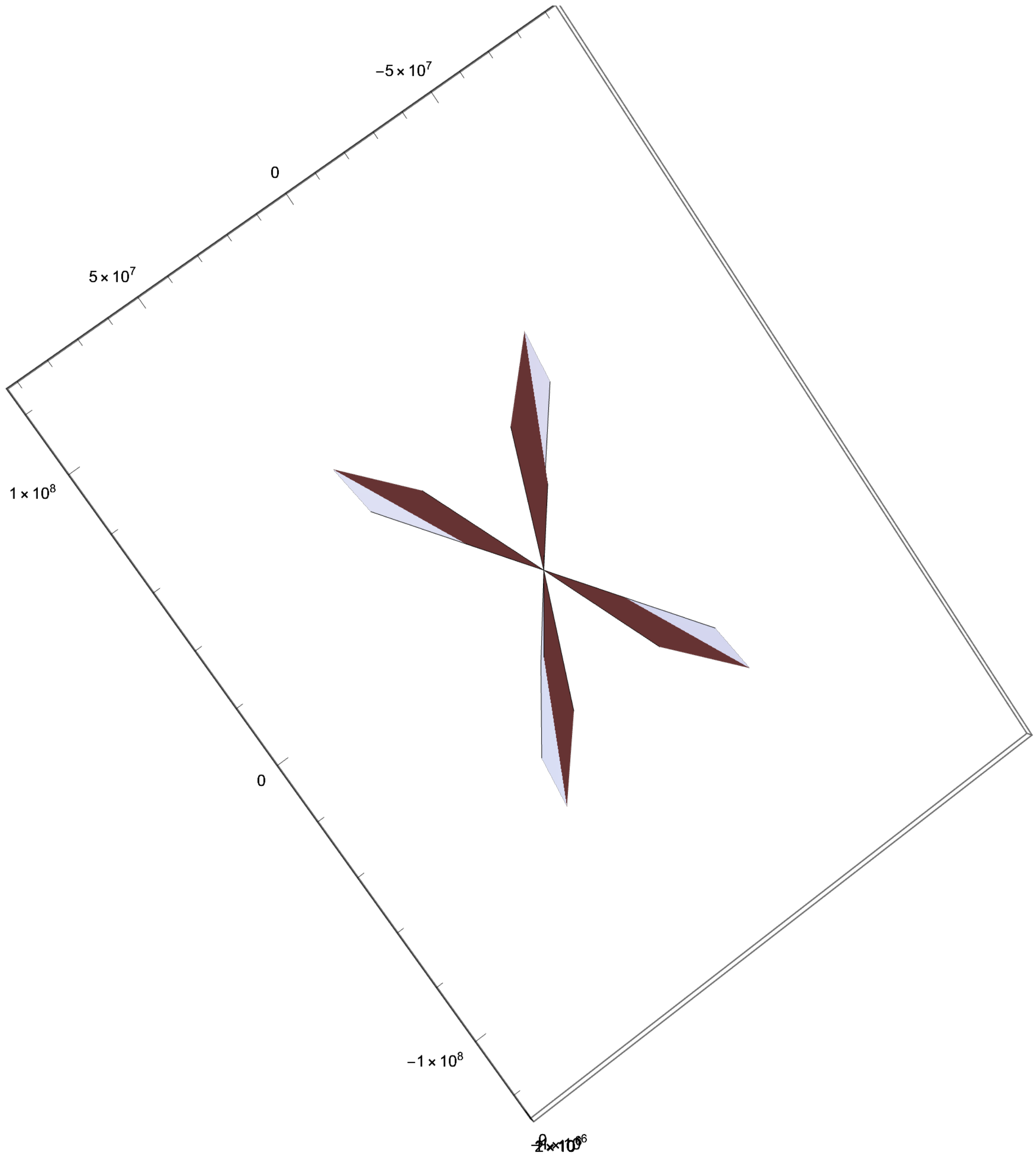
, When we make patterns of substitutions for theta in terms of beta within the equation, we see that there are discontinuous methods for graphing the information contained in the velocity of light or substance to produce a visualization. In other words, the same equation with different orders of substitutions for theta in terms of beta give us different impressions of how we observe the spacetime functioning. That is part of a relativistic equation for traveling through the height of a cone at the point of perception, the event of perception, when r = η. In other words, sometimes we see are able to visualize a form of the equation, and sometimes we are not. Gibson has said that, "The necessary condition for pattern vision is an *inhomogeneity* of the set of hypothetical rays" (The Visual World, 64). These visualiza-

tions of velocities are vectors, and hypothetically, rays. Gibson refers to types of order, the first being light or dark. Light is a natural type of stimulation, and thus it is a very useful tool for understanding the natural inhomogeneity going on during the event of perception. Perception is given to us in a multi-faceted series of ways of visualizing light. It should be noted that while light is the only substance that reaches the eye, the substance of light travels in a similar way to other forms of energy like mass. These different ways of visualizing light often pop up as concepts in modern physics. For the purposes of this paper, we are more interested in their correlations to the, "*explanation* of experience" (The Visual World, 8), because, "there are laws relating perception to physical stimulation as well as laws relating it to physiological processes" (The Visual World, 8).

With the above and continuing mathematical count of the

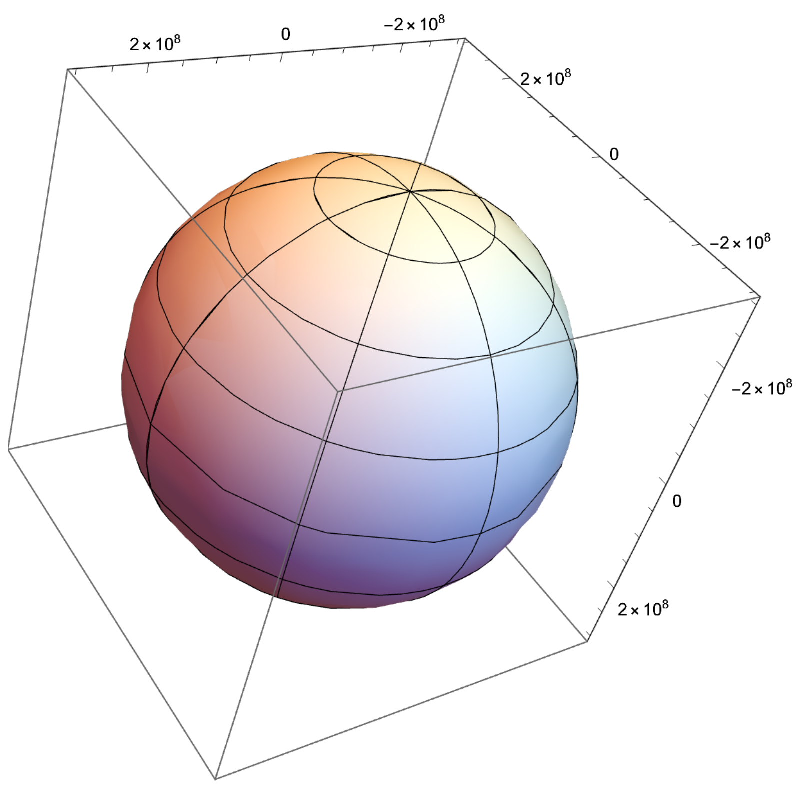
Light travels carrying information only upon reaching the threshold of the event of perception.

$$\text{SphericalPlot3D}\Big[\left(\sqrt{\left(3.5481432270250993\text{`*}^\wedge 18 - 1.1294090667581471\text{`*}^\wedge 18\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right) + 8.987551787368176\text{`*}^\wedge 16\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/ \left(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right) + (\theta)^2}\right), \{\beta, -1.1\pi, 1.1\pi\}, \{\theta, -2.2\pi, 2.2\pi\}\Big]$$


−5 × 10^7
0
5 × 10^7
1 × 10^8
0
−1 × 10^8

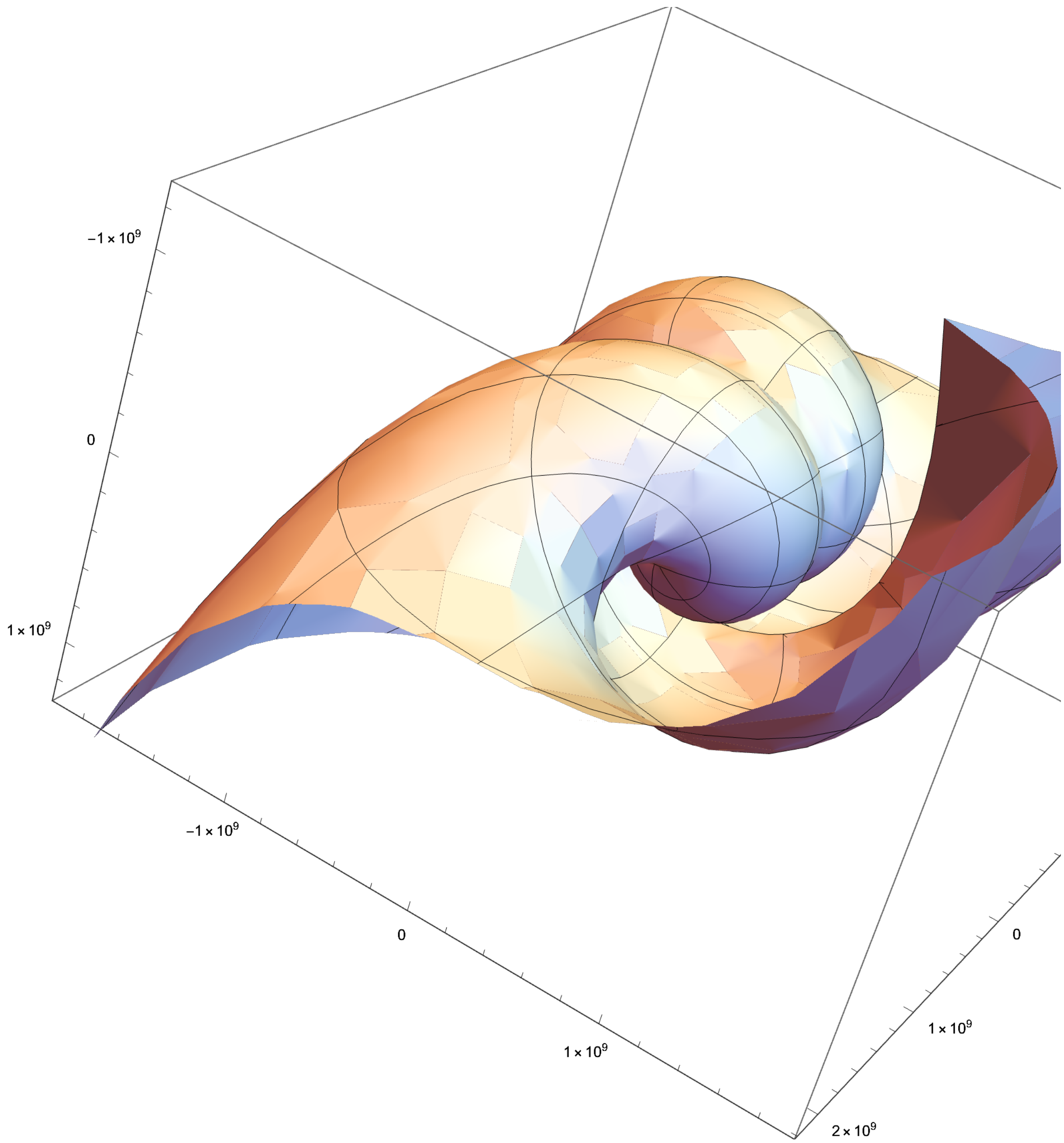
Light/Substance travels like a sphere, or a "particle"

```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```



Light/Substance travels like a wave.

```
SphericalPlot3D[(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
   (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```

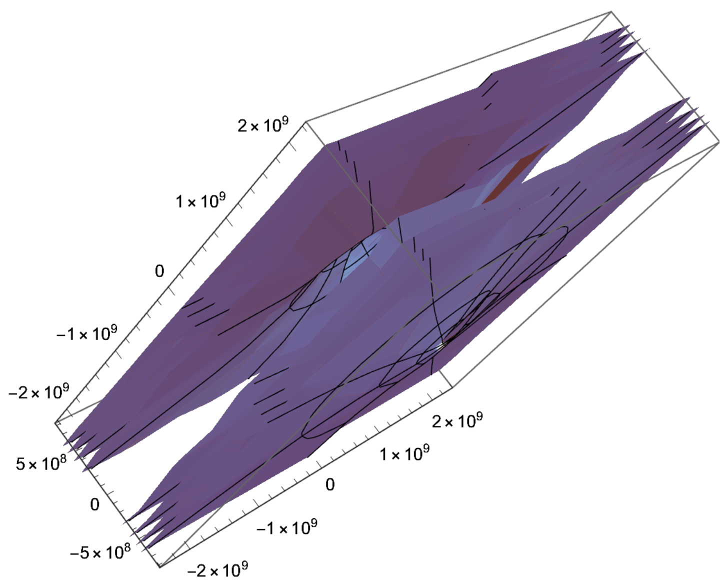


The form of this wave is useful to modeling a contoured surface mathematically, because we can

see a continuous curve that does not have to build the contour out of smaller triangles, but is very smooth and continuously curved.

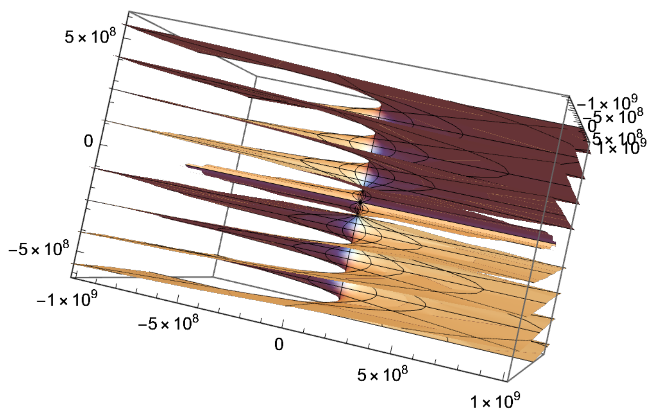
Light/substance travels like a manifold (sheets of paper layered upon one another).

$$\text{SphericalPlot3D}\left[-\left(1.\text{`}\sqrt{\left(3.5481432270250993\text{`}*\text{^}18 - 1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\text{`} - 12.566370614359172\text{`}\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right), \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



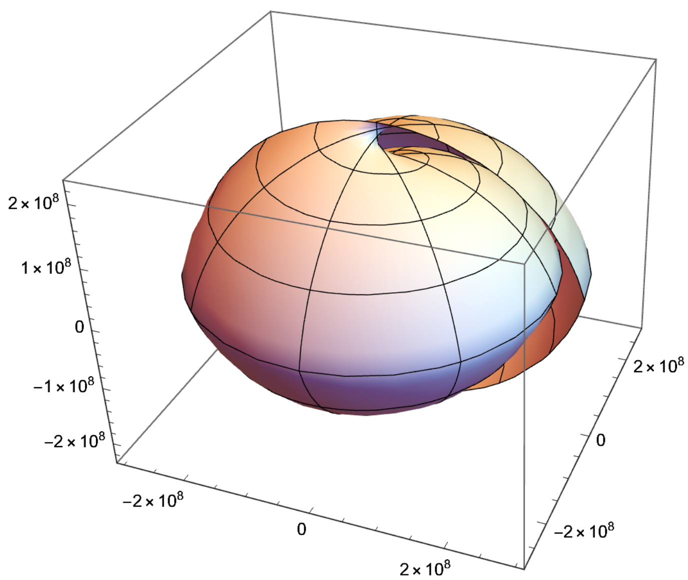
Light/substance travels like a double helix.

```
SphericalPlot3D[-(1.` √(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (θ)^2)) /
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```



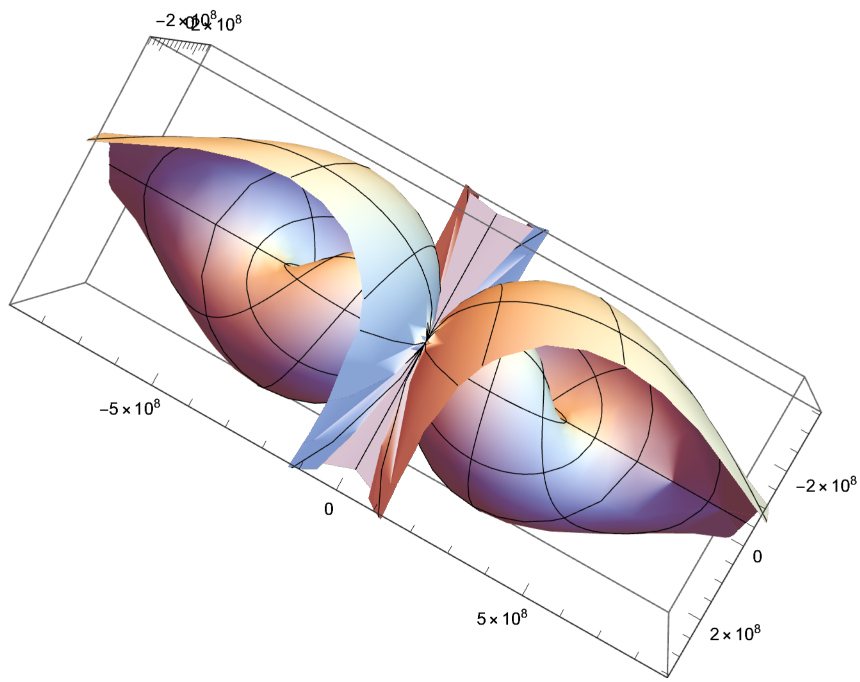
Light/substance travels in a conch - like shape.

```
SphericalPlot3D[-(1.` √(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (θ)^2)) /
  (Sqrt[39.47841760435743` - 12.566370614359172` (θ) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2]),
 {β, -π, π}, {θ, -2 π, 2 π}]
```



Light travels in a tulip shape, representational and symbolic of particle - wave duality.

$$\text{SphericalPlot3D}\Big[-\Big(1.\grave{}\ \sqrt{\left(3.5481432270250993\grave{}*\wedge 18 - 1.1294090667581471\grave{}*\wedge 18\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + 8.987551787368176\grave{}*\wedge 16\left(\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)\right)}\Big/\left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\ \theta + \theta^2}\right),\ \{\beta, -\pi, \pi\},\ \{\theta, -2\pi, 2\pi\}\Big]$$



VII. The Flow of Light through an Ambient Array (The Array Is within Each Point of the Ecologically Visual Field)

There are non - relatavisitic solutions to the height of the cone that include the Lorenz Transformations. This is because in the normal course of primal sketching, a visual system detects the edge of a circle and relates it to the distance away from which the observer is. The size of the primal sketching is dependent upon the measurement made by the eye relativistically, however, when determining a change between sizes, the Lorenz factor will cancel. For this section, the visualizations are very complex if we want to see all the different possible nested equations. We will refer the reader to the fourth

addendum to this paper for further visualizations.

We can formulate the non - relativistic equation for the height of the cone in terms of the speed of light of non - relativistic time :

$$\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==c\,(\theta/(2\pi)) \tag{173}$$

This will give us introspection into the meaning of relativity' s relation of the consciously perceptual system to the visual system and if the visual system has evolved with a response to relativistic principles. We will be able to visualize the ambient optic array and the inhomogeneities within it.

$$\mathbf{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==c\,(\theta/(2\pi)),\ v\right]$$

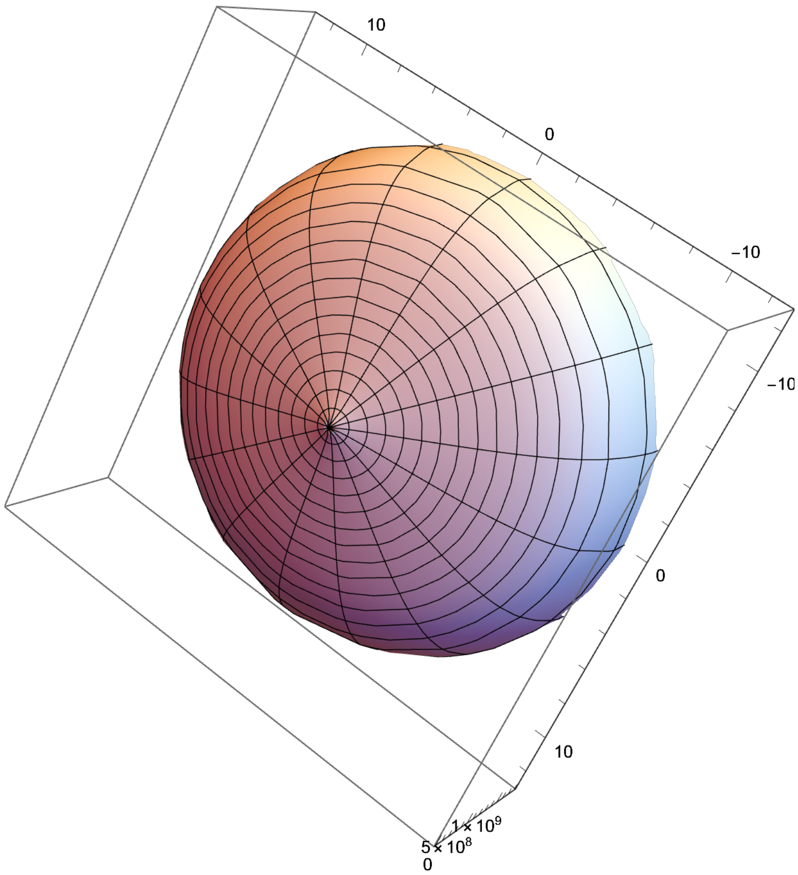
{}

$$\mathbf{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==c\,(\theta/(2\pi)),\ r\right]$$

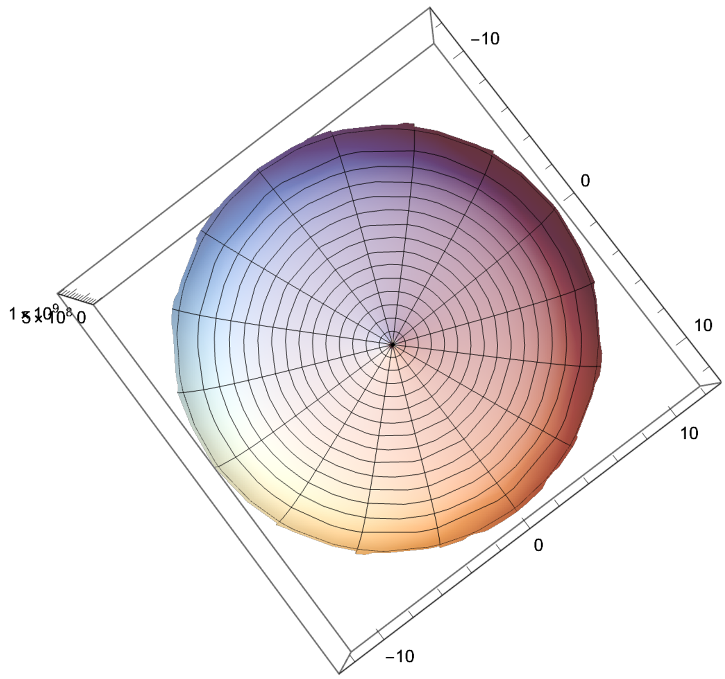
$$\left\{\left\{r\to-\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\},\left\{r\to\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\}\right\}$$

```
RevolutionPlot3D[c Sqrt[θ]/Sqrt[4 π - θ], {θ, -4 π, 4 π}]
```

$$\text{RevolutionPlot3D}\left[\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}, \{\theta, -4\pi, 4\pi\}\right]$$



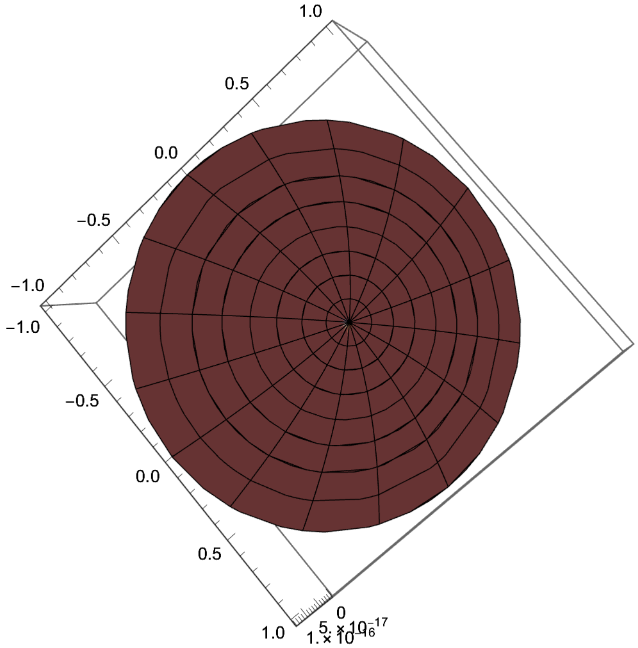
This is an example of inhomogeneity within the ambient optic array. From one side of the expression for radius in terms of the speed of light and time, we see that there is a solid surface, but on the other side, the middle of the bowl is overcome by white saturation. Granted, these are not the proper form of the equation, because they are non-relativisitc, but we will soon get a look at some of the relativistic interpretations of information within the light.



$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == c\ (\theta/(2\pi)),\ \theta\right]$$

$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{4\pi r^2}{c^2+r^2}\right\}\right\}$$

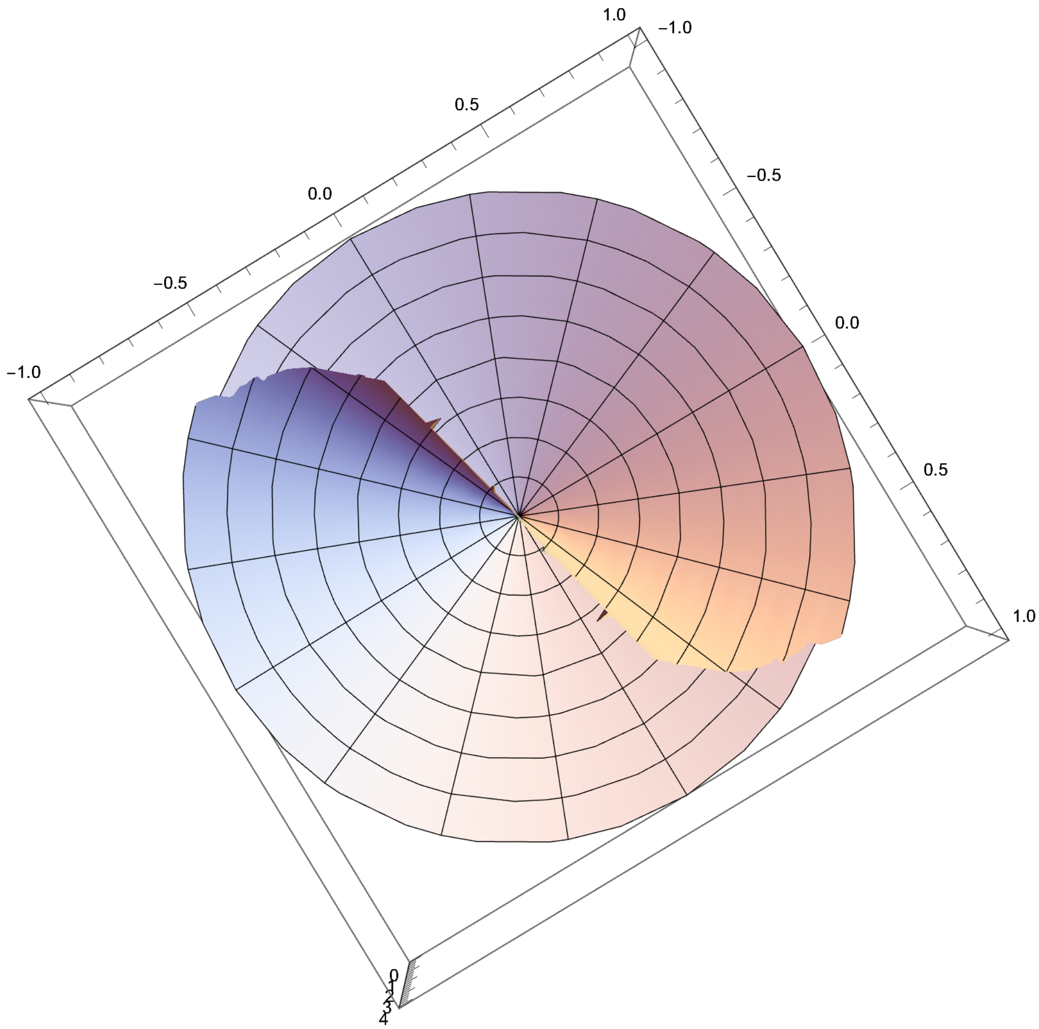
$$\text{RevolutionPlot3D}\left[\frac{4\,\pi\,r^2}{c^2+r^2},\ \{r, -1, 1\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == c\,(\theta\,/\,(2\,\pi)),\ c\right]$$

$$\left\{\left\{c \to -\frac{\sqrt{4\,\pi\,r^2 - r^2\,\theta}}{\sqrt{\theta}}\right\},\ \left\{c \to \frac{\sqrt{4\,\pi\,r^2 - r^2\,\theta}}{\sqrt{\theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2 - r^2\,\theta}}{\sqrt{\theta}},\ \{r, -1, 1\},\ \{\theta, -2\,\pi, 2\,\pi\}\right]$$



We can formulate the relativistic equation for the height of the cone in terms of the speed of light of relativistic time :

$$\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi}\ \sqrt{1-\frac{v^2}{c^2}} == c\left((\theta\,/\,(2\,\pi))\Big/\sqrt{1-\frac{v^2}{c^2}}\right) \tag{174}$$

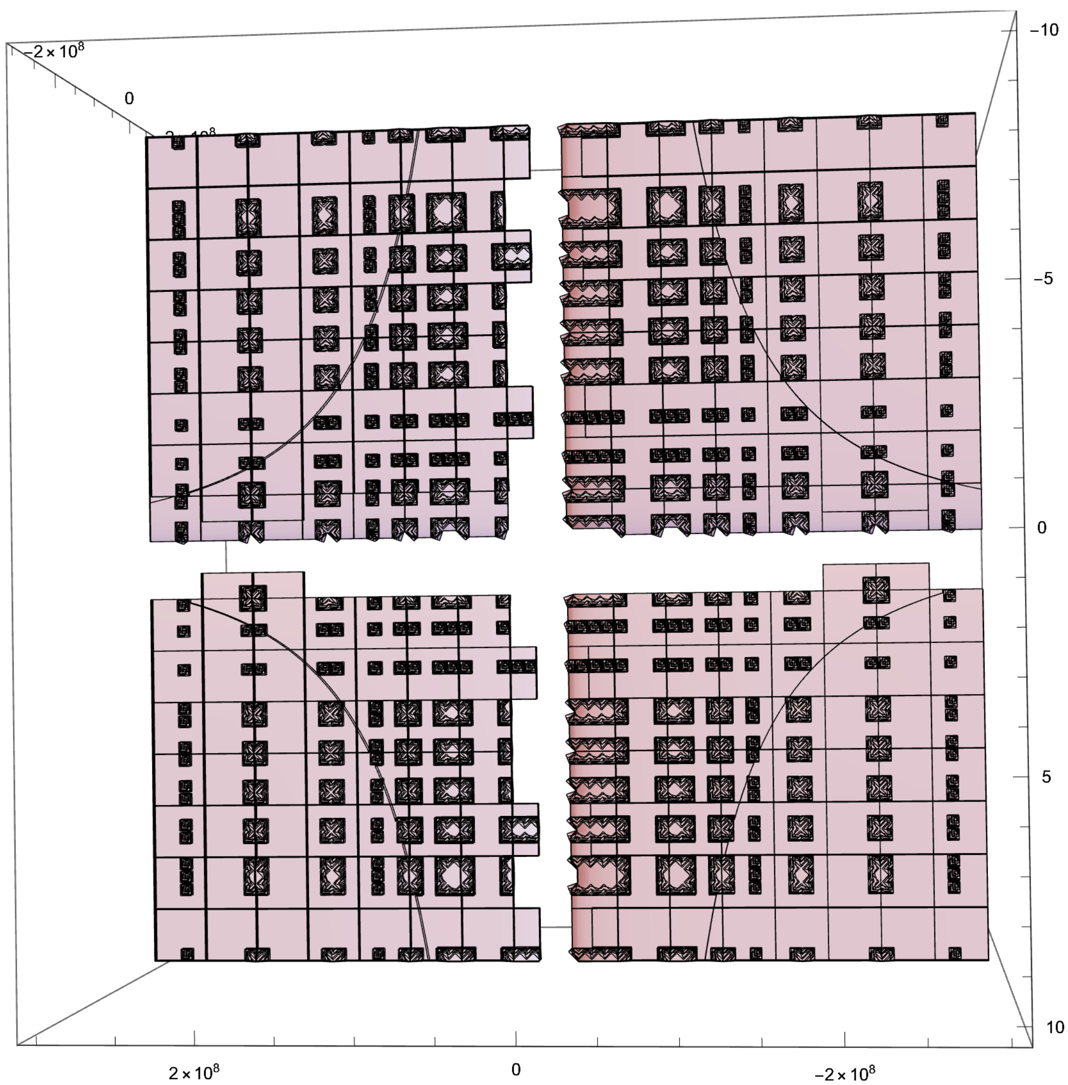
$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi}\ \sqrt{1-\frac{v^2}{c^2}} == c\left((\theta\,/\,(2\,\pi))\Big/\sqrt{1-\frac{v^2}{c^2}}\right),\ \theta\right]$$

$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{4\,\pi\,\left(c^4\,r^2 - 2\,c^2\,r^2\,v^2 + r^2\,v^4\right)}{c^6 + c^4\,r^2 - 2\,c^2\,r^2\,v^2 + r^2\,v^4}\right\}\right\}$$

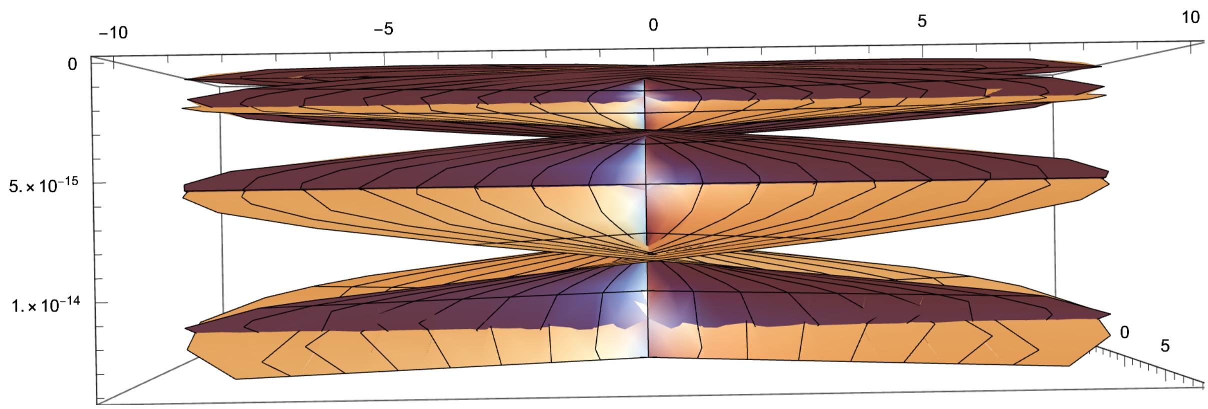
Time is visualized from contour to be a gradient of texture. We can also visualize the layout when we know that light travels at a fairly constant speed through substances like air.However, when we consider it to be a variable, which it truly is, we can see how there is information contained within time's relation to the velocity of a perceiver, the speed of light being perceived, and the initial radius of the circle transforming into a cone, which is the wavelength of light.

$$\text{ContourPlot3D}\left[\frac{4\pi\left(c^4 r^2 - 2 c^2 r^2 v^2 + r^2 v^4\right)}{c^6 + c^4 r^2 - 2 c^2 r^2 v^2 + r^2 v^4},\right.$$

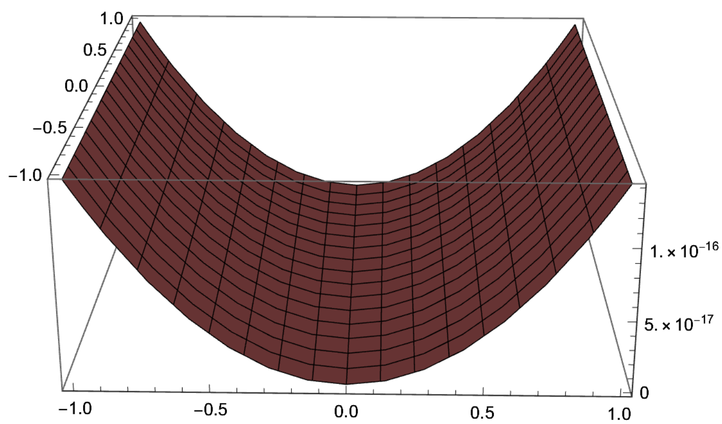
```
 {r, -10, 10}, {v, -(2.99792458 * 10^8), (2.99792458 * 10^8)},
 {c, -(2.99792458 * 10^8), (2.99792458 * 10^8)}]
```



RevolutionPlot3D$\left[\frac{4\,\pi\,\left(c^4\,r^2-2\,c^2\,r^2\,v^2+r^2\,v^4\right)}{c^6+c^4\,r^2-2\,c^2\,r^2\,v^2+r^2\,v^4}\right.$, {v, -10, 10}, {r, -10, 10}$\left.\right]$



Plot3D$\left[\frac{4\,\pi\,\left(c^4\,r^2-2\,c^2\,r^2\,v^2+r^2\,v^4\right)}{c^6+c^4\,r^2-2\,c^2\,r^2\,v^2+r^2\,v^4}\right.$, {r, -1, 1}, {v, -1, 1}$\left.\right]$



$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi}\sqrt{1-\frac{v^2}{c^2}} == c\left((\theta/(2\pi))\Big/\sqrt{1-\frac{v^2}{c^2}}\right), v\right]$$

$$\left\{\left\{v \to -\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\right\},\right.$$

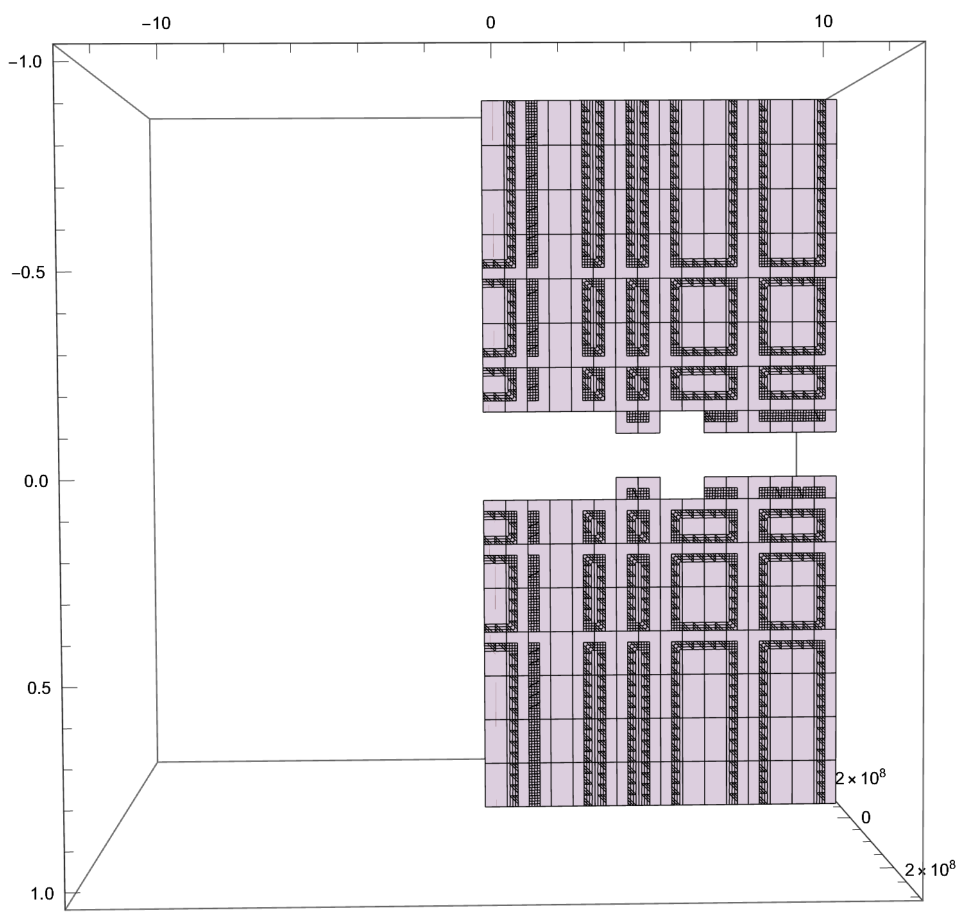
$$\left\{v \to \sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\right\},$$

$$\left\{v \to -\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right\},$$

$$\left.\left\{v \to \sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right\}\right\}$$

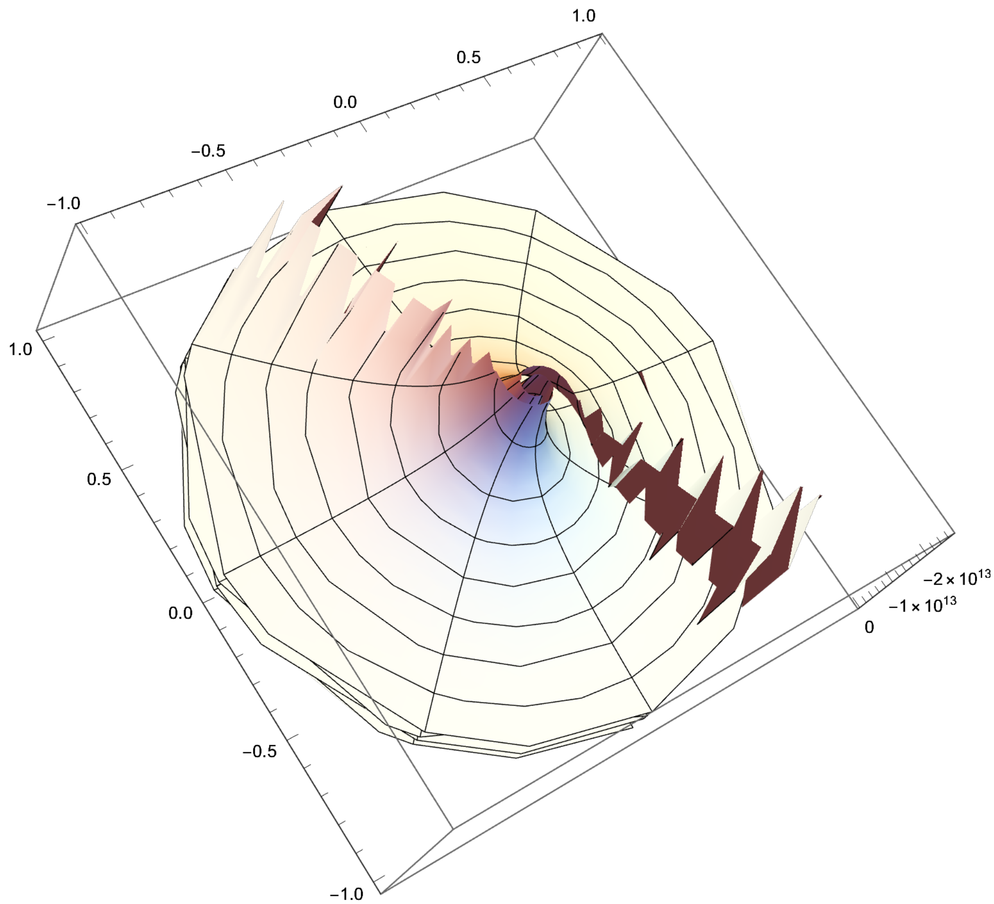
```
{c, -(2.99792458 * 10^8), (2.99792458 * 10^8)},

v := (2.99792458 * 10^8)
```

$$\text{ContourPlot3D}\Big[\Big\{\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}},$$
$$-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big\},\ \{r,-1,1\},$$
$$\{\theta,-4\,\pi,4\,\pi\},\ \{c,-(2.99792458*10\wedge 8),\ (2.99792458*10\wedge 8)\}\Big]$$



```
RevolutionPlot3D[
```

$$-\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\text{, \{r, -1, 1\}, \{}\theta\text{, -4}\pi\text{, 4}\pi\text{\}]}$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}\sqrt{1-\frac{v^2}{c^2}}==c\left((\theta/(2\,\pi))\Big/\sqrt{1-\frac{v^2}{c^2}}\right),\ c\right]$$

$$\Big\{\Big\{c\to$$

$$-\sqrt{\Bigg(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}-\left(8\times2^{1/3}\,\pi\,r^4\right)\Big/\Big(3\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\Big)^{1/3}\Big)-\left(8\times2^{1/3}\,\pi\,r^2\,v^2\right)\Big/}$$

$$\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-$$

$$2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\Big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+}$$

$$432\,\pi^2 r^4 v^8 \theta^4 - 48\,\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3} +$$

$$\left(16\times 2^{1/3}\pi^2 r^4\right)\Big/\Big(3\,\theta\,\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 +$$
$$144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 - 48\,\pi r^6 v^6 \theta^5 -}$$
$$216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3}\Big) + \left(2^{1/3} r^4 \theta\right)\Big/$$
$$\Big(3\,\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 + 144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 -$$
$$2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 +}$$
$$432\,\pi^2 r^4 v^8 \theta^4 - 48\,\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3}\Big) +$$

$$\left(2\times 2^{1/3} r^2 v^2 \theta\right)\Big/\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 +$$
$$144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 -}$$
$$48\,\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3} +$$

$$\frac{1}{3\times 2^{1/3}\theta}\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 + 144\,\pi r^4 v^2 \theta^2 +$$
$$108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 -}$$
$$48\,\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3}\Bigg)\Bigg\},$$

$$\Big\{c \to \sqrt{\Bigg(-\frac{r^2}{3} + \frac{4\,\pi r^2}{3\,\theta} - \left(8\times 2^{1/3}\pi r^4\right)\Big/\Big(3\,\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta +}$$
$$24\,\pi r^6 \theta^2 + 144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 -$$
$$27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 -}$$
$$48\,\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3}\Big) -$$

$$\left(8\times 2^{1/3}\pi r^2 v^2\right)\Big/\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 +$$
$$144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 - 48}$$
$$\pi r^6 v^6 \theta^5 - 216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3} +$$

$$\left(16\times 2^{1/3}\pi^2 r^4\right)\Big/\Big(3\,\theta\,\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 +$$
$$144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\Big(-256\,\pi^3 r^6 v^6 \theta^3 + 192\,\pi^2 r^6 v^6 \theta^4 + 432\,\pi^2 r^4 v^8 \theta^4 - 48\,\pi r^6 v^6 \theta^5 -}$$
$$216\,\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\Big)\Big)^{1/3}\Big) + \left(2^{1/3} r^4 \theta\right)\Big/$$
$$\Big(3\,\Big(128\,\pi^3 r^6 - 96\,\pi^2 r^6 \theta - 288\,\pi^2 r^4 v^2 \theta + 24\,\pi r^6 \theta^2 + 144\,\pi r^4 v^2 \theta^2 + 108\,\pi r^2 v^4 \theta^2 -$$

$$2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+$$

$$432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\big)^{1/3}\big)+$$

$$\big(2\times2^{1/3}\,r^2\,v^2\,\theta\big)\Big/\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+$$

$$144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+$$

$$3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48$$

$$\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}+$$

$$\frac{1}{3\times2^{1/3}\,\theta}\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+$$

$$108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+$$

$$3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48$$

$$\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}\Big)\Big\},$$

$$\Big\{c\to-\surd\Big(\Big(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+\big(4\times2^{1/3}\,\pi\,r^4\big)\Big/\Big(3\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+$$

$$24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+$$

$$3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-$$

$$216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}\Big)-\big(4\,\mathbb{i}\,2^{1/3}\,\pi\,r^4\big)\Big/$$

$$\Big(\sqrt{3}\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-$$

$$2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+$$

$$432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}\Big)+$$

$$\big(4\times2^{1/3}\,\pi\,r^2\,v^2\big)\Big/\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+$$

$$144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+$$

$$3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-$$

$$48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}-$$

$$\big(4\,\mathbb{i}\,2^{1/3}\,\sqrt{3}\,\pi\,r^2\,v^2\big)\Big/\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+$$

$$144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+$$

$$3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-$$

$$216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}-\big(8\times2^{1/3}\,\pi^2\,r^4\big)\Big/$$

$$\Big(3\,\theta\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-$$

$$2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\surd\big(\big(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+$$

$$432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\big)\big)\Big)^{1/3}\Big)+$$

$$\big(8\,\mathbb{i}\,2^{1/3}\,\pi^2\,r^4\big)\Big/\Big(\sqrt{3}\,\theta\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+$$

$$144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3}\Big) -$$

$$\left(r^4 \theta\right) \Big/ \Big(3 \times 2^{2/3} \Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 +$$
$$144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3}\Big) +$$

$$\left(\mathbb{i}\, r^4 \theta\right) \Big/ \Big(2^{2/3}\sqrt{3}\Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 +$$
$$144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3}\Big) - \left(2^{1/3} r^2 v^2 \theta\right) \Big/$$
$$\Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 + 144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 -$$
$$2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 +\right.}$$
$$\left.432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)\Big)^{1/3} +$$

$$\left(\mathbb{i}\, 2^{1/3}\sqrt{3}\, r^2 v^2 \theta\right) \Big/ \Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 +$$
$$144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3} -$$

$$\frac{1}{6 \times 2^{1/3}\theta}\Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 + 144\pi r^4 v^2 \theta^2 +$$
$$108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3} - \frac{1}{2 \times 2^{1/3}\sqrt{3}\,\theta}$$
$$\mathbb{i}\Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta + 24\pi r^6 \theta^2 + 144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 -$$
$$2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 +\right.}$$
$$\left.432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)\Big)^{1/3}\Bigg)\Bigg\},$$

$$\Bigg\{c \to \sqrt{\Bigg(-\frac{r^2}{3} + \frac{4\pi r^2}{3\theta} + \left(4 \times 2^{1/3}\pi r^4\right) \Big/ \Big(3\Big(128\pi^3 r^6 - 96\pi^2 r^6 \theta - 288\pi^2 r^4 v^2 \theta +}$$
$$24\pi r^6 \theta^2 + 144\pi r^4 v^2 \theta^2 + 108\pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 +$$
$$3\sqrt{3}\sqrt{\left(-256\pi^3 r^6 v^6 \theta^3 + 192\pi^2 r^6 v^6 \theta^4 + 432\pi^2 r^4 v^8 \theta^4 - 48\pi r^6 v^6 \theta^5 - 216\pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\Big)^{1/3}\Big) - \left(4\,\mathbb{i}\, 2^{1/3}\pi r^4\right) \Big/$$

$$\left(\sqrt{3}\ \left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)+$$

$$\left(4\times 2^{1/3}\,\pi\,r^2\,v^2\right)\Big/\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}-$$

$$\left(4\,\mathbb{i}\,2^{1/3}\,\sqrt{3}\,\pi\,r^2\,v^2\right)\Big/\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}-\left(8\times 2^{1/3}\,\pi^2\,r^4\right)\Big/$$

$$\left(3\,\theta\,\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)+$$

$$\left(8\,\mathbb{i}\,2^{1/3}\,\pi^2\,r^4\right)\Big/\left(\sqrt{3}\,\theta\,\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)-$$

$$\left(r^4\,\theta\right)\Big/\left(3\times 2^{2/3}\,\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)+$$

$$\left(\mathbb{i}\,r^4\,\theta\right)\Big/\left(2^{2/3}\,\sqrt{3}\,\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)-$$

$$\left(2^{1/3}\,r^2\,v^2\,\theta\right)\Big/\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}+$$

$$\left(\mathbb{i}\, 2^{1/3}\, \sqrt{3}\, r^2 v^2 \theta\right) \Big/ \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3} -$$

$$\frac{1}{6 \times 2^{1/3} \theta} \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3} - \frac{1}{2 \times 2^{1/3} \sqrt{3}\, \theta}$$

$$\mathbb{i} \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3} \Bigg) \Big\},$$

$$\Big\{c \to -\sqrt{\Bigg(-\frac{r^2}{3} + \frac{4 \pi r^2}{3 \theta} + \left(4 \times 2^{1/3} \pi r^4\right) \Big/ \left(3 \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3}\right) + \left(4\, \mathbb{i}\, 2^{1/3} \pi r^4\right) \Big/}$$

$$\left(\sqrt{3} \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3}\right) +$$

$$\left(4 \times 2^{1/3} \pi r^2 v^2\right) \Big/ \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3} +$$

$$\left(4\, \mathbb{i}\, 2^{1/3} \sqrt{3}\, \pi r^2 v^2\right) \Big/ \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3} - \left(8 \times 2^{1/3} \pi^2 r^4\right) \Big/$$

$$\left(3 \theta \left(128 \pi^3 r^6 - 96 \pi^2 r^6 \theta - 288 \pi^2 r^4 v^2 \theta + 24 \pi r^6 \theta^2 + 144 \pi r^4 v^2 \theta^2 + 108 \pi r^2 v^4 \theta^2 - 2 r^6 \theta^3 - 18 r^4 v^2 \theta^3 - 27 r^2 v^4 \theta^3 + 3\sqrt{3}\sqrt{\left(-256 \pi^3 r^6 v^6 \theta^3 + 192 \pi^2 r^6 v^6 \theta^4 + 432 \pi^2 r^4 v^8 \theta^4 - 48 \pi r^6 v^6 \theta^5 - 216 \pi r^4 v^8 \theta^5 + 4 r^6 v^6 \theta^6 + 27 r^4 v^8 \theta^6\right)}\right)^{1/3}\right) -$$

$$\left(8\,i\,2^{1/3}\,\pi^2\,r^4\right)\Big/\left(\sqrt{3}\,\theta\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)-$$

$$\left(r^4\,\theta\right)\Big/\left(3\times 2^{2/3}\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)-$$

$$\left(i\,r^4\,\theta\right)\Big/\left(2^{2/3}\,\sqrt{3}\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\right)-$$

$$\left(2^{1/3}\,r^2\,v^2\,\theta\right)\Big/\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}-$$

$$\left(i\,2^{1/3}\,\sqrt{3}\,r^2\,v^2\,\theta\right)\Big/\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}-$$

$$\frac{1}{6\times 2^{1/3}\,\theta}\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}+\frac{1}{2\times 2^{1/3}\,\sqrt{3}\,\theta}$$

$$i\left(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\,\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\right)^{1/3}\Bigg)\Bigg\},$$

$$\Bigg\{c\to\sqrt{\Bigg(-\frac{r^2}{3}+\frac{4\,\pi\,r^2}{3\,\theta}+\left(4\times 2^{1/3}\,\pi\,r^4\right)\Big/\Bigg(3\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-}$$

$$27\, r^2\, v^4\, \theta^3 + 3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 -\right.}$$

$$\left.\left.48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) +$$

$$\left(4\, \mathbb{i}\, 2^{1/3}\, \pi\, r^4\right) \Big/ \left(\sqrt{3}\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 -\right.}$$

$$\left.\left.48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) +$$

$$\left(4 \times 2^{1/3}\, \pi\, r^2\, v^2\right) \Big/ \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\right.}$$

$$\left.\left.\pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3} +$$

$$\left(4\, \mathbb{i}\, 2^{1/3}\, \sqrt{3}\, \pi\, r^2\, v^2\right) \Big/ \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\, \pi\, r^6\, v^6\right.}$$

$$\left.\left.\theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3} - \left(8 \times 2^{1/3}\, \pi^2\, r^4\right) \Big/$$

$$\left(3\, \theta\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 + 144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 -\right.\right.$$

$$2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 + 3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 +\right.}$$

$$\left.\left.432\, \pi^2\, r^4\, v^8\, \theta^4 - 48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) -$$

$$\left(8\, \mathbb{i}\, 2^{1/3}\, \pi^2\, r^4\right) \Big/ \left(\sqrt{3}\, \theta\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 -\right.}$$

$$\left.\left.48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) -$$

$$\left(r^4\, \theta\right) \Big/ \left(3 \times 2^{2/3}\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 -\right.}$$

$$\left.\left.48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) -$$

$$\left(\mathbb{i}\, r^4\, \theta\right) \Big/ \left(2^{2/3}\, \sqrt{3}\, \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 +\right.\right.$$

$$144\, \pi\, r^4\, v^2\, \theta^2 + 108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\, \sqrt{3}\, \sqrt{\left(-256\, \pi^3\, r^6\, v^6\, \theta^3 + 192\, \pi^2\, r^6\, v^6\, \theta^4 + 432\, \pi^2\, r^4\, v^8\, \theta^4 -\right.}$$

$$\left.\left.48\, \pi\, r^6\, v^6\, \theta^5 - 216\, \pi\, r^4\, v^8\, \theta^5 + 4\, r^6\, v^6\, \theta^6 + 27\, r^4\, v^8\, \theta^6\right)\right)^{1/3}\Bigg) -$$

$$\left(2^{1/3}\, r^2\, v^2\, \theta\right) \Big/ \left(128\, \pi^3\, r^6 - 96\, \pi^2\, r^6\, \theta - 288\, \pi^2\, r^4\, v^2\, \theta + 24\, \pi\, r^6\, \theta^2 + 144\, \pi\, r^4\, v^2\, \theta^2 +\right.$$

$$108\, \pi\, r^2\, v^4\, \theta^2 - 2\, r^6\, \theta^3 - 18\, r^4\, v^2\, \theta^3 - 27\, r^2\, v^4\, \theta^3 +$$

$$3\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\Big)^{1/3}-$$

$$\left(\mathbb{i}\,2^{1/3}\,\sqrt{3}\,r^2\,v^2\,\theta\right)\Big/\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\Big)^{1/3}-$$

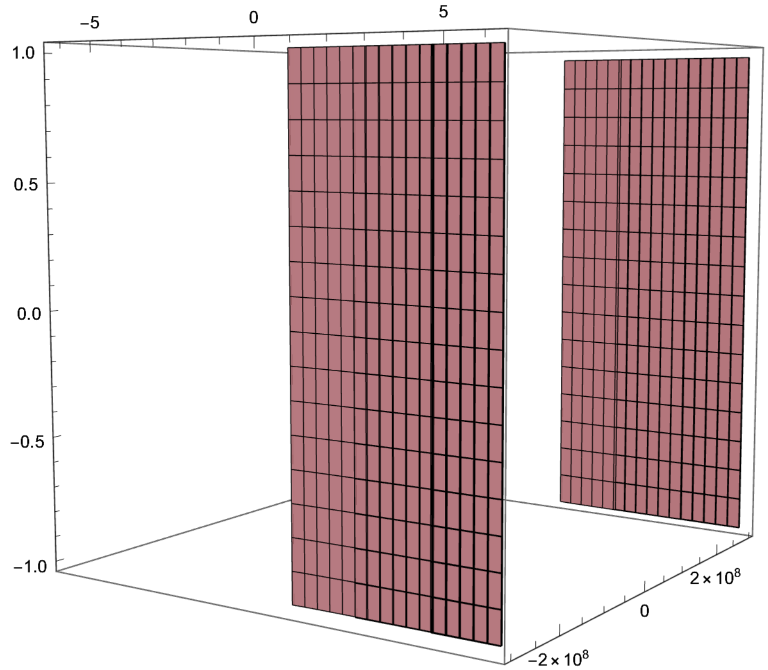
$$\frac{1}{6\times 2^{1/3}\,\theta}\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\Big)^{1/3}+$$

$$\frac{1}{2\times 2^{1/3}\,\sqrt{3}\,\theta}\,\mathbb{i}\,\Big(128\,\pi^3\,r^6-96\,\pi^2\,r^6\,\theta-288\,\pi^2\,r^4\,v^2\,\theta+24\,\pi\,r^6\,\theta^2+144\,\pi\,r^4\,v^2\,\theta^2+108\,\pi\,r^2\,v^4\,\theta^2-2\,r^6\,\theta^3-18\,r^4\,v^2\,\theta^3-27\,r^2\,v^4\,\theta^3+3\sqrt{3}\,\sqrt{\left(-256\,\pi^3\,r^6\,v^6\,\theta^3+192\,\pi^2\,r^6\,v^6\,\theta^4+432\,\pi^2\,r^4\,v^8\,\theta^4-48\,\pi\,r^6\,v^6\,\theta^5-216\,\pi\,r^4\,v^8\,\theta^5+4\,r^6\,v^6\,\theta^6+27\,r^4\,v^8\,\theta^6\right)}\Big)^{1/3}\Big)\Big\}\Big\}$$

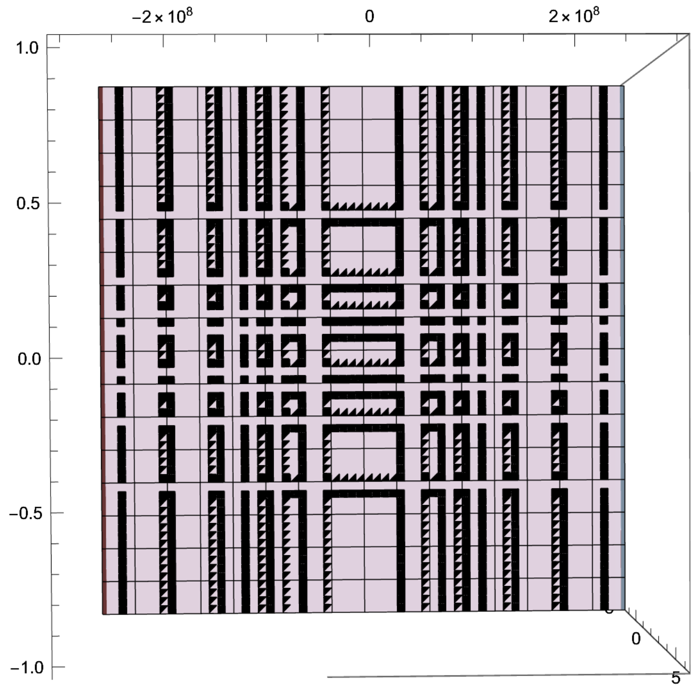
$$\mathbf{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}\,\sqrt{1-\frac{v^2}{c^2}}==c\left((\theta\,/\,(2\,\pi))\Big/\sqrt{1-\frac{v^2}{c^2}}\right),\ r\right]$$

$$\left\{\left\{r\to-\frac{\mathbb{i}\,c^3\,\sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\,\pi+\theta}}\right\},\left\{r\to\frac{\mathbb{i}\,c^3\,\sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\,\pi+\theta}}\right\}\right\}$$

```
ContourPlot3D[ⅈ c^3 Sqrt[θ]/((c - v) (c + v) Sqrt[-4 π + θ]), {θ, -2 π, 2 π},
 {v, -(2.99792458*10^8), (2.99792458*10^8)}, {r, -1, 1}]
```



```
ContourPlot3D[{-(ⅈ c^3 Sqrt[θ])/((c - v) (c + v) Sqrt[-4 π + θ]), (ⅈ c^3 Sqrt[θ])/((c - v) (c + v) Sqrt[-4 π + θ])},
 {θ, -2 π, 2 π}, {v, -(2.99792458 * 10^8), (2.99792458 * 10^8)}, {r, -1, 1}]
```



During this section of the paper ' s main body,
we will discuss the gradient found when we make a contour plot of the

"We can now define a fourth type of order among the elements of a retinal image. It would be a serial change in the length of the cycles of a repetitive order...If a repetitive order is the stimulus for visual texture, this would constitute a gradient of the density of texture" (The Visual World, 67). I am proposing with the relativisitic interpretations of the functions of the height of the cone, that

VIII. The Height of the Cone Relates to Stimulus Energy in a Room of Constant Illumination

IX. The Projective Plane per unit of stimulus from velocity of light through the height of the cone.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}\left(\sqrt{1-\frac{v^2}{c^2}}\,\theta\right)==\right.$$

$$\left.c\left((\theta/(2\pi))\Big/\sqrt{1-((v)\text{^}2/c\text{^}2)}\right),v\right]$$

$$\left\{\left\{v\to-\sqrt{-\frac{4c^2\pi r^2\theta}{-4\pi r^2\theta+r^2\theta^2}+\frac{c^2r^2\theta^2}{-4\pi r^2\theta+r^2\theta^2}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2\theta+r^2\theta^2}}\right\},\right.$$

$$\left\{v\to\sqrt{-\frac{4c^2\pi r^2\theta}{-4\pi r^2\theta+r^2\theta^2}+\frac{c^2r^2\theta^2}{-4\pi r^2\theta+r^2\theta^2}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2\theta+r^2\theta^2}}\right\},$$

$$\left\{v\to-\sqrt{-\frac{4c^2\pi r^2\theta}{-4\pi r^2\theta+r^2\theta^2}+\frac{c^2r^2\theta^2}{-4\pi r^2\theta+r^2\theta^2}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2\theta+r^2\theta^2}}\right\},$$

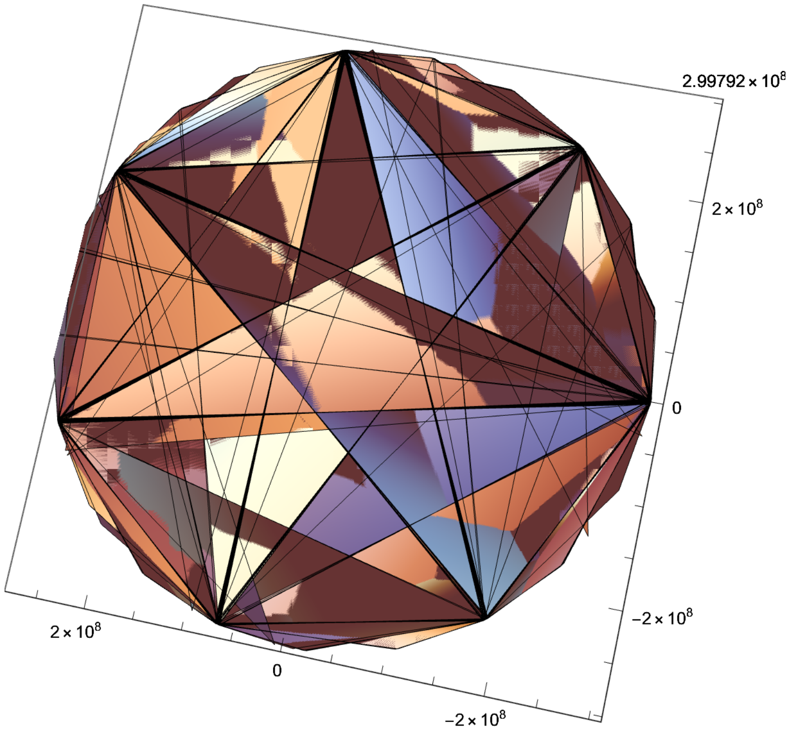
$$\left.\left\{v\to\sqrt{-\frac{4c^2\pi r^2\theta}{-4\pi r^2\theta+r^2\theta^2}+\frac{c^2r^2\theta^2}{-4\pi r^2\theta+r^2\theta^2}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2\theta+r^2\theta^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[-\sqrt{-\frac{4c^2\pi r^2\theta}{-4\pi r^2\theta+r^2\theta^2}+\frac{c^2r^2\theta^2}{-4\pi r^2\theta+r^2\theta^2}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2\theta+r^2\theta^2}},\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

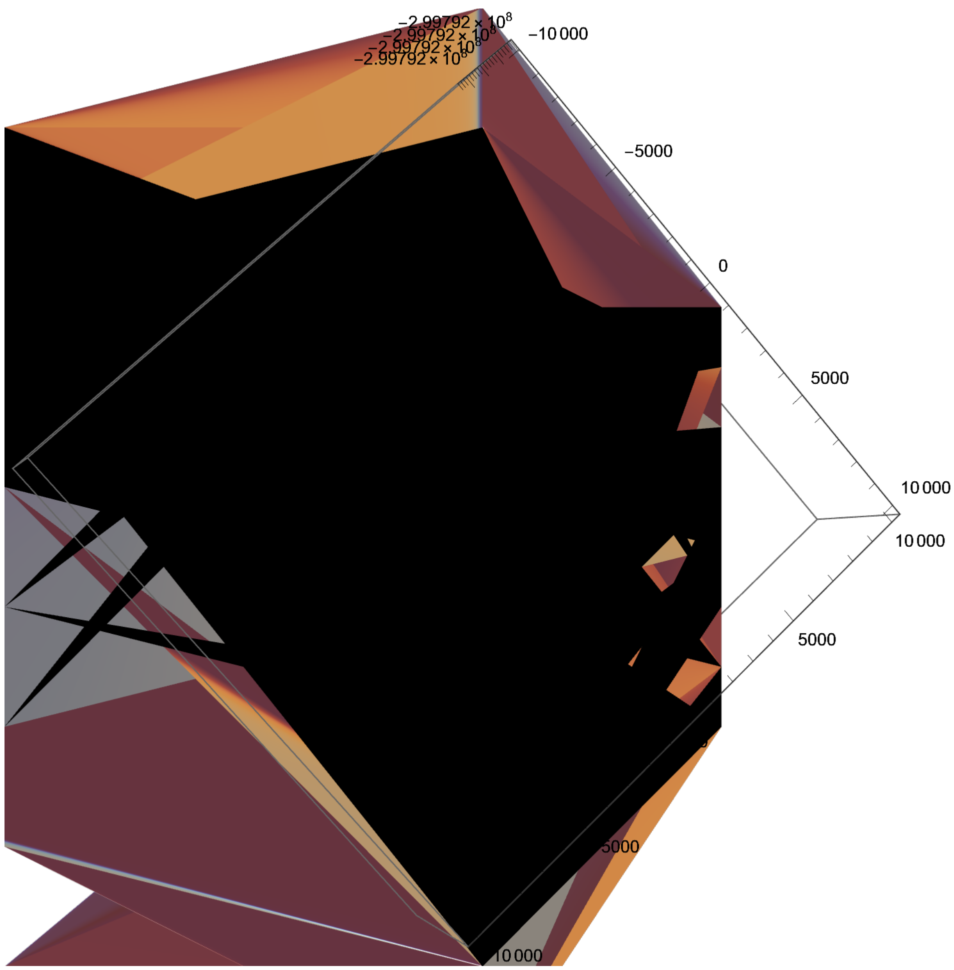
```
{{v → -0.5` √(-(2.` (-1.615521742612498`*^34 +
        2.2588181335162941`*^18 r^2 θ - 1.7975103574736352`*^17 r^2 θ^2)) /
     (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) -
   2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)^2 /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
       (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
           8.07760871306249`*^33 r^2 θ^2)) /
```

```
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
{v → 0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
        1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) -
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)^2 /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
       (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
            8.07760871306249`*^33 r^2 θ^2)) /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
{v → -0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
        1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)^2 /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
       (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
            8.07760871306249`*^33 r^2 θ^2)) /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
{v → 0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
        1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)^2 /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
       (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
            8.07760871306249`*^33 r^2 θ^2)) /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))}}
```

```
RevolutionPlot3D[
 {(-0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)) /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
       2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
              1.7975103574736352`*^17 r^2 θ^2)^2 / (8.987551787368176`*^16 -
              12.566370614359172` r^2 θ + r^2 θ^2)^2 - (4.` (7.2597926626745534`*^50 -
               1.015062247661201`*^35 r^2 θ + 8.07760871306249`*^33 r^2 θ^2)) /
            (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2))))),
  (0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)) /
        (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
       2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
              1.7975103574736352`*^17 r^2 θ^2)^2 / (8.987551787368176`*^16 -
              12.566370614359172` r^2 θ + r^2 θ^2)^2 - (4.` (7.2597926626745534`*^50 -
               1.015062247661201`*^35 r^2 θ + 8.07760871306249`*^33 r^2 θ^2)) /
            (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))))},
 {r, -10 000, 10 000}, {θ, -20 000 π, 20 000
   π}]
```


2.99792 × 10^8
2 × 10^8
0
−2 × 10^8
2 × 10^8
0
−2 × 10^8

```
RevolutionPlot3D[
 {(-0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r² θ -
          1.7975103574736352`*^17 r² θ²)) /
      (8.987551787368176`*^16 - 12.566370614359172` r² θ + r² θ²) -
     2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r² θ -
            1.7975103574736352`*^17 r² θ²)² / (8.987551787368176`*^16 -
            12.566370614359172` r² θ + r² θ²)² - (4.` (7.2597926626745534`*^50 -
             1.015062247661201`*^35 r² θ + 8.07760871306249`*^33 r² θ²)) /
          (8.987551787368176`*^16 - 12.566370614359172` r² θ + r² θ²))))},
 {r, -10000, 10000}, {θ, -20000 π, 20000
   π}]
```



VIII. Theoretical Relations of Point to Point Pickup of Invariance through the Imaginary Plane

We have discussed the geometry of a cone, and shown that when a substance of any kind travels through the height of the cone, we can solve for its velocity in two different ways. We can take the first derivative of the maximum distance of the height of the cone with respect to time, and understand that the wavelength of light received has an actual initial radius equal to the wavelength of light received by the perceiver. We have also shown that we can solve for a velocity through the height of the cone by application of relativity and the initial principle that η = r at the maximum height of the cone.

We will now show that it's possible to include imaginary solutions to theta during the comination of multiple points in the visual field.

$$\frac{\sqrt{3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2}}{\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}} =$$

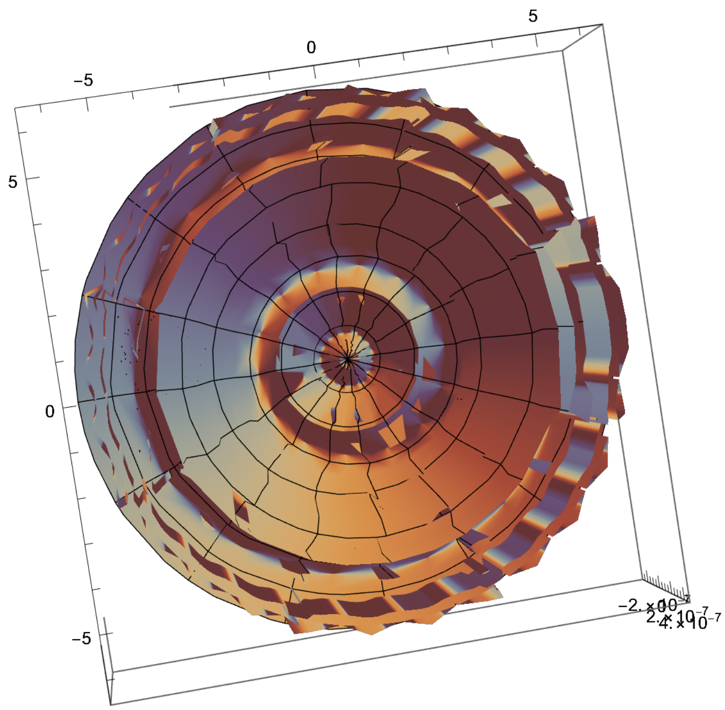
velocity

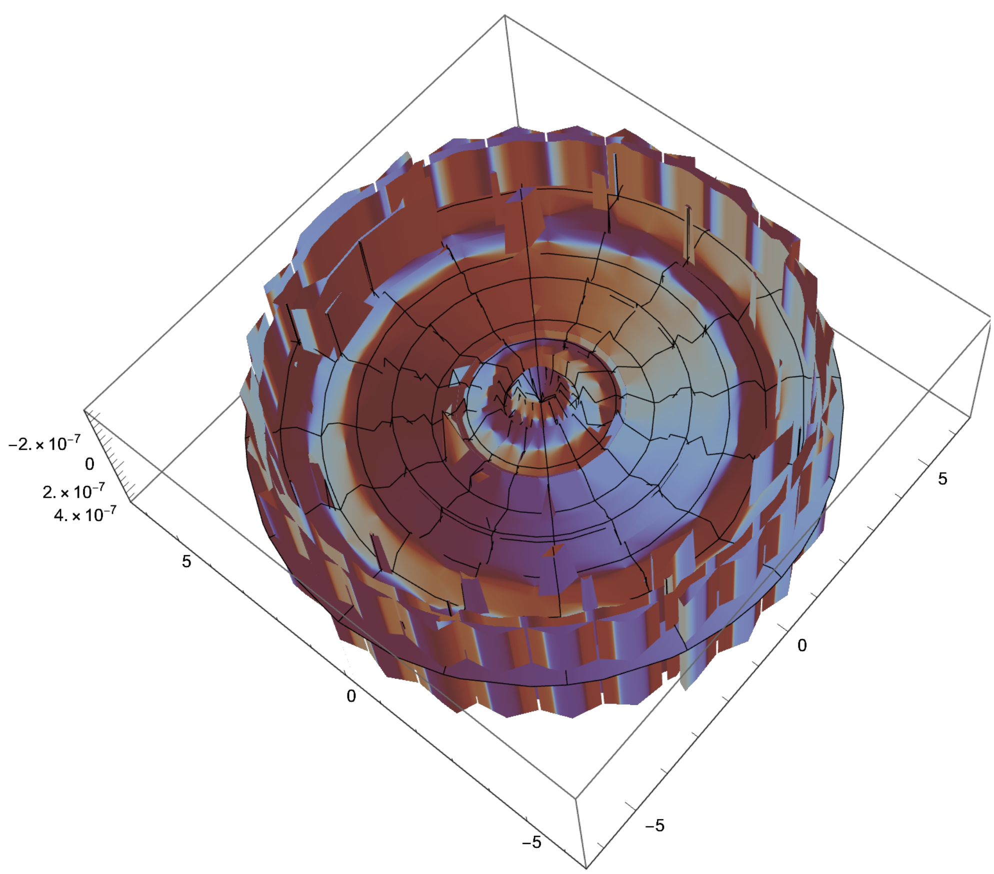
2π

$$D\left[\frac{\sqrt{3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2}}{\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}},\ \theta\right]$$

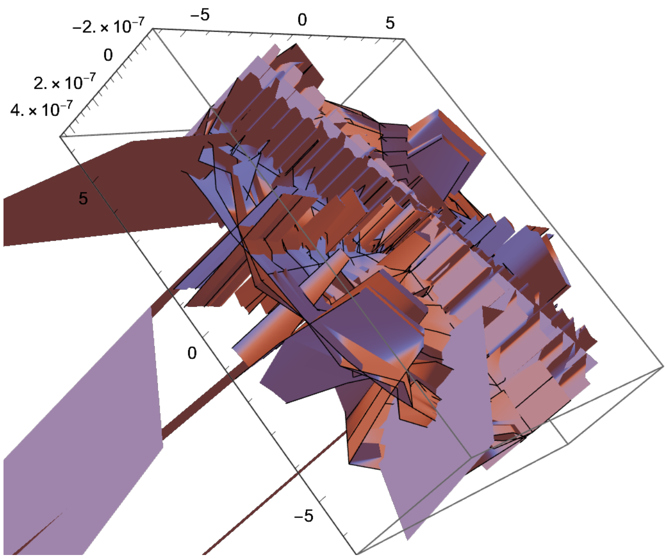
$$2\pi\left(\frac{-1.12941\times10^{18} + 1.79751\times10^{17}\,\theta}{2\sqrt{39.4784 - 12.5664\,\theta + \theta^2}\ \sqrt{3.54814\times10^{18} - 1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2}} - \frac{(-12.5664 + 2\,\theta)\sqrt{3.54814\times10^{18} - 1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2}}{2\left(39.4784 - 12.5664\,\theta + \theta^2\right)^{3/2}}\right)$$

```
RevolutionPlot3D[2 π ((-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ) /
    (2 √(39.47841760435743` - 12.566370614359172` θ + (θ)^2)
      √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2)) -
   ((-12.566370614359172` + 2 θ) √(3.5481432270250993`*^18 -
          1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
    (2 (39.47841760435743` - 12.566370614359172` θ + θ^2)^(3/2))), {θ, -2 π, 2 π}]
```


−5
0
5
5
0
−5


−2. × 10^−7
0
2. × 10^−7
4. × 10^−7
5
0
−5
−5
0
5

```
RevolutionPlot3D[2 π ((-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ) /
    (2 Sqrt[39.47841760435743` - 12.566370614359172` θ + (θ)^2]
      Sqrt[(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
         8.987551787368176`*^16 θ^2)]) -
   ((-12.566370614359172` + 2 θ) Sqrt[(3.5481432270250993`*^18 -
         1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)]) /
    (2 (39.47841760435743` - 12.566370614359172` θ + θ^2)^(3/2))), {β, -2 π, 2 π},
 {θ,
  -2
   π,
  2
   π}]
```



$$\left\{\left\{\theta \to \frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}} + \left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right\},\right.$$

$$\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1+i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1-i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right\},$$

$$\left.\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right\}\right\}$$

$$\left(\frac{4\pi}{3}+\frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)$$

SphericalPlot3D$\Big[\Big\{\Big(\sqrt{}\,(3.5481432270250993\text{`}*\text{^}18-1.1294090667581471\text{`}*\text{^}18\,((\theta)))+$

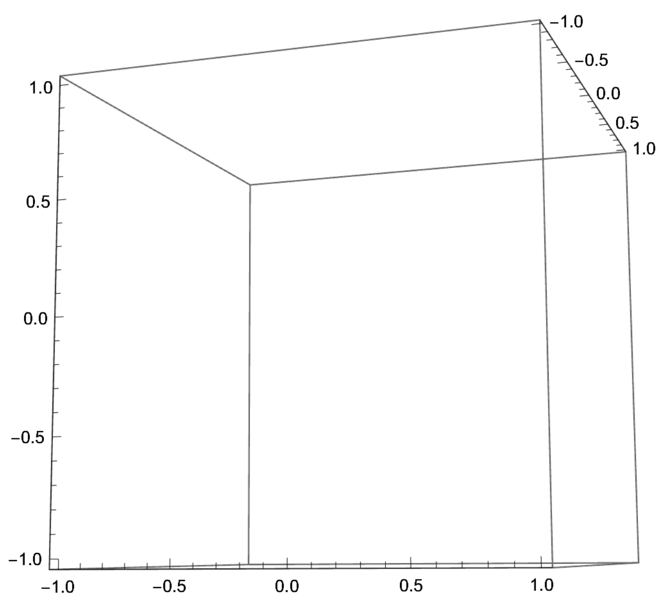
$8.987551787368176\text{`}*\text{^}16$

$\left(\left(\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\left(\left(\frac{2}{3}\left(2\pi-\frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}}+\left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)\right)\right)\right)\Big/$

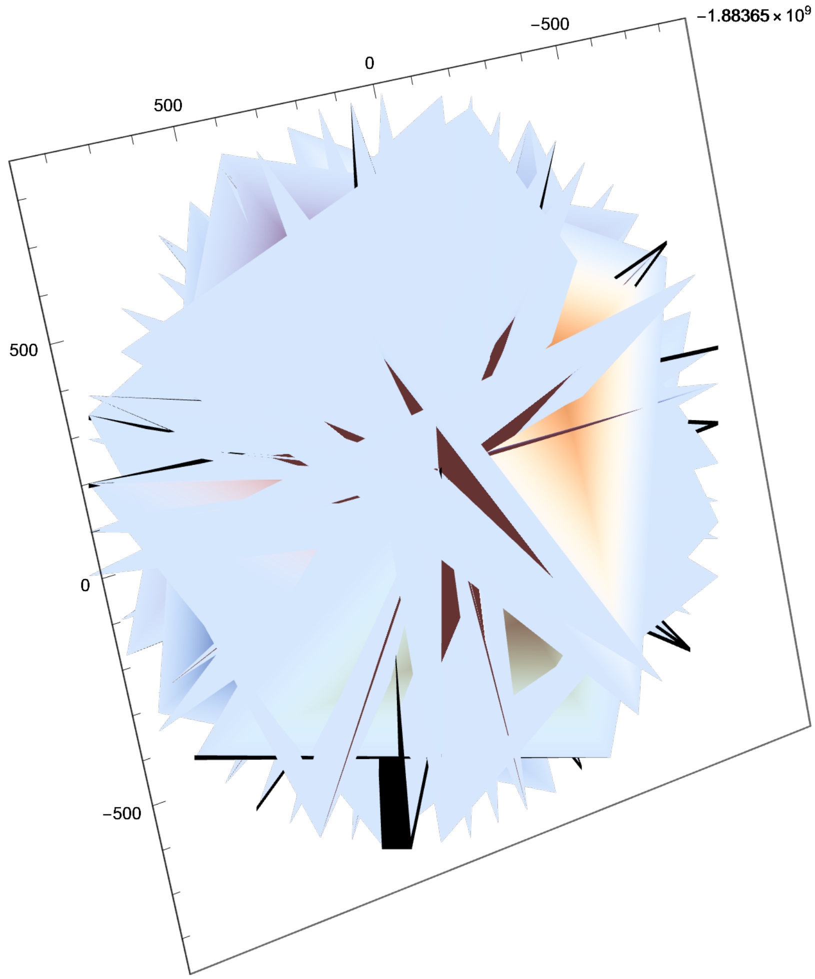
$\Big(\sqrt{}\left(39.47841760435743\text{`}-12.566370614359172\text{`}\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\right)+$

$\left(\left(\frac{2}{3}\left(2\pi-\frac{2\pi}{\left(17+3\sqrt{33}\right)^{1/3}}+\left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)\left(\frac{4\pi}{3}+\frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\right.\right.$

$\left.\left.\frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)\Big)\Big\}$, $\{\beta, -\pi, \pi\}$, $\{\theta, -2\pi, 2\pi\}\Big]$

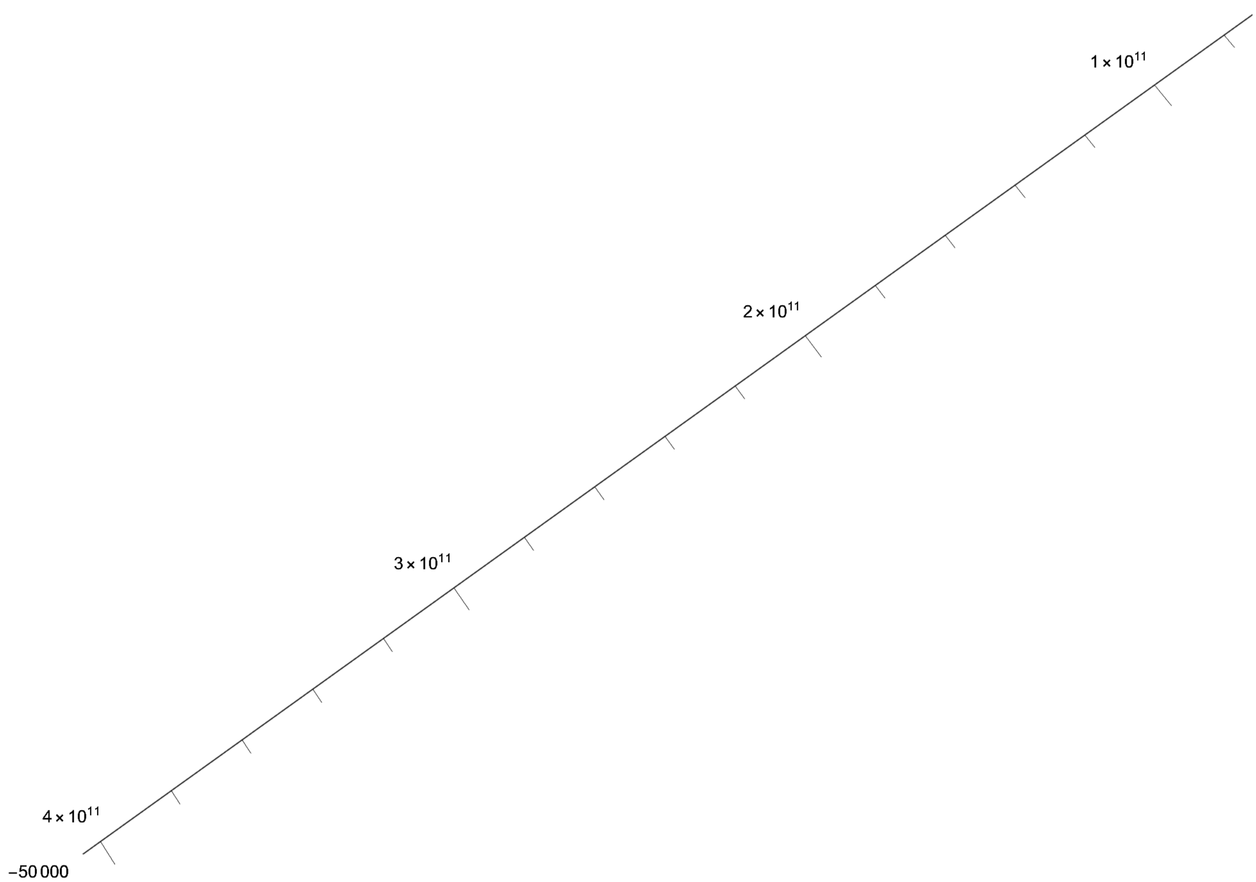


```
SphericalPlot3D[
 {Sqrt[(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (((2 (π - Sqrt[π^2 - π^2 Sin[β]^2])))) +
       8.987551787368176`*^16 (((2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))^2)))/
    (Sqrt[(39.47841760435743` - 12.566370614359172` ((2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) +
          ((2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) (4 π/3 + (2 (1 - ⅈ Sqrt[3]) π)/(3 (17 + 3 Sqrt[33])^(1/3)) -
               1/3 (1 + ⅈ Sqrt[3]) (17 + 3 Sqrt[33])^(1/3) π)))))])]}, {β, -π, π}, {θ, -25 π, 25 π}]
```



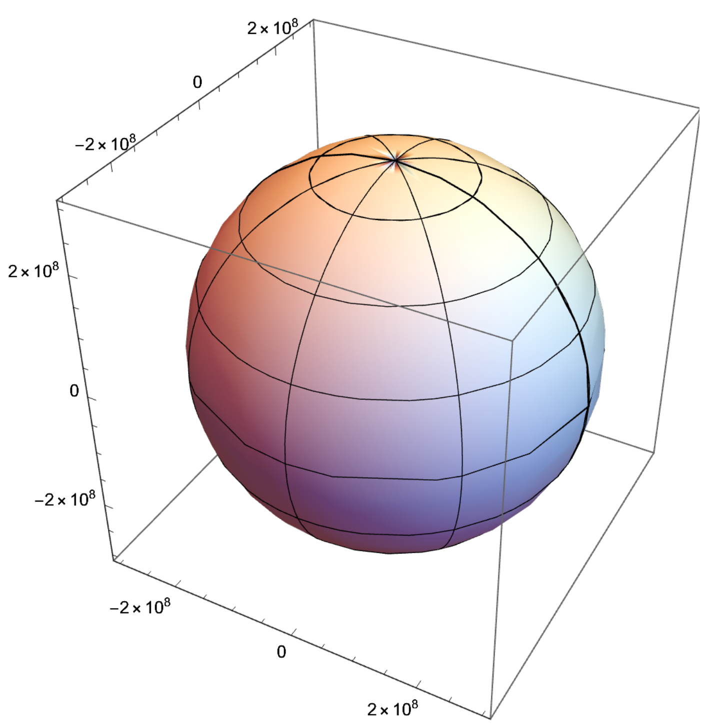
SphericalPlot3D$\Big[$

$$\left\{\left(\sqrt{}\left(3.5481432270250993\text{`}*\text{^}18-1.1294090667581471\text{`}*\text{^}18\ (\theta)+8.987551787368176\text{`}*\text{^}16\ \left((\theta)^{2}\right)\right)\right)\Big/\left(\sqrt{\left(39.47841760435743\text{`}-12.566370614359172\text{`}\ (\theta)+\left(\left(2\left(\pi-\sqrt{\pi^{2}-\pi^{2}\,\mathrm{Sin}[\beta]^{2}}\right)\right)\left(\frac{4\pi}{3}+\frac{2\left(1-i\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)\right)\right)}\right)\right\},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Big]$$

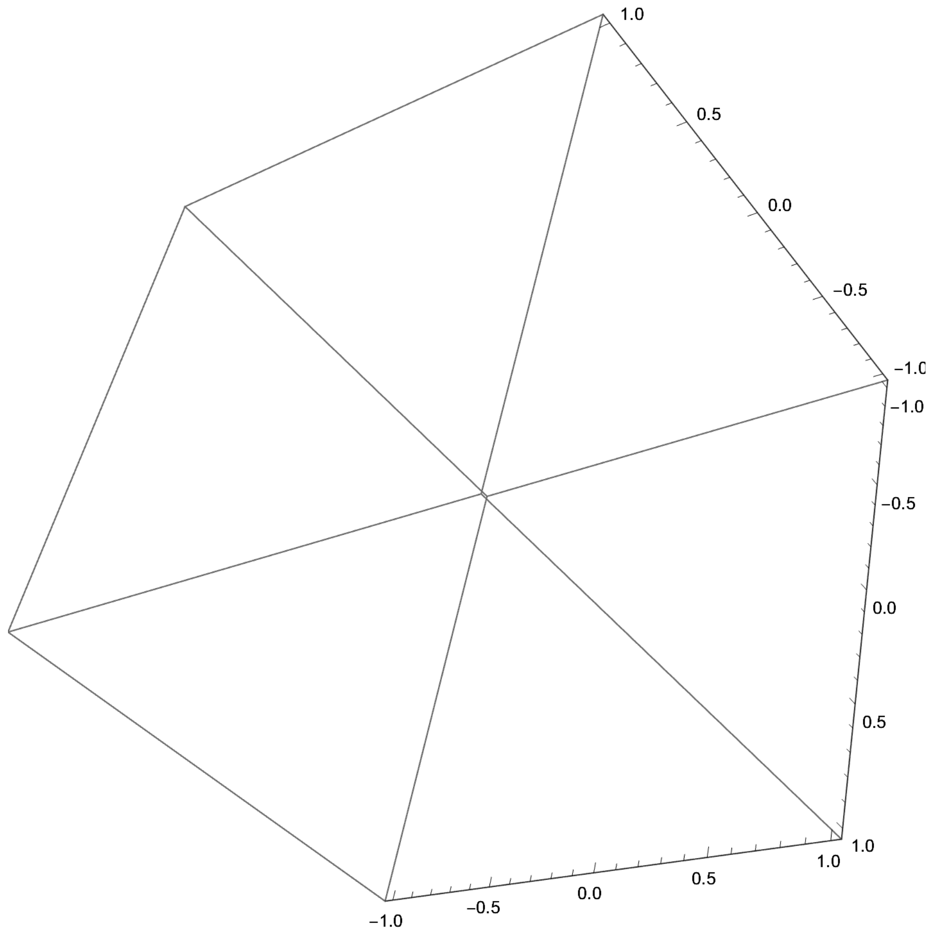


$$\text{SphericalPlot3D}\Big[\Big\{\Big(\sqrt{}\,(3.5481432270250993\text{`*^}18 - 1.1294090667581471\text{`*^}18\,(\theta) + 8.987551787368176\text{`*^}16\,((\theta)^2))\Big)\Big/\left(\sqrt{\left(39.47841760435743\text{`} - 12.566370614359172\text{`}\left(\frac{4\pi}{3} + \frac{2\left(1 - i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi\right) + \theta^2\right)}\right),$$

$$\left(-\left(1.\text{`}\sqrt{\left(3.5481432270250993\text{`*^}18 - 1.1294090667581471\text{`*^}18\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) + 8.987551787368176\text{`*^}16\left(\frac{4\pi}{3} + \frac{2\left(1 - i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi\right)^2\right)}\Big/\left(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \theta^2}\right)\right)\right)\Big\}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\Big]$$



$$
\begin{aligned}
&\text{SphericalPlot3D}\Bigg[\Bigg\{\Bigg(\sqrt{\Bigg(3.5481432270250993\text{`}*\text{^}18 - 1.1294090667581471\text{`}*\text{^}18}\\
&\qquad\left(\frac{4\,\pi}{3}+\frac{2\left(1-\mathbb{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathbb{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)+\\
&\qquad 8.987551787368176\text{`}*\text{^}16\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\Bigg)\Bigg)\Bigg/\\
&\quad\left(\sqrt{39.47841760435743\text{`}-12.566370614359172\text{`}\,\theta+\theta^2}\right),\\
&\Bigg(-\Bigg(1.\text{`}\sqrt{\Bigg(3.5481432270250993\text{`}*\text{^}18-1.1294090667581471\text{`}*\text{^}18}\\
&\qquad\left(2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)+8.987551787368176\text{`}*\text{^}16\\
&\qquad\left(\frac{4\,\pi}{3}+\frac{2\left(1-\mathbb{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathbb{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right)^2\Bigg)\Bigg)\Bigg/\\
&\quad\left(\sqrt{39.47841760435743\text{`}-12.566370614359172\text{`}\,\theta+\theta^2}\right)\Bigg)\Bigg\},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Bigg]
\end{aligned}
$$


1.0
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0
1.0
0.5
0.0
−0.5
−1.0

```
D[(√(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
  (Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]), θ]
```

$$\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{2\sqrt{39.4784-12.5664\,\theta+\theta^2}\,\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2}}-\frac{(-12.5664+2\,\theta)\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2}}{2\left(39.4784-12.5664\,\theta+\theta^2\right)^{3/2}}$$

```
D[Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π), θ]
```

```
D[(4 π r^2 - 2 r^2 θ)/(4 π Sqrt[4 π r^2 θ - r^2 θ^2]), θ]
```

$$-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2}{2\,\pi\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

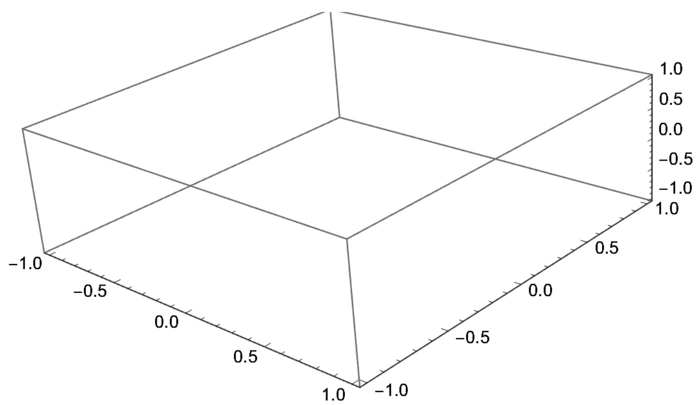
```
Solve[
 (((8 π (-(4 π r^2 - 2 r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])))^2/(8 π (4 π r^2 θ - r^2 θ^2)^(3/2)) -
          r^2/(2 π Sqrt[4 π r^2 θ - r^2 θ^2]))) / (c^4)) T ==
  ((8 π ((-1.1294090667581471`*^18 +
           1.7975103574736352`*^17 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) /
         (2 Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]
           √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
              8.987551787368176`*^16 θ^2)) -
        ((-12.566370614359172` + 2 θ) √(3.5481432270250993`*^18 -
              1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
         (2 (39.47841760435743` - 12.566370614359172` θ + θ^2)^(3/2)))) / (c^4)), r]
```

{{}}

```
Solve[
 ((8 π G) / (c^4)) T == ((8 π ((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2)) /
       (√(39.47841760435743` - 12.566370614359172` θ + θ^2))))/ (c^4)), T]
```

$$\left\{\left\{T \to \frac{0.101937\ \sqrt{3.54814\times10^{18} - 1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2}}{\sqrt{39.4784 - 12.5664\,\theta + \theta^2}}\right\}\right\}$$

```
RevolutionPlot3D[
 (0.1019367991845056` √(3.5481432270250993`*^18 - 1.1294090667581471`*^182
        (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16 θ^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), {β, -2 π, 2 π}, {θ, -2 π, 2 π}]
```

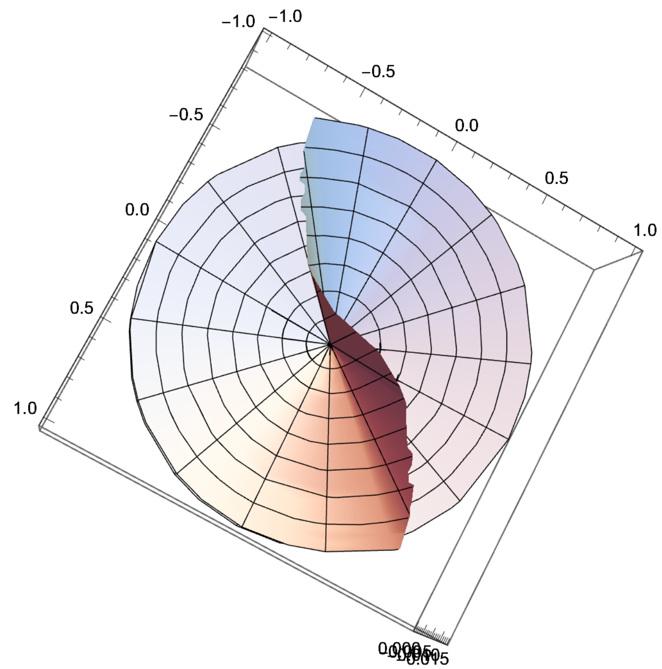



```
Solve[
 ((8 π ((0.1019367991845056` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18
             θ + 8.987551787368176`*^16 θ^2)) /
        (√(39.47841760435743` - 12.566370614359172` θ + θ^2))) / (c^4)) T ==
  ((8 π (-(4 π r^2 - 2 r^2 θ)^2/(8 π (4 π r^2 θ - r^2 θ^2)^(3/2)) - r^2/(2 π √(4 π r^2 θ - r^2 θ^2)))) / (c^4)), T]
```

$$\left\{\left\{T \to \frac{1.\left(-\frac{0.0397887\,(12.5664\,r^2 - 2.\,r^2\,\theta)^2}{(12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2)^{3/2}} - \frac{0.159155\,r^2}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}}\right)}{G}\right\}\right\}$$

```
G := 9.81
```

$$\text{RevolutionPlot3D}\left[\frac{1}{G}\,1.\grave{}\left(-\frac{0.039788735772973836\grave{}\,\left(12.566370614359172\grave{}\,r^2-2.\grave{}\,r^2\,\theta\right)^2}{\left(12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2\right)^{3/2}}-\frac{0.15915494309189535\grave{}\,r^2}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}\right),\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

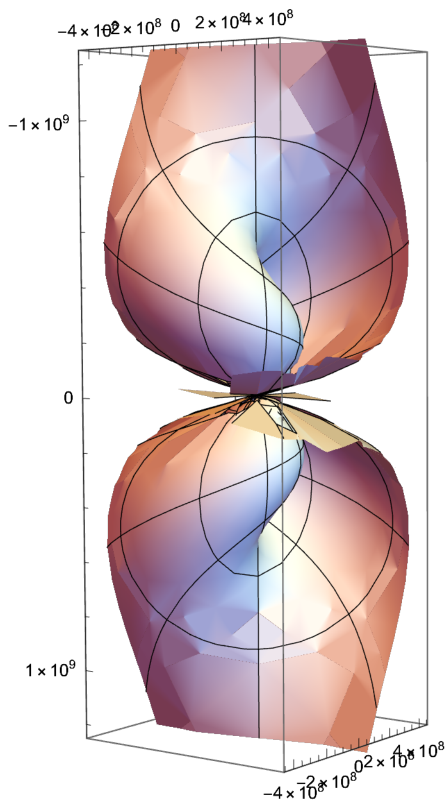


$$\text{RevolutionPlot3D}\left[\frac{1}{G}\,1.\grave{}\left(-\frac{0.039788735772973836\grave{}\,\left(12.566370614359172\grave{}\,r^2-2.\grave{}\,r^2\,\theta\right)^2}{\left(12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2\right)^{3/2}}-\frac{0.15915494309189535\grave{}\,r^2}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}\right),\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

$$\text{D}\left[\text{D}\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right],\theta\right]$$

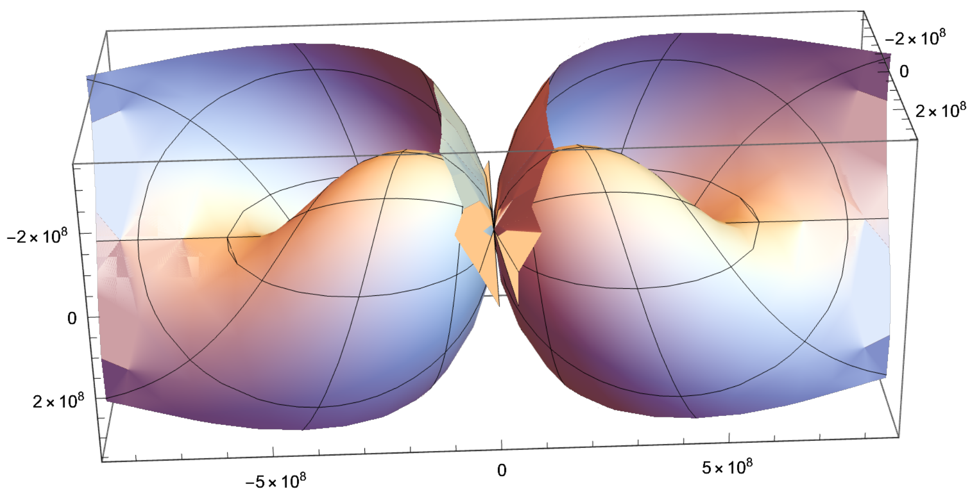
$$-\frac{\left(4\pi r^2-2r^2\theta\right)^2}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{r^2}{2\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

```
SphericalPlot3D[
 {(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 8.987551787368176`*^16
       θ^2)) / (Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]),
  (-(1.` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18
           (2 (π - Sqrt[π^2 - π^2 Sin[β]^2])) + 8.987551787368176`*^16 θ^2)) /
    (Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]))}, {β, -π, π}, {θ, -2 π, 2 π}]
```




```
RevolutionPlot3D[-(1.` √(3.5481432270250993`*^18 -
       1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
  (Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]), {θ, -2 π, 2 π}]
```

$$\texttt{SphericalPlot3D}\Big[\Big\{-\Big(1.\text{`}\sqrt{\Big(3.5481432270250993\text{`}{*}\text{^}18 - 1.1294090667581471\text{`}{*}\text{^}18 \times 2\,\pi\,\Big(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\Big) + 8.987551787368176\text{`}{*}\text{^}16\,\Big(2\,\pi\,\Big(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\Big)\Big)^2\Big)}\Big)\Big/\Big(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \theta^2}\Big),$$
$$\Big(\sqrt{\Big(3.5481432270250993\text{`}{*}\text{^}18 - 1.1294090667581471\text{`}{*}\text{^}18 \times 2\,\pi\,\Big(1+\sqrt{1-\mathrm{Sin}[\beta]^2}\Big) + 8.987551787368176\text{`}{*}\text{^}16\,\Big(2\,\pi\,\Big(1+\sqrt{1-\mathrm{Sin}[\beta]^2}\Big)\Big)^2\Big)}\Big)\Big/\Big(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \theta^2}\Big)\Big\}, \{\beta, -\pi, \pi\}, \{\theta, -2\,\pi, 2\,\pi\}\Big]$$



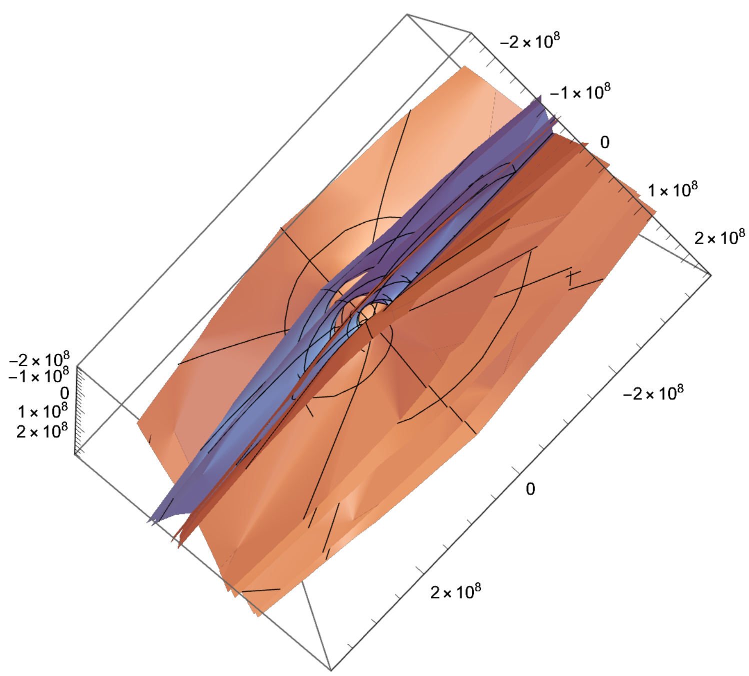
$$\texttt{D}\Big[\Big(\sqrt{\Big(3.5481432270250993\text{`}{*}\text{^}18 - 1.1294090667581471\text{`}{*}\text{^}18\,\theta + 8.987551787368176\text{`}{*}\text{^}16\,\theta^2\Big)}\Big)\Big/\Big(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \theta^2}\Big), \theta\Big]$$

$$\frac{-1.12941\times10^{18} + 1.79751\times10^{17}\,\theta}{2\,\sqrt{39.4784 - 12.5664\,\theta + \theta^2}\,\sqrt{3.54814\times10^{18} - 1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2}} - \frac{(-12.5664 + 2\,\theta)\,\sqrt{3.54814\times10^{18} - 1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2}}{2\,\left(39.4784 - 12.5664\,\theta + \theta^2\right)^{3/2}}$$

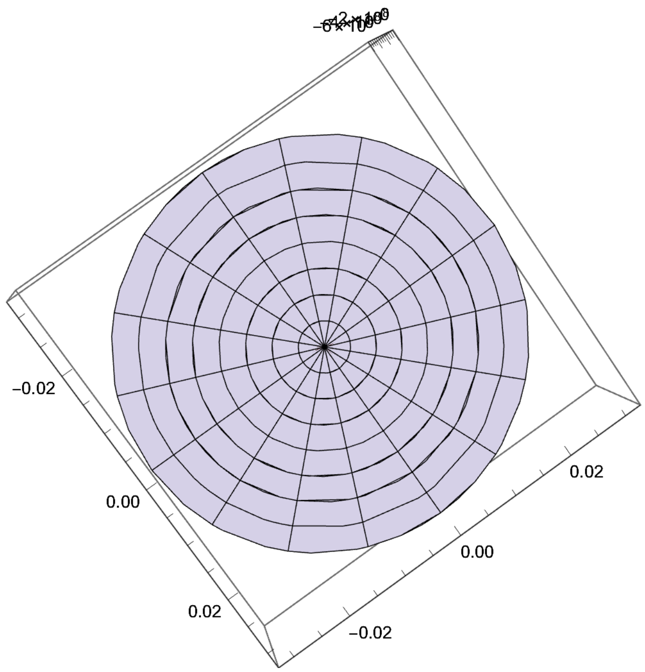
$$\texttt{Solve}\Big[\beta == \texttt{ArcSin}\Big[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\Big], \theta\Big]$$

$$\Big\{\Big\{\theta \to 2\,\pi\,\Big(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\Big)\Big\}, \Big\{\theta \to 2\,\pi\,\Big(1+\sqrt{1-\mathrm{Sin}[\beta]^2}\Big)\Big\}\Big\}$$

```
SphericalPlot3D[
 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 × 2 π (1 + Sqrt[1 - Sin[β]^2])) /
   (2 Sqrt[(39.47841760435743` - 12.566370614359172` θ + (2 π (1 + Sqrt[1 - Sin[β]^2]))^2)]
     Sqrt[(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 (2 π (1 + Sqrt[1 - Sin[β]^2]))^2)]) -
  ((-12.566370614359172` + 2 (2 π (1 + Sqrt[1 - Sin[β]^2]))) Sqrt[(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)]) /
   (2 (39.47841760435743` - 12.566370614359172` × 2 π (1 + Sqrt[1 - Sin[β]^2]) +
        (2 π (1 + Sqrt[1 - Sin[β]^2]))^2)^(3/2)), {θ, -2 π, 2 π}, {β, -π, π}]
```

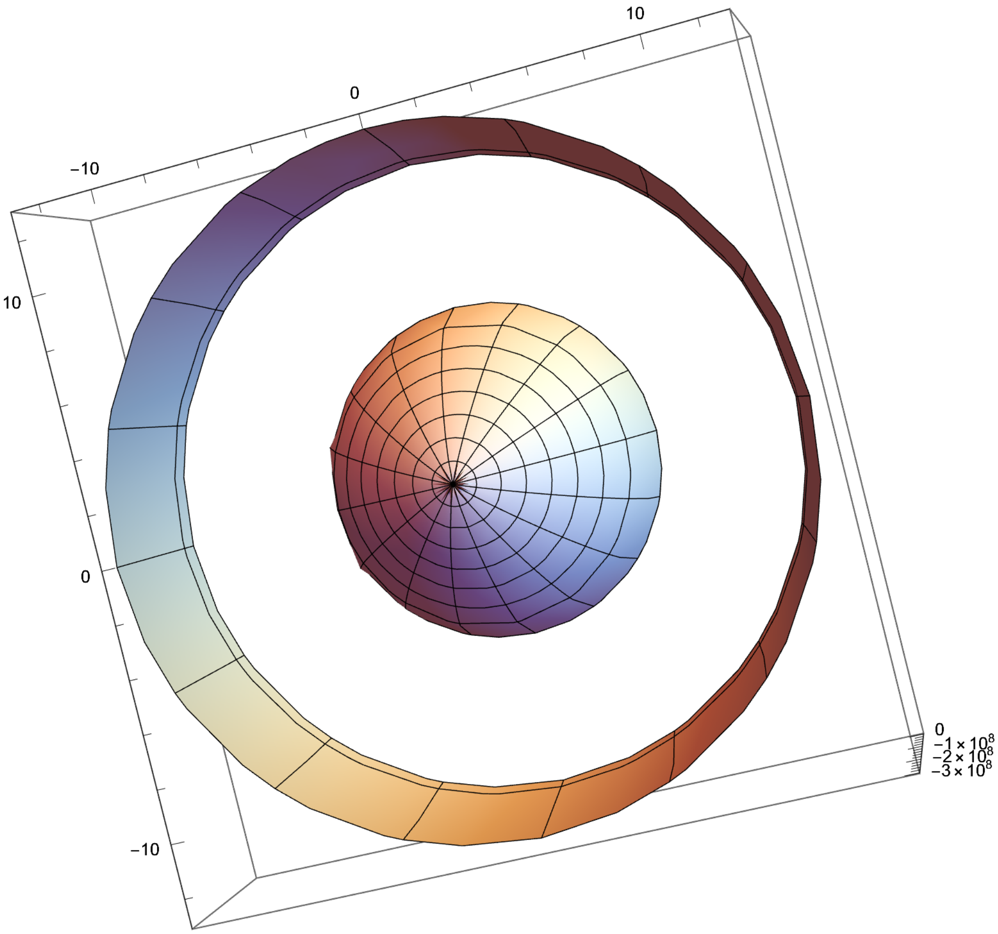


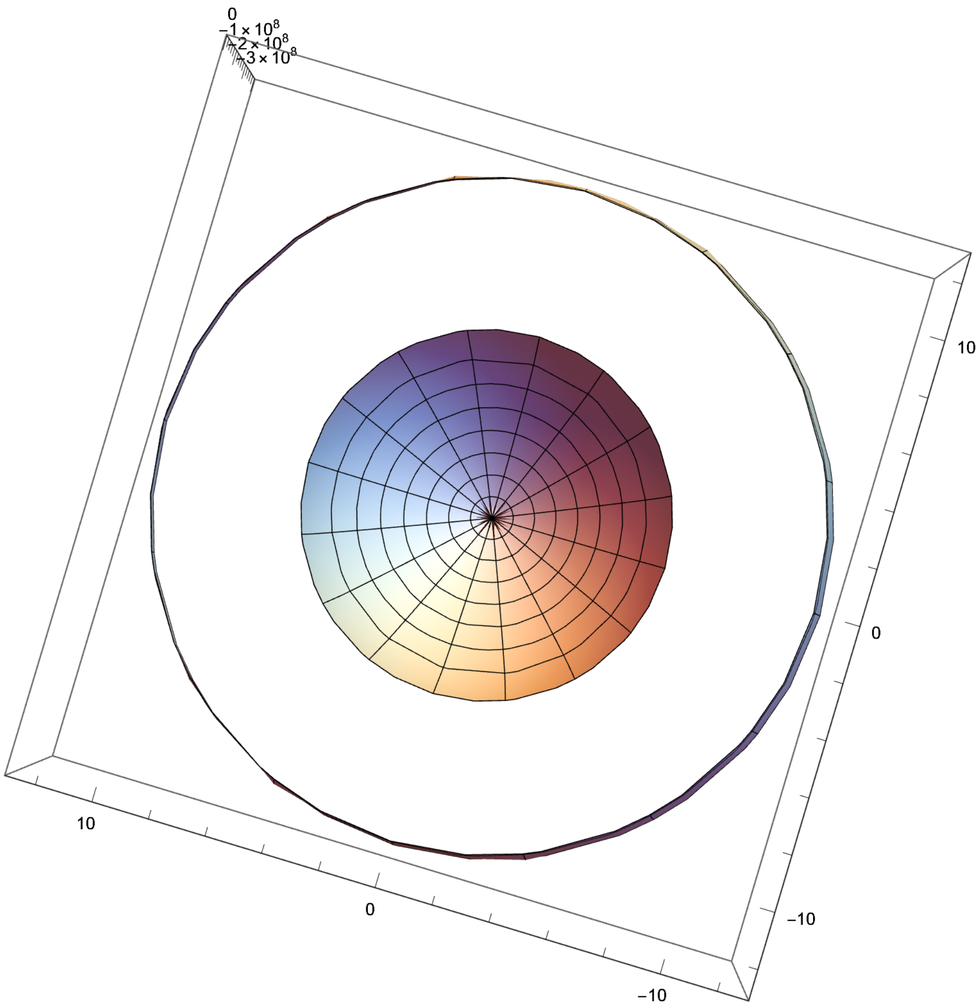
```
RevolutionPlot3D[-(1.` √(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
   (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), {θ, -.01 π, .01 π}]
```




```
c := (2.99792458 * 10^8)
```

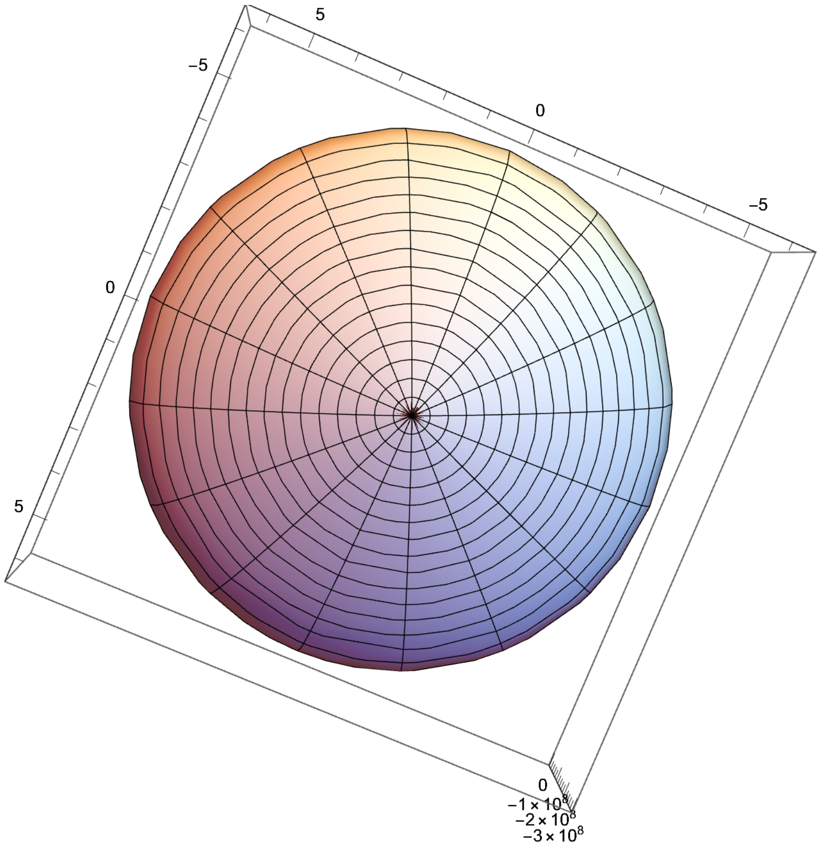
$$\text{RevolutionPlot3D}\left[-\frac{1}{2}\sqrt{4\,c^2-\frac{\sqrt{c^4\,(4\,\pi-\theta)\,\theta^3}}{\pi^2}}\,,\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$

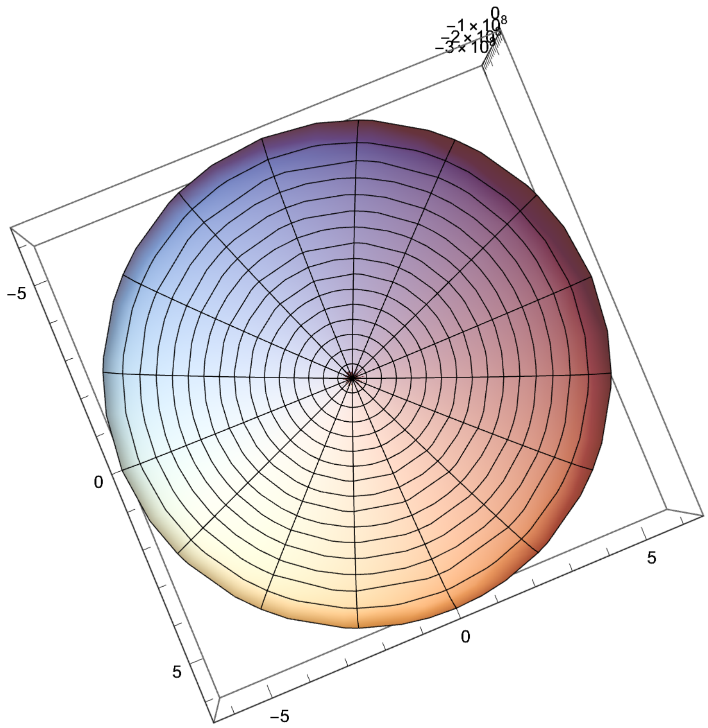

10
0
−10
10
0
−10
0
−1 × 10^8
−2 × 10^8
−3 × 10^8



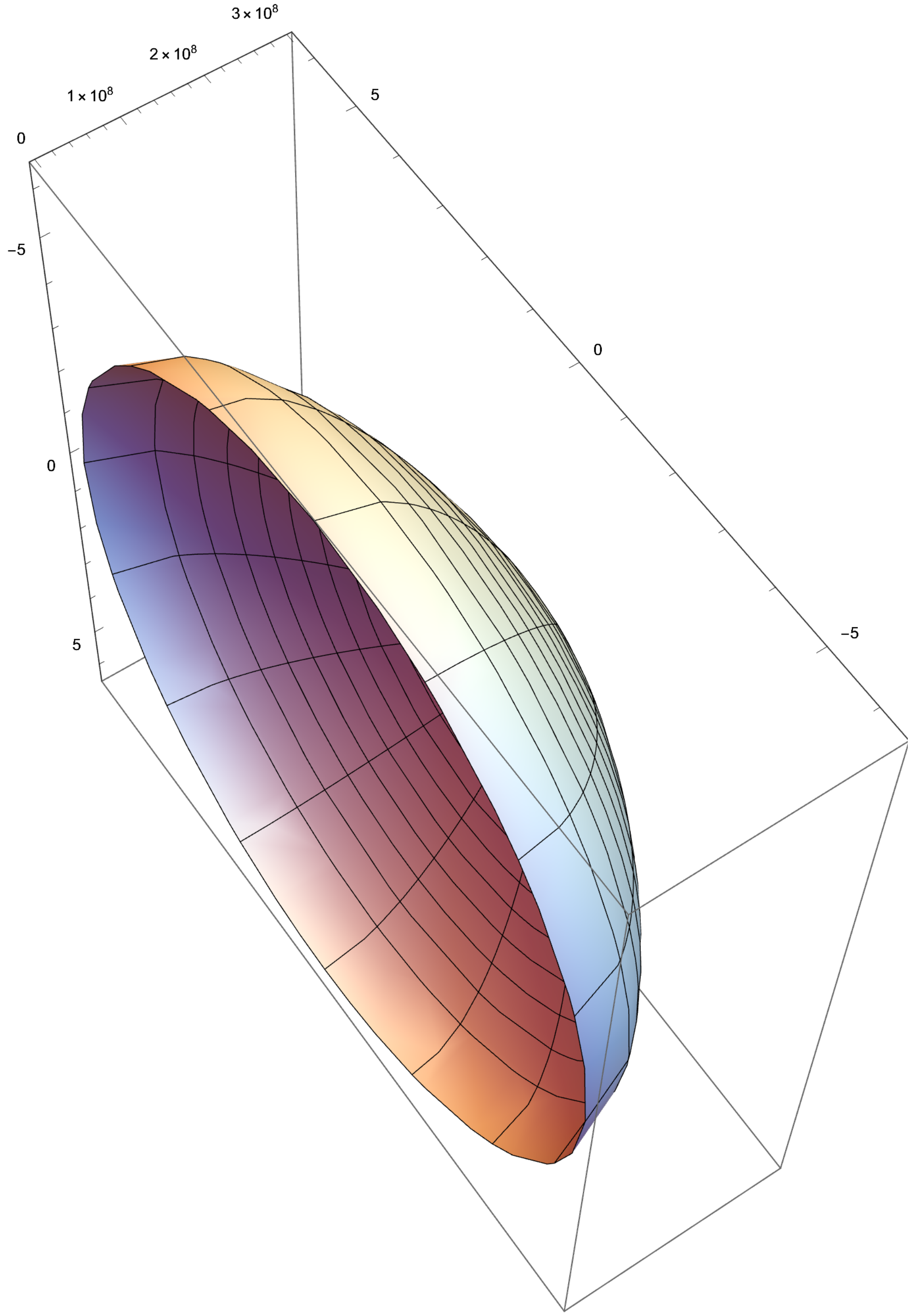
0
-1×10^8
-2×10^8
-3×10^8
10
0
-10
10
0
-10

$$\text{RevolutionPlot3D}\left[-\frac{1}{2}\sqrt{4\,c^2-\frac{\sqrt{c^4\,(4\,\pi-\theta)\,\theta^3}}{\pi^2}}\,,\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

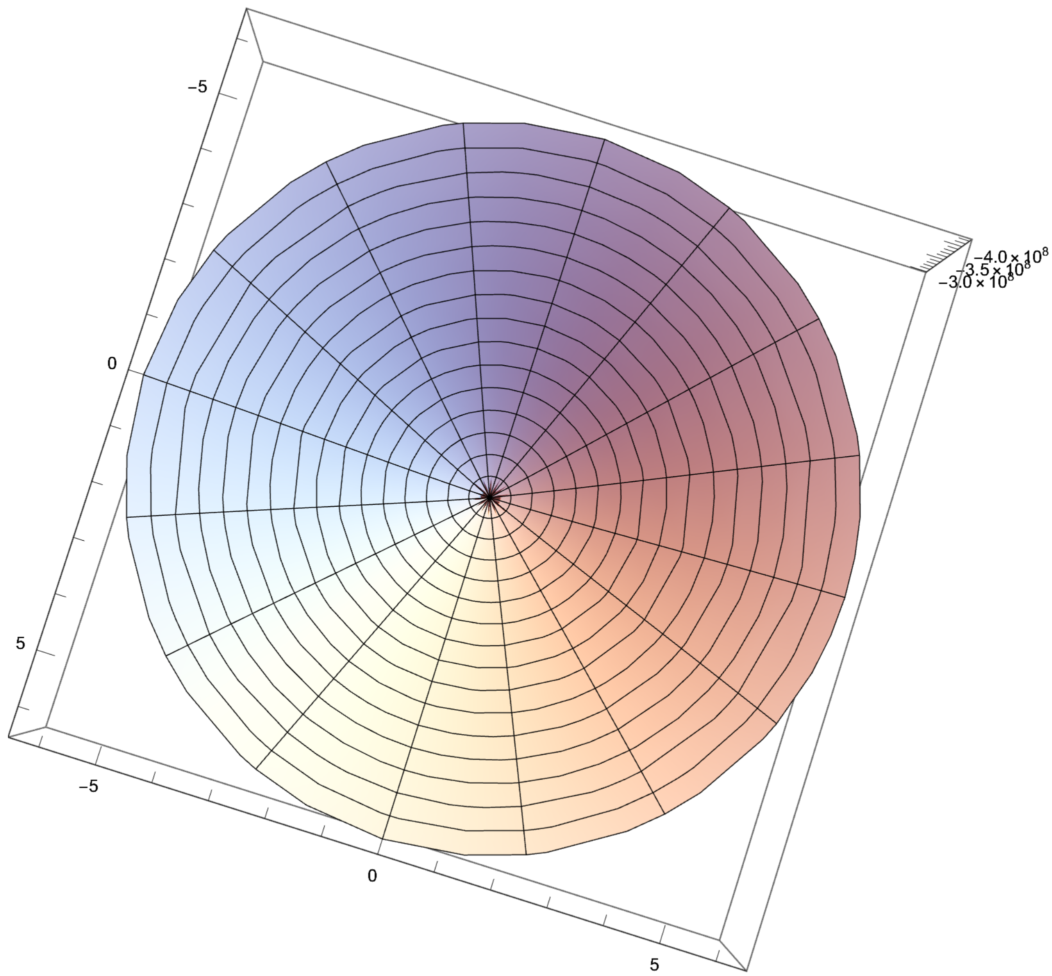


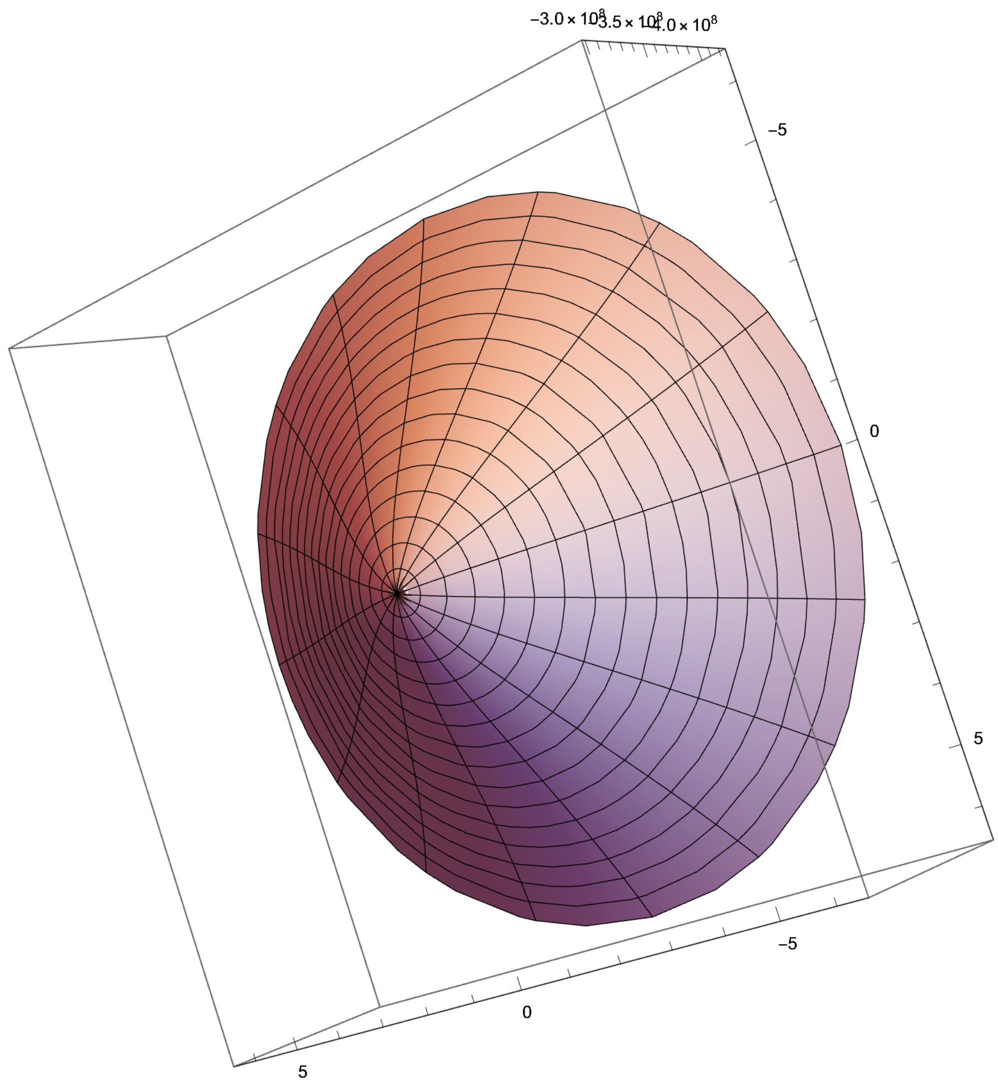

0
−1 × 10^8
−2 × 10^8
−3 × 10^8
−5
0
5
5
0
−5

$$\text{RevolutionPlot3D}\left[\frac{1}{2}\sqrt{4\,c^2-\frac{\sqrt{c^4\,(4\,\pi-\theta)\,\theta^3}}{\pi^2}},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



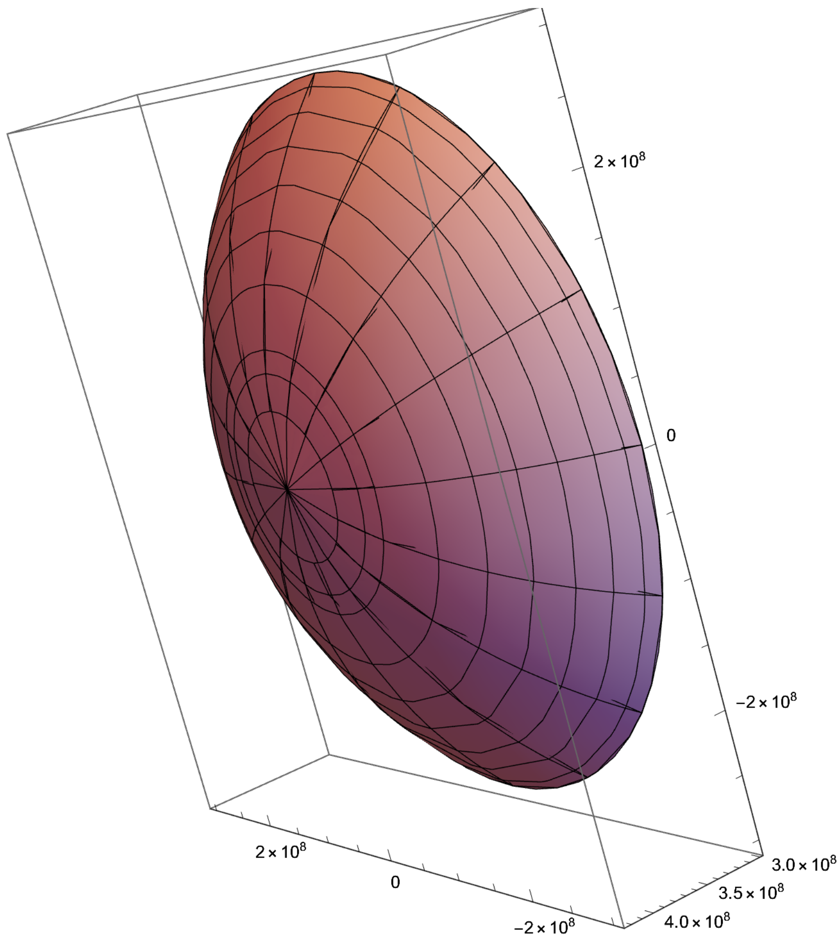
$$\text{RevolutionPlot3D}\left[-\sqrt{c^2+\frac{\sqrt{4\,c^4\,\pi\,\theta^3-c^4\,\theta^4}}{4\,\pi^2}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



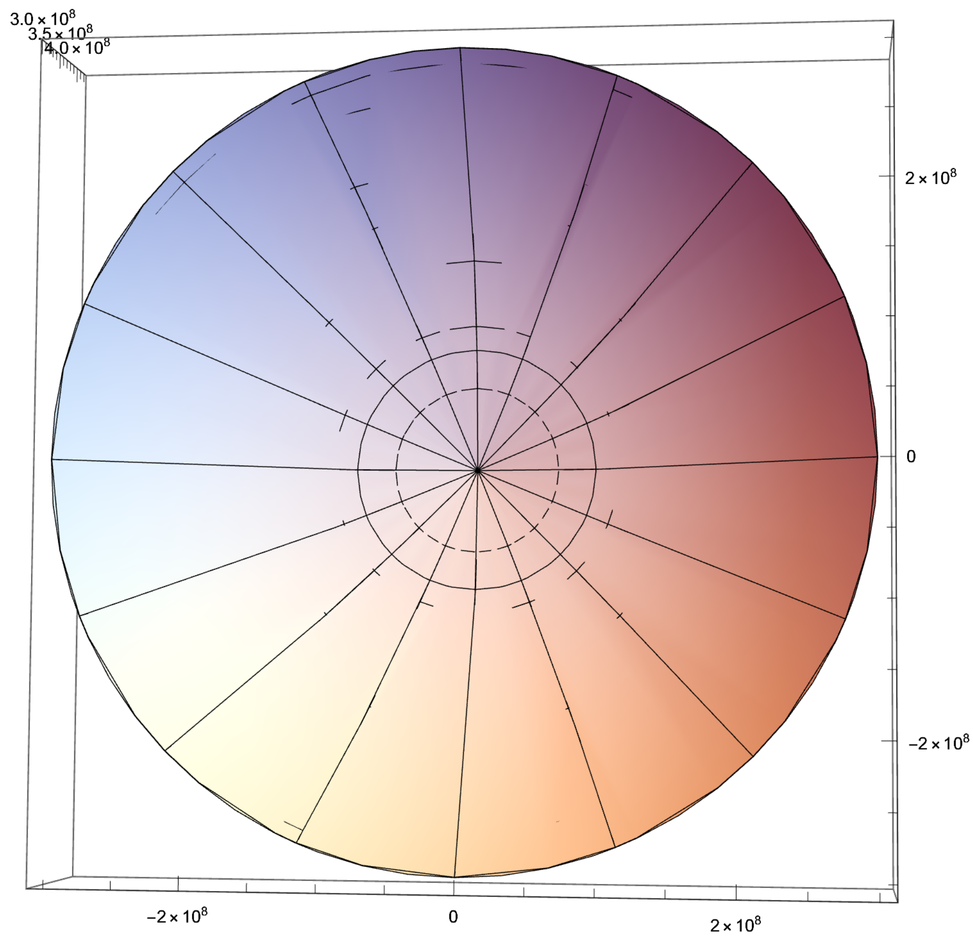


RevolutionPlot3D[

$$\left\{\left(\frac{1}{2}\sqrt{4\,c^2-\frac{\sqrt{c^4\,(4\,\pi-\theta)\,\theta^3}}{\pi^2}}\right),\ \left(\sqrt{c^2+\frac{\sqrt{4\,c^4\,\pi\,\theta^3-c^4\,\theta^4}}{4\,\pi^2}}\right)\right\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\Big]$$



2 × 10^8
0
−2 × 10^8
2 × 10^8
0
−2 × 10^8
3.0 × 10^8
3.5 × 10^8
4.0 × 10^8



$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == c\,((\theta)/(2\pi)),\ \theta\right]$$

$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{4\pi r^2}{c^2+r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}} == c\left(((\theta)/(2\pi))\Big/\sqrt{1-\frac{(v)^2}{c^2}}\right),\ \theta\right]$$

$$\left\{\{\theta \to 0\},\ \left\{\theta \to \frac{4\pi\left(c^4 r^2 - 2 c^2 r^2 v^2 + r^2 v^4\right)}{c^6 + c^4 r^2 - 2 c^2 r^2 v^2 + r^2 v^4}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}}==c\left(((\theta)/(2\pi))\Big/\sqrt{1-\frac{(v)^2}{c^2}}\right),v\right]$$

$$\left\{\left\{v\to-\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\right\},\right.$$
$$\left\{v\to\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\right\},$$
$$\left\{v\to-\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right\},$$
$$\left.\left\{v\to\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}+\frac{\sqrt{4c^6\pi r^2\theta-c^6r^2\theta^2}}{-4\pi r^2+r^2\theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}\sqrt{1-\frac{(v)^2}{c^2}}==c\left(((\theta)/(2\pi))\Big/\sqrt{1-\frac{(v)^2}{c^2}}\right),r\right]$$

$$\left\{\left\{r\to-\frac{i\,c^3\sqrt{\theta}}{(c-v)(c+v)\sqrt{-4\pi+\theta}}\right\},\left\{r\to\frac{i\,c^3\sqrt{\theta}}{(c-v)(c+v)\sqrt{-4\pi+\theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==c((\theta)/(2\pi)),r\right]$$

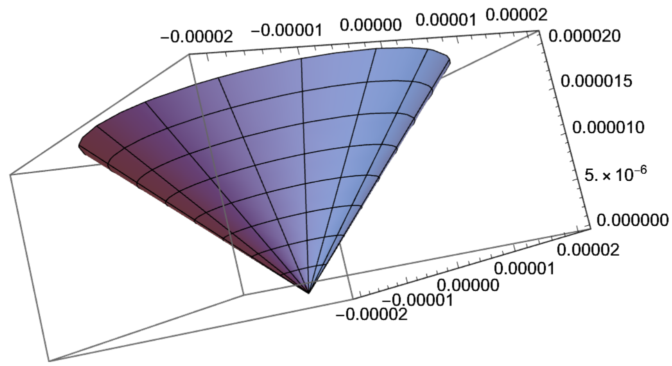
$$\left\{\left\{r\to-\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\},\left\{r\to\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==\right.$$
$$\left.c\left(\left(\theta\sqrt{1-\frac{(r/(\theta/(2\pi)))^2}{c^2}}\right)\Big/(2\pi)\right),\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{c^2r^2+2r^4}\right)}{c^2+r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{c^2r^2+2r^4}\right)}{c^2+r^2}\right\}\right\}$$

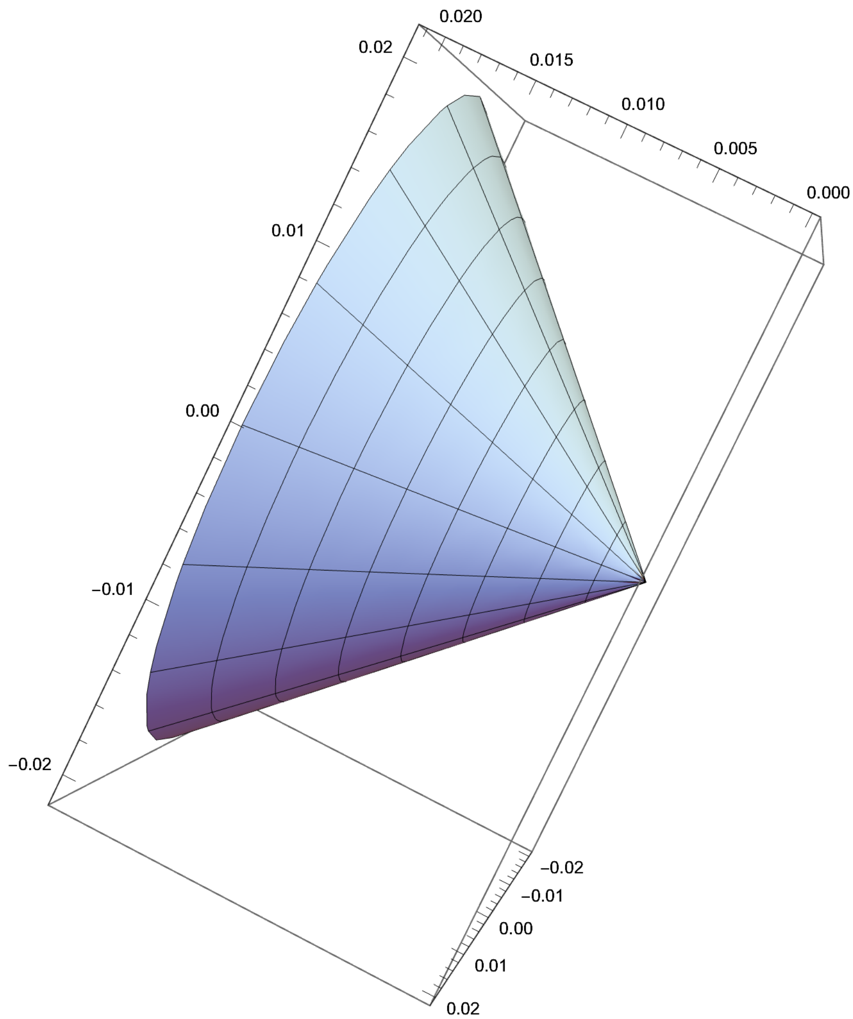
```
c := (2.99792458 * 10^8)
```

$$\text{RevolutionPlot3D}\left[\left\{\frac{2\,\pi\left(r^2-\sqrt{c^2\,r^2+2\,r^4}\right)}{c^2+r^2},\ \frac{2\,\pi\left(r^2+\sqrt{c^2\,r^2+2\,r^4}\right)}{c^2+r^2}\right\},\ \{r,\ -1000,\ 1000\}\right]$$

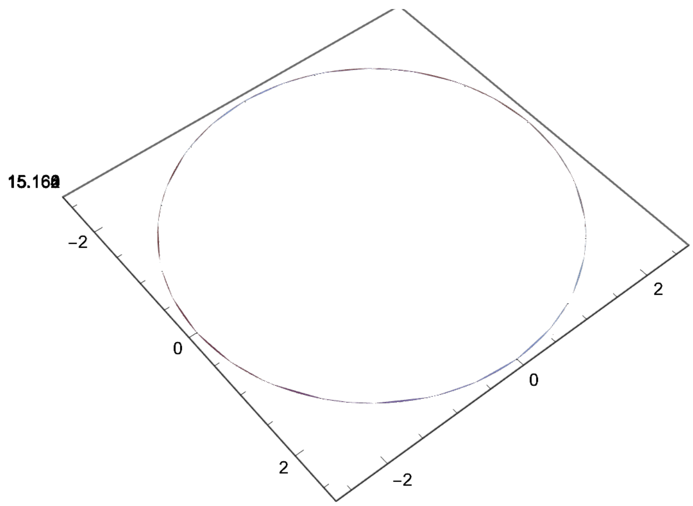


```
RevolutionPlot3D[
```

$$\left\{\frac{2\,\pi\left(r^{2}-\sqrt{c^{2}\,r^{2}+2\,r^{4}}\right)}{c^{2}+r^{2}},\ \frac{2\,\pi\left(r^{2}+\sqrt{c^{2}\,r^{2}+2\,r^{4}}\right)}{c^{2}+r^{2}}\right\},\ \{r,\ -1\,000\,000,\ 1\,000\,000\}\Big]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{2\,\pi\,\left(r^2-\sqrt{c^2\,r^2+2\,r^4}\right)}{c^2+r^2},\ \frac{2\,\pi\,\left(r^2+\sqrt{c^2\,r^2+2\,r^4}\right)}{c^2+r^2}\right\},\ \{r,\ -100\,000\,000\,000,\ 100\,000\,000\,000\}\right]$$



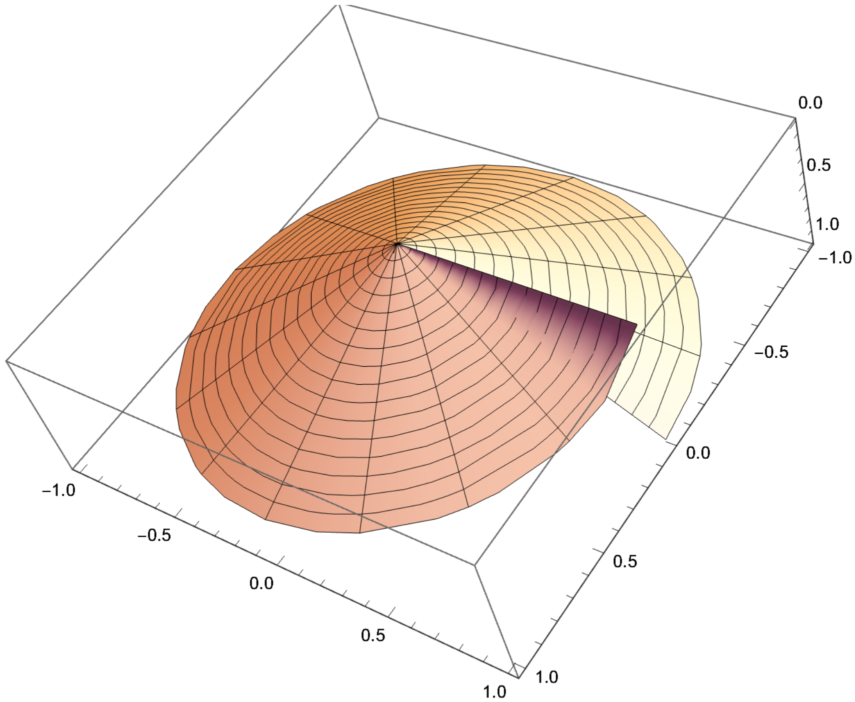
$$\frac{2\,\pi\,\left(r^2+\sqrt{c^2\,r^2+2\,r^4}\right)}{c^2+r^2}$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}=c\,(\theta\,/\,(2\,\pi)),\ \theta\right]$$

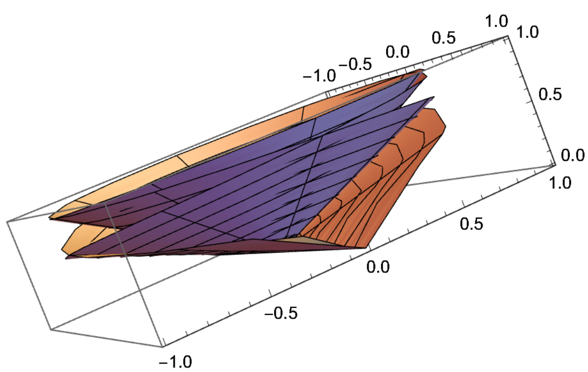
$$\left\{\left\{\theta\to\frac{4\,\pi\,r^2}{c^2+r^2}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{4\,\pi\,r^2}{c^2+r^2}\right.$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{(r/(\theta/(2\,\pi)))^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\;\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ r\right]$$

{{}}

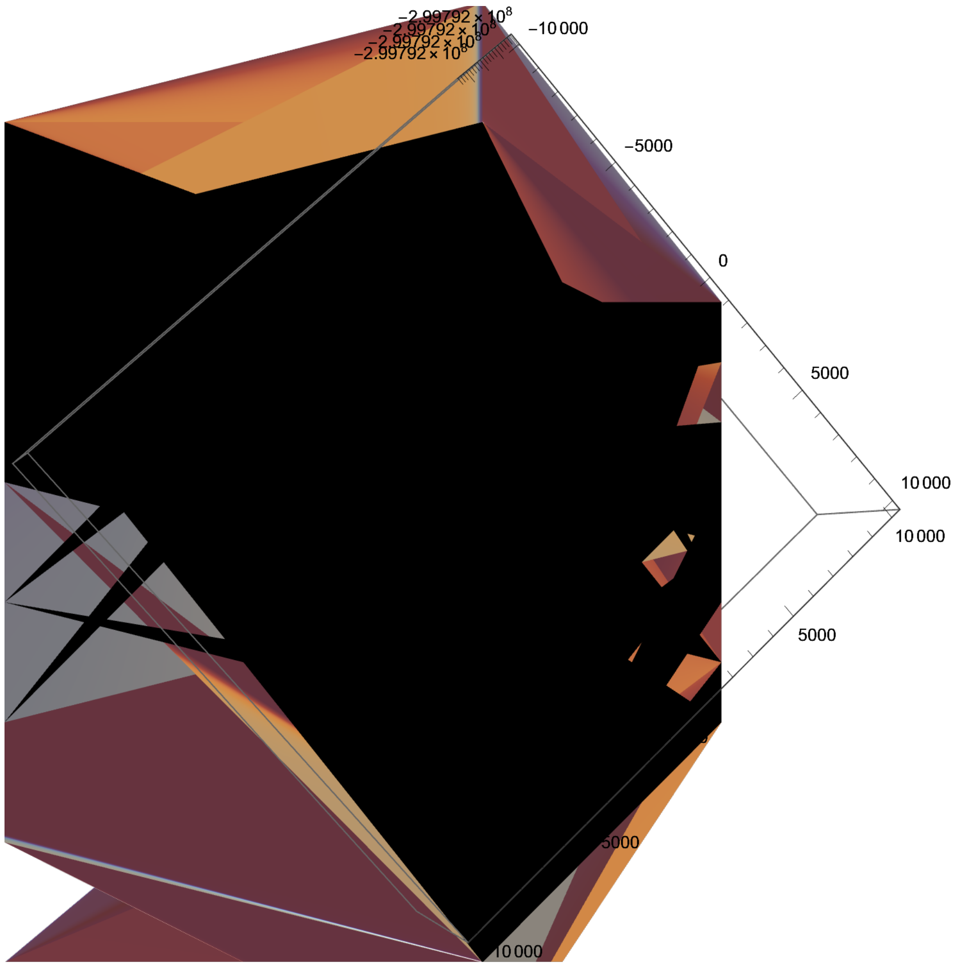
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\right]$$

{{}}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\pi r-r\theta}}{2\pi}\left(\sqrt{1-\frac{v^2}{c^2}}\ \theta\right)==c\left(\left(\sqrt{1-\frac{v^2}{c^2}}\ \theta\right)\Big/(2\pi)\right),v\right]$$

```
{{v → -0.5` √(-(2.` (-1.615521742612498`*^34 +
          2.2588181335162941`*^18 r^2 θ - 1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) -
    2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
        (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
              8.07760871306249`*^33 r^2 θ^2)) /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
 {v → 0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) -
    2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
        (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
              8.07760871306249`*^33 r^2 θ^2)) /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
 {v → -0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
    2.` √(((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
        (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
              8.07760871306249`*^33 r^2 θ^2)) /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))},
```

```
{v → 0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
        (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
             8.07760871306249`*^33 r^2 θ^2)) /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)))}}

RevolutionPlot3D[
 {(-0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
          1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) -
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 / (8.987551787368176`*^16 -
            12.566370614359172` r^2 θ + r^2 θ^2)^2 - (4.` (7.2597926626745534`*^50 -
             1.015062247661201`*^35 r^2 θ + 8.07760871306249`*^33 r^2 θ^2)) /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2))))},
 {r, -10000, 10000}, {θ, -20000 π, 20000
   π}]
```



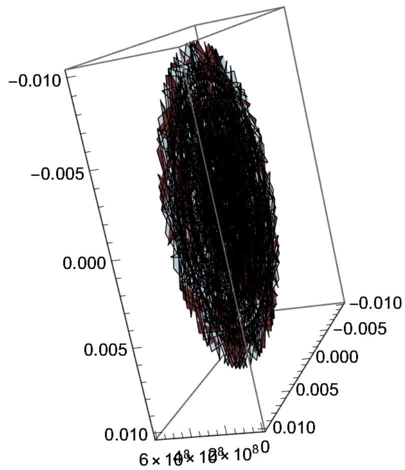
−2.99792 × 10^8
−2.99792 × 10^8
−2.99792 × 10^8
−2.99792 × 10^8
−10 000
−5000
0
5000
10 000
10 000
5000
5000
10 000

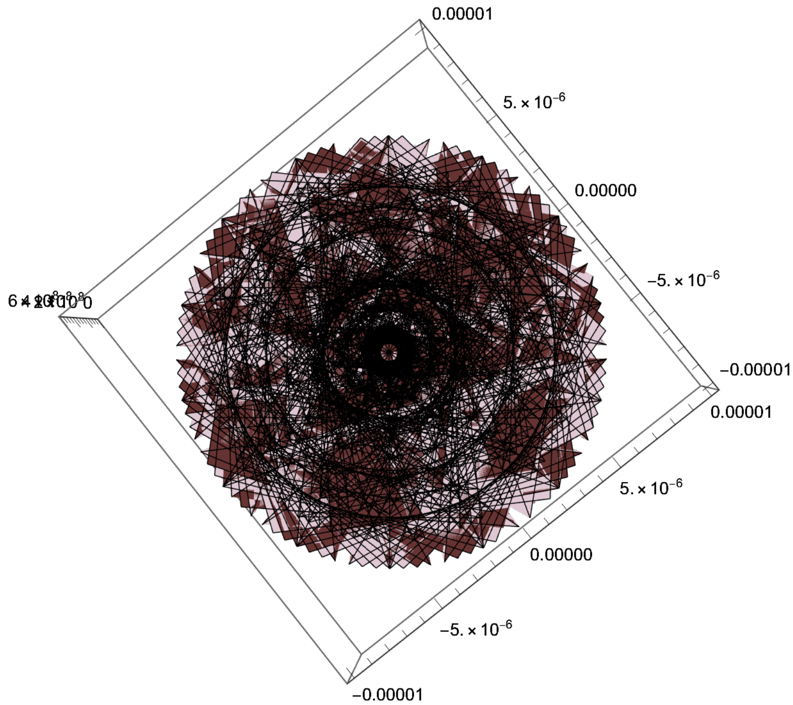
```
(-0.5` √(-(2.` (-1.615521742612498`*^34 +
        2.2588181335162941`*^18 r^2 θ - 1.7975103574736352`*^17 r^2 θ^2)) /
      (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
    2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18 r^2 θ -
            1.7975103574736352`*^17 r^2 θ^2)^2 /
          (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
        (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
              8.07760871306249`*^33 r^2 θ^2)) /
          (0.5` √(-(2.` (-1.615521742612498`*^34 + 2.2588181335162941`*^18
                         r^2 θ - 1.7975103574736352`*^17 r^2 θ^2)) /
                 (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2) +
               2.` √((-1.615521742612498`*^34 + 2.2588181335162941`*^18
                          r^2 θ - 1.7975103574736352`*^17 r^2 θ^2)^2 /
                     (8.987551787368176`*^16 - 12.566370614359172` r^2 θ + r^2 θ^2)^2 -
                   (4.` (7.2597926626745534`*^50 - 1.015062247661201`*^35 r^2 θ +
                         8.07760871306249`*^33 r^2 θ^2)) / (8.987551787368176`*^16 -
                       12.566370614359172` r^2 θ + r^2 θ^2)))))))
```

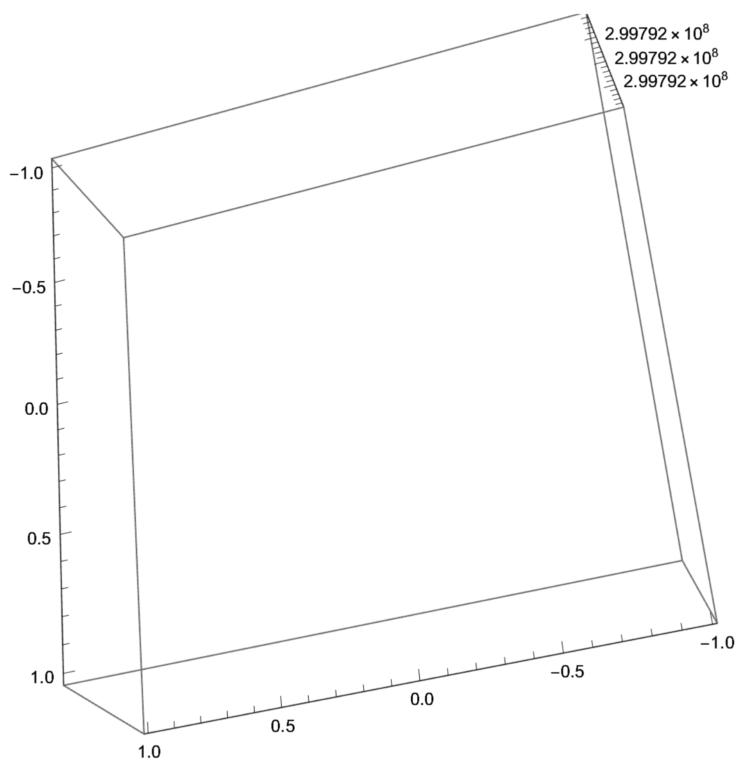
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\;\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\;\sqrt{4\pi r-r\theta}}{2\pi}==c\left(\left(\sqrt{1-\frac{v^2}{c^2}}\;\theta\right)\Big/(2\pi)\right),\ v\right]$$

$$\left\{\left\{v\to-\frac{\sqrt{-4\pi r^2+c^2\theta+r^2\theta}}{\sqrt{\theta}}\right\},\ \left\{v\to\frac{\sqrt{-4\pi r^2+c^2\theta+r^2\theta}}{\sqrt{\theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{-4\,\pi\,r^2 + c^2\,\theta + r^2\,\theta}}{\sqrt{\theta}},\ \{r, -.01, .01\}, \{\theta, -200\,000\,000\,000\,\pi, 200\,000\,000\,000\,\pi\}\right]$$



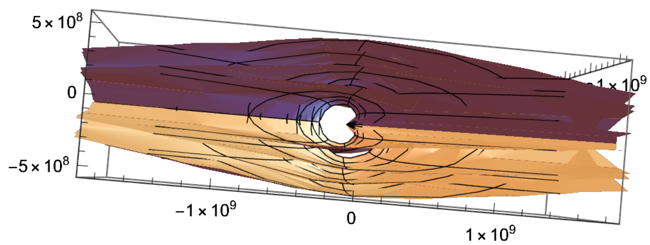

0.00001
5. × 10^-6
0.00000
-5. × 10^-6
-0.00001
0.00001
5. × 10^-6
0.00000
-5. × 10^-6
-0.00001


2.99792 × 10^8
2.99792 × 10^8
2.99792 × 10^8
-1.0
-0.5
0.0
0.5
1.0
-1.0
-0.5
0.0
0.5
1.0

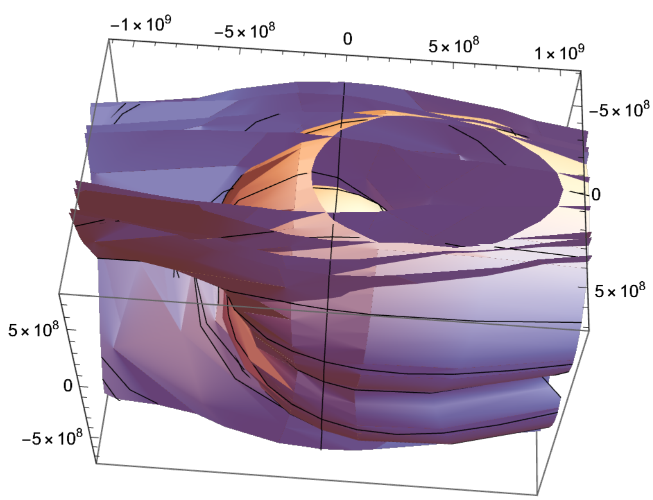
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == c\,(\theta/(2\pi)),\ r\right]$$

$$\left\{\left\{r \to -\frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\}, \left\{r \to \frac{c\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right\}\right\}$$

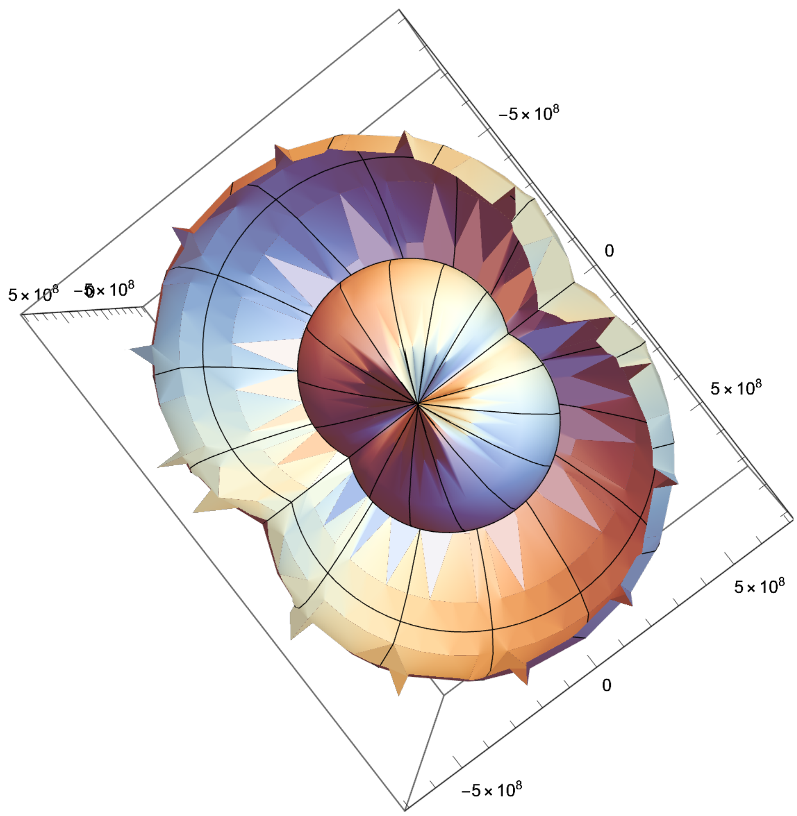
$$\text{SphericalPlot3D}\left[\left\{\frac{c\sqrt{\theta}}{\sqrt{4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}\right\}, \{\theta, -4\pi, 4\pi\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{SphericalPlot3D}\left[\left\{\frac{c\sqrt{\theta}}{\sqrt{4\pi-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}, \frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\pi-\theta}}\right\},\right.$$
$$\left.\{\theta, -4\pi, 4\pi\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}},\ \{\theta,\ -4\,\pi,\ 4\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$

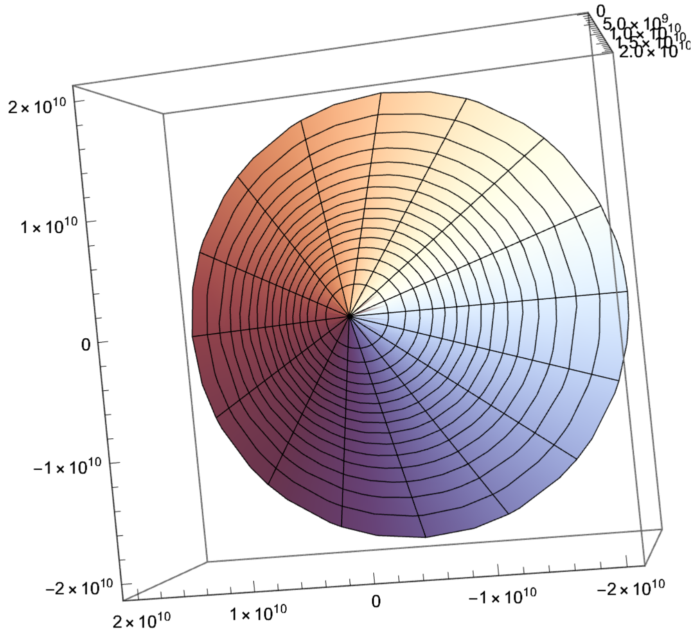


$$\left\{\left\{r\to-\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right\},\ \left\{r\to\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\ \sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi} == c\ (\theta\,/\,(2\,\pi)),\ v\right]$$

{}

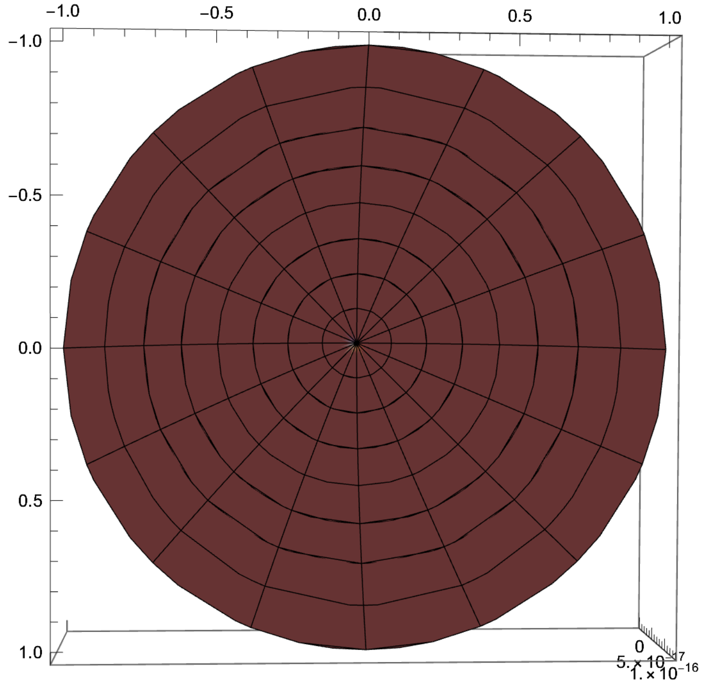
$$\text{RevolutionPlot3D}\left[\left\{-\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}},\ \frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right\},\ \{\theta,\ -3\,\pi,\ 3\,\pi\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==c\,(\theta\,/\,(2\,\pi)),\ \theta\right]$$

$$\left\{\{\theta\to 0\},\ \left\{\theta\to\frac{4\,\pi\,r^2}{c^2+r^2}\right\}\right\}$$

```
RevolutionPlot3D[4 π r^2/(c^2 + r^2), {r, -1, 1}]
```



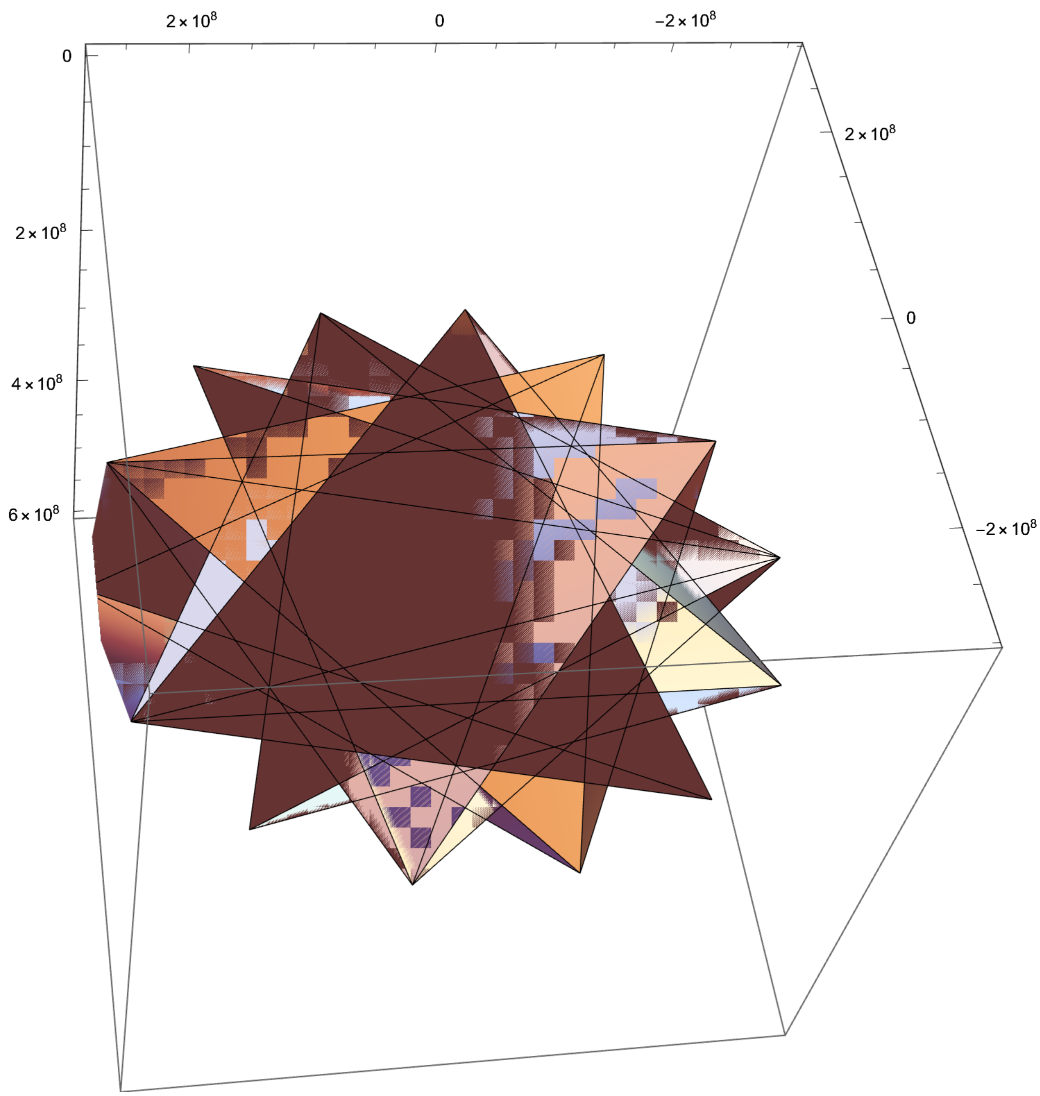
$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

$$\mathrm{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{c^2}}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}{2\,\pi}==c\,(\theta/(2\,\pi)),\,v\right]$$

$$\left\{\left\{v\to-\frac{1.\,\sqrt{-1.12941\times10^{18}\,r^2+8.07761\times10^{33}\,\theta+8.98755\times10^{16}\,r^2\,\theta}}{\sqrt{-12.5664\,r^2+8.98755\times10^{16}\,\theta+r^2\,\theta}}\right\},\right.$$

$$\left.\left\{v\to\frac{\sqrt{-1.12941\times10^{18}\,r^2+8.07761\times10^{33}\,\theta+8.98755\times10^{16}\,r^2\,\theta}}{\sqrt{-12.5664\,r^2+8.98755\times10^{16}\,\theta+r^2\,\theta}}\right\}\right\}$$

```
RevolutionPlot3D[{-(1.` √(-1.1294090667581471`*^18 r^2 +
        8.07760871306249`*^33 θ + 8.987551787368176`*^16 r^2 θ)) /
    (√(-12.566370614359172` r^2 + 8.987551787368176`*^16 θ + r^2 θ)),
   (√(-1.1294090667581471`*^18 r^2 + 8.07760871306249`*^33 θ +
        8.987551787368176`*^16 r^2 θ)) /
    (√(-12.566370614359172` r^2 + 8.987551787368176`*^16 θ + r^2 θ))},
  {r, -100, 100}, {θ, -40 π, 40 π}]
```



$$\text{Solve}\left[r' * \theta' == 2\pi r' - 2\pi\sqrt{r'^2 - \eta'^2},\ \eta'\right] \tag{175}$$

$$\left\{\left\{\eta' \to -\frac{\sqrt{4\pi r'^2 \theta - r'^2 \theta'^2}}{2\pi}\right\},\ \left\{\eta' \to \frac{\sqrt{4\pi r'^2 \theta - r'^2 \theta'^2}}{2\pi}\right\}\right\} \tag{176}$$

$$\eta' = \eta = \frac{\sqrt{4\,\pi\,r'^2\,\theta - r'^2\,\theta'^2}}{2\,\pi} == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} \tag{177}$$

$$\frac{\sqrt{4\,\pi\,r'^2\,\theta - r'^2\,\theta'^2}}{2\,\pi} = \frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(r\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\left(\theta\Big/\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right) - \left(r\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\left(\theta\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\right)}\right)$$

$$\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(r\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\left(\theta\Big/\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right) - \left(r\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\left(\theta\,\sqrt{1-((v)\,\hat{}\,2/c\,\hat{}\,2)}\right)^2\right)}\right)$$

$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{v^2}{c^2}}\,\theta - r^2\left(1-\frac{v^2}{c^2}\right)^2\theta^2}}{2\,\pi} == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ v\right]$$

$$\Big\{\{v \to 0\},\ \Big\{v \to -\sqrt{\Big(\frac{4\,c^2}{3} - \left(4\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3} + \left(2\,c^4\,\theta^2\right)\Big/\left(3\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3}\right) + \frac{1}{3\,\theta^2}\,2\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3}\Big)}\Big\},$$

$$\Big\{v \to \sqrt{\Big(\frac{4\,c^2}{3} - \left(4\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3} + \left(2\,c^4\,\theta^2\right)\Big/\left(3\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3}\right) + \frac{1}{3\,\theta^2}\,2\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3}\Big)}\Big\},$$

$$\Big\{v \to -\sqrt{\Big(\frac{4\,c^2}{3} + \left(2\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3} - \left(2\,\mathbb{i}\,\sqrt{3}\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4 + 9\,c^6\,\pi\,\theta^5 - c^6\,\theta^6 + 3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8 - 10\,c^{12}\,\pi\,\theta^9 + c^{12}\,\theta^{10}}\right)^{1/3} -}$$

$$\left(c^4\,\theta^2\right)\Big/\left(3\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)+\left(\mathrm{i}\,c^4\,\theta^2\right)\Big/\left(\sqrt{3}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)-\frac{1}{3\,\theta^2}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-\frac{1}{\sqrt{3}\,\theta^2}\,\mathrm{i}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Bigg)\Bigg\},$$

$$\Bigg\{v\to\sqrt{\Bigg(\frac{4\,c^2}{3}+\left(2\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-\left(2\,\mathrm{i}\,\sqrt{3}\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-\left(c^4\,\theta^2\right)\Big/\left(3\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)+\left(\mathrm{i}\,c^4\,\theta^2\right)\Big/\left(\sqrt{3}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)-\frac{1}{3\,\theta^2}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-\frac{1}{\sqrt{3}\,\theta^2}\,\mathrm{i}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Bigg)}\Bigg\},$$

$$\Bigg\{v\to-\sqrt{\Bigg(\frac{4\,c^2}{3}+\left(2\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}+\left(2\,\mathrm{i}\,\sqrt{3}\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-\left(c^4\,\theta^2\right)\Big/\left(3\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)-\left(\mathrm{i}\,c^4\,\theta^2\right)\Big/\left(\sqrt{3}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\right)-\frac{1}{3\,\theta^2}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}+$$

$$\frac{1}{\sqrt{3}\,\theta^2}$$

$$\mathbb{i}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Bigg)\Big\},$$

$$\Big\{v\to\sqrt{\Bigg(\frac{4\,c^2}{3}+\left(2\,c^4\,\pi\,\theta\right)\Big/\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+\right.}$$

$$\left.3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}+\left(2\,\mathbb{i}\,\sqrt{3}\,c^4\,\pi\,\theta\right)\Big/$$

$$\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}-$$

$$\left(c^4\,\theta^2\right)\Big/\Big(3\,\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+\right.$$

$$\left.3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Big)-\left(\mathbb{i}\,c^4\,\theta^2\right)\Big/$$

$$\Big(\sqrt{3}\,\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Big)-$$

$$\frac{1}{3\,\theta^2}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}+$$

$$\frac{1}{\sqrt{3}\,\theta^2}$$

$$\mathbb{i}\left(-27\,c^6\,\pi^2\,\theta^4+9\,c^6\,\pi\,\theta^5-c^6\,\theta^6+3\,\sqrt{3}\,\pi\,\sqrt{27\,c^{12}\,\pi^2\,\theta^8-10\,c^{12}\,\pi\,\theta^9+c^{12}\,\theta^{10}}\right)^{1/3}\Bigg)\Big\}\Big\}$$

$$r'/t' = \left(r\,\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\Big/\left(2\,\pi\,\theta\Big/\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right) = \frac{r\left(1-\frac{v^2}{c^2}\right)}{2\,\pi\,\theta} \tag{178}$$

c := (2.99792458 * 10^8) (179)

c := (2.99792458 * 10^8)

From a first derivative with respect to time can be found through theta and set equal to the distance of a wavelength over time.

$$\frac{r\left(1-\frac{v^2}{c^2}\right)}{2\,\pi\,\theta} = (1/2\,\pi)\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right] = \frac{4\,\pi\,r^2-2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}} \tag{180}$$

$$\mathbf{(1/2\,\pi)\,D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta,\,r\right]}$$

$$\frac{1}{2}\,\pi\,\partial_1\,\frac{4\,\pi-2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,\theta-\theta^2}}$$

$$(1/2\pi)\ \mathrm{D}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{8\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

$$\left(r\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\Big/\left((2\pi\theta)\Big/\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)$$

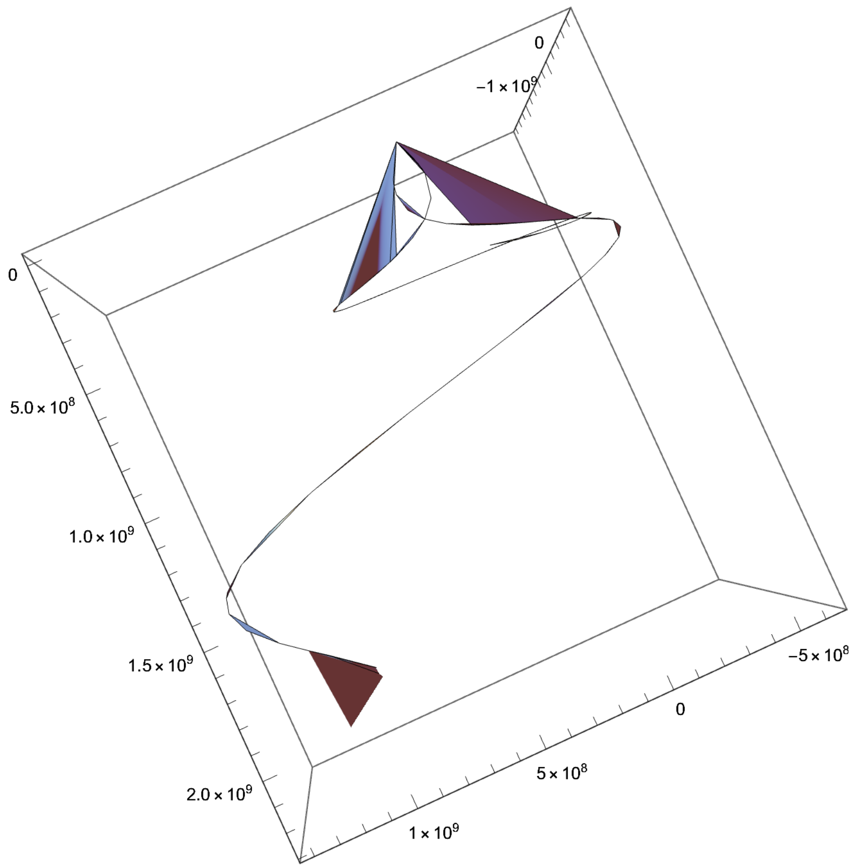
$$\frac{r\left(1-\frac{v^2}{c^2}\right)}{2\pi\theta}$$

$$\mathrm{Solve}\left[\left(r\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)\Big/\left((\theta\ (2\pi))\Big/\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right) == \frac{4\pi r^2 - 2r^2\theta}{8\sqrt{4\pi r^2\theta - r^2\theta^2}}, v\right]$$

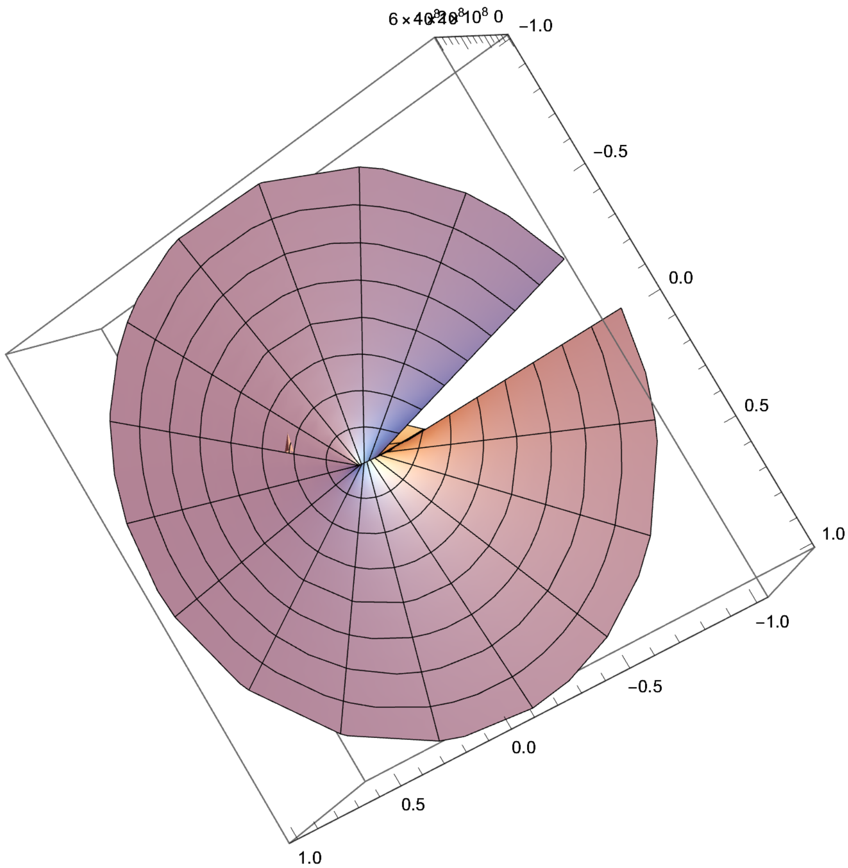
$$\left\{\left\{v \to -\frac{\sqrt{2c^2 - \frac{2c^2\pi^2 r\theta}{\sqrt{r^2(4\pi-\theta)\theta}} + \frac{c^2\pi r\theta^2}{\sqrt{r^2(4\pi-\theta)\theta}}}}{\sqrt{2}}\right\}, \left\{v \to \frac{\sqrt{2c^2 - \frac{2c^2\pi^2 r\theta}{\sqrt{r^2(4\pi-\theta)\theta}} + \frac{c^2\pi r\theta^2}{\sqrt{r^2(4\pi-\theta)\theta}}}}{\sqrt{2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left\{\left(-\frac{\sqrt{2\,c^2 - \frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right),\right.\right.$$

$$\left.\left.\left(\frac{\sqrt{2\,c^2 - \frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right)\right\}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



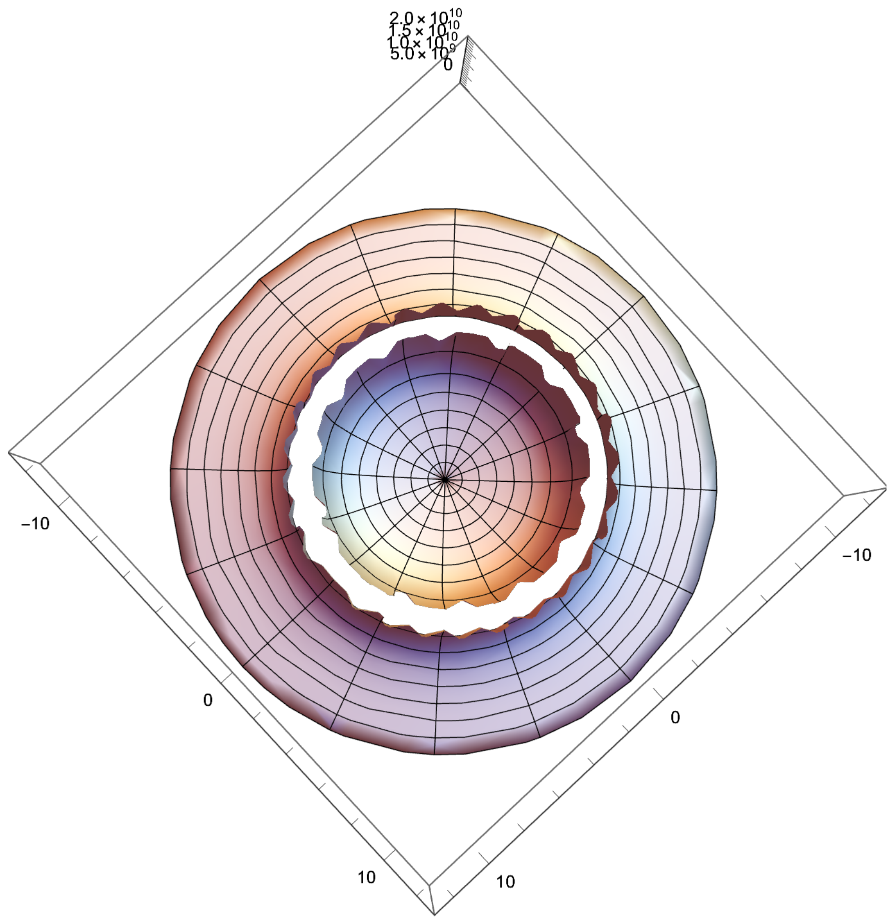
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}},\,\{r,-1,1\},\,\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==c,\,r\right]$$

$$\left\{\left\{r\to-\frac{c\,\sqrt{64\,\pi-16\,\theta}\,\sqrt{\theta}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right\},\left\{r\to\frac{c\,\sqrt{64\,\pi-16\,\theta}\,\sqrt{\theta}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right\}\right\}$$

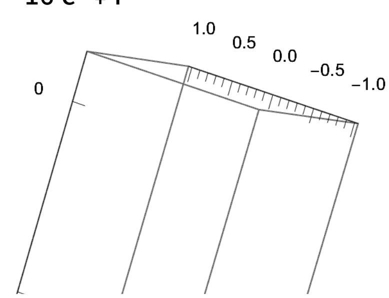
$$\text{RevolutionPlot3D}\left[\frac{c\sqrt{64\pi-16\theta}\ \sqrt{\theta}}{\sqrt{4\pi^2-4\pi\theta+\theta^2}},\ \{\theta,\ -4\pi,\ 4\pi\}\right]$$

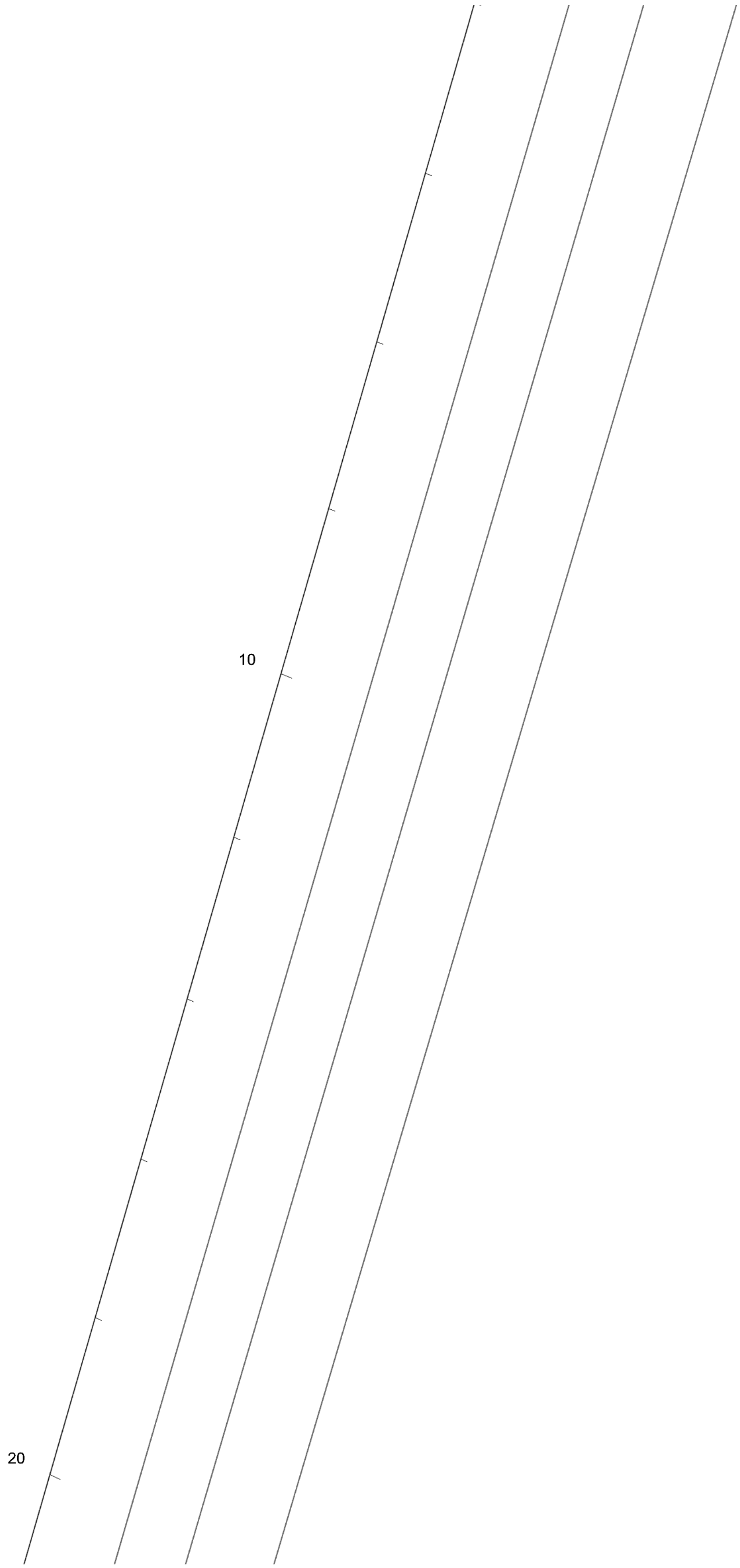


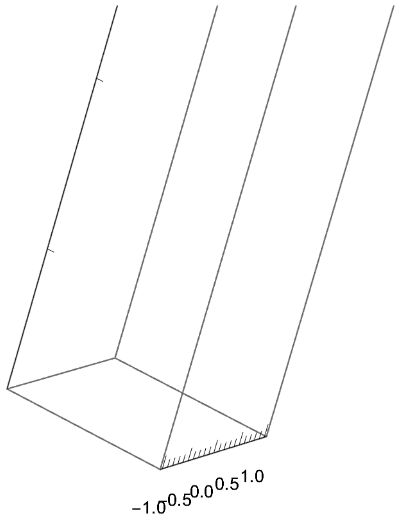
$$\text{Solve}\left[\frac{4\pi r^2-2r^2\theta}{8\sqrt{4\pi r^2\theta-r^2\theta^2}}==c,\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(16c^2+r^2-4\sqrt{16c^4+c^2r^2}\right)}{16c^2+r^2}\right\},\ \left\{\theta\to\frac{2\pi\left(16c^2+r^2+4\sqrt{16c^4+c^2r^2}\right)}{16c^2+r^2}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left\{\frac{2\pi\left(16c^2+r^2-4\sqrt{16c^4+c^2r^2}\right)}{16c^2+r^2},\ \frac{2\pi\left(16c^2+r^2+4\sqrt{16c^4+c^2r^2}\right)}{16c^2+r^2}\right\},\ \{r,\ -1,\ 1\}\right]$$




10
20



$$\text{Solve}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}==c,\,r\right]$$

{}

$$\text{Solve}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}==c,\,\theta\right]$$

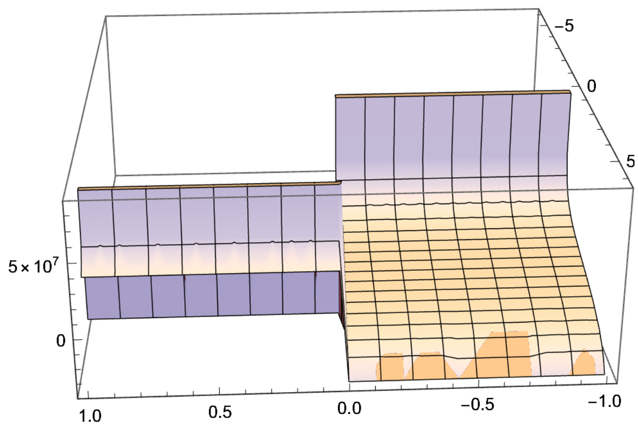
$$\{\{\theta\to 2\,\pi\}\}$$

$$((1\,/\,(2\,\pi)))\ \text{D}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}},\,\theta\right]$$

$$\frac{-\frac{2\,c^2\,\pi^2\,r}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi^2\,r\,\theta\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{c^2\,\pi\,r\,\theta^2\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{2\,\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}}{4\,\sqrt{2}\,\pi\,\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}$$

$$\texttt{SphericalPlot3D}\left[\frac{-\frac{2\,c^2\,\pi^2\,r}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi^2\,r\,\theta\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{c^2\,\pi\,r\,\theta^2\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{2\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}}{4\,\sqrt{2}\,\pi\,\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}},\right.$$

$$\left.\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$(1/2\,\pi)\;\texttt{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,r,\,\theta\right]$$

$$\frac{1}{2}\,\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)$$

$$\frac{r\left(1-\frac{(\theta\,r)^2}{c^2}\right)}{2\,\pi\,\theta}=(1/2\,\pi)\;\mathrm{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,r,\,\theta\right]=\frac{4\,\pi\,r^2-2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\tag{181}$$

$$\texttt{Solve}\left[\frac{1}{2}\,\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)==\frac{r\left(1-\frac{((\theta\,r-2\,\pi\,r)/(2\,\pi))^2}{c^2}\right)}{2\,\pi\,\theta},\,r\right]$$

$$\texttt{RevolutionPlot3D}\Bigg[\Bigg\{\Bigg(-\sqrt{}\Bigg(-\frac{128\,c^2\,\pi^5}{3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$

$$\frac{160\,c^2\,\pi^4\,\theta}{3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}-$$

$$\frac{64\,c^2\,\pi^3\,\theta^2}{3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$

$$\frac{8\,c^2\,\pi^2\,\theta^3}{3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$

$$\left(4096\times 2^{1/3}\,c^4\,\pi^{10}\right)\Big/\Big(3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$

$$\left(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032\, c^6\, \pi^{13}\, \theta^2 +\right.$$
$$9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 + 1867776$$
$$c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 - 37739520\, c^4\, \pi^{14}\, \theta^5 +$$
$$194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293760\, c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} +$$
$$\sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10240\, c^4\, \pi^9\, \theta - 10496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\right.\right.}$$
$$\left.\theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 + \left(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta -\right.$$
$$1769472\, c^4\, \pi^{18}\, \theta + 3244032\, c^6\, \pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384$$
$$c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 + 1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4$$
$$\pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 - 37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 +$$
$$27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6$$
$$\pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 + 293760$$
$$\left.\left.\left.\left. c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)\right)^{1/3}\right) -$$

$$\left(10240 \times 2^{1/3}\, c^4\, \pi^9\, \theta\right) \Big/ \left(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)\right.$$
$$\left(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032\, c^6\, \pi^{13}\, \theta^2 +\right.$$
$$9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 -$$
$$14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 -$$
$$1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} -$$
$$108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10240\, c^4\, \pi^9\, \theta - 10496\, c^4\, \pi^8\, \theta^2 +\right.\right.}$$
$$\left.5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 +$$
$$\left(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032\, c^6\right.$$
$$\pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5432832$$
$$c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} -$$
$$\left.\left.\left.\left. 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)\right)^{1/3}\right) +$$

$$\left(10496 \times 2^{1/3}\, c^4\, \pi^8\, \theta^2\right) \Big/ \left(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)\right.$$
$$\left(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032\, c^6\, \pi^{13}\, \theta^2 +\right.$$
$$9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 -$$
$$14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 -$$
$$1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} -$$
$$108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10240\, c^4\, \pi^9\, \theta - 10496\, c^4\, \pi^8\, \theta^2 +\right.\right.}$$

$$5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 +$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6$$
$$\pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832$$
$$c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} -$$
$$38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(5632 \times 2^{1/3}\, c^4\, \pi^7\, \theta^3\right) \Big/ \Big(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 +$$
$$9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 -$$
$$14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 -$$
$$1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} -$$
$$108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\Big(4\, \Big(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 +}$$
$$5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 +$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6$$
$$\pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832$$
$$c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} -$$
$$38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(1664 \times 2^{1/3}\, c^4\, \pi^6\, \theta^4\right) \Big/ \Big(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 +$$
$$9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 -$$
$$14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 -$$
$$1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} -$$
$$108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\Big(4\, \Big(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 +}$$
$$5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 +$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6$$
$$\pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832$$

$$c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1503360 c^4 \pi^{10} \theta^9 + 293760 c^4 \pi^9 \theta^{10} - 38448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13})^2\Big)\Big)^{1/3}\Big) -$$

$$\left(256 \times 2^{1/3} c^4 \pi^5 \theta^5\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524288 c^6 \pi^{15} - 1966080 c^6 \pi^{14} \theta - 1769472 c^4 \pi^{18} \theta + 3244032 c^6 \pi^{13} \theta^2 + 9732096 c^4 \pi^{17} \theta^2 - 3088384 c^6 \pi^{12} \theta^3 - 24440832 c^4 \pi^{16} \theta^3 + 1867776 c^6 \pi^{11} \theta^4 + 37048320 c^4 \pi^{15} \theta^4 - 743424 c^6 \pi^{10} \theta^5 - 37739520 c^4 \pi^{14} \theta^5 + 194560 c^6 \pi^9 \theta^6 + 27205632 c^4 \pi^{13} \theta^6 - 32256 c^6 \pi^8 \theta^7 - 14224896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5432832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1503360 c^4 \pi^{10} \theta^9 + 293760 c^4 \pi^9 \theta^{10} - 38448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096 c^4 \pi^{10} + 10240 c^4 \pi^9 \theta - 10496 c^4 \pi^8 \theta^2 + 5632 c^4 \pi^7 \theta^3 - 1664 c^4 \pi^6 \theta^4 + 256 c^4 \pi^5 \theta^5 - 16 c^4 \pi^4 \theta^6\right)^3 + \left(524288 c^6 \pi^{15} - 1966080 c^6 \pi^{14} \theta - 1769472 c^4 \pi^{18} \theta + 3244032 c^6 \pi^{13} \theta^2 + 9732096 c^4 \pi^{17} \theta^2 - 3088384 c^6 \pi^{12} \theta^3 - 24440832 c^4 \pi^{16} \theta^3 + 1867776 c^6 \pi^{11} \theta^4 + 37048320 c^4 \pi^{15} \theta^4 - 743424 c^6 \pi^{10} \theta^5 - 37739520 c^4 \pi^{14} \theta^5 + 194560 c^6 \pi^9 \theta^6 + 27205632 c^4 \pi^{13} \theta^6 - 32256 c^6 \pi^8 \theta^7 - 14224896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5432832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1503360 c^4 \pi^{10} \theta^9 + 293760 c^4 \pi^9 \theta^{10} - 38448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(16 \times 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524288 c^6 \pi^{15} - 1966080 c^6 \pi^{14} \theta - 1769472 c^4 \pi^{18} \theta + 3244032 c^6 \pi^{13} \theta^2 + 9732096 c^4 \pi^{17} \theta^2 - 3088384 c^6 \pi^{12} \theta^3 - 24440832 c^4 \pi^{16} \theta^3 + 1867776 c^6 \pi^{11} \theta^4 + 37048320 c^4 \pi^{15} \theta^4 - 743424 c^6 \pi^{10} \theta^5 - 37739520 c^4 \pi^{14} \theta^5 + 194560 c^6 \pi^9 \theta^6 + 27205632 c^4 \pi^{13} \theta^6 - 32256 c^6 \pi^8 \theta^7 - 14224896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5432832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1503360 c^4 \pi^{10} \theta^9 + 293760 c^4 \pi^9 \theta^{10} - 38448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096 c^4 \pi^{10} + 10240 c^4 \pi^9 \theta - 10496 c^4 \pi^8 \theta^2 + 5632 c^4 \pi^7 \theta^3 - 1664 c^4 \pi^6 \theta^4 + 256 c^4 \pi^5 \theta^5 - 16 c^4 \pi^4 \theta^6\right)^3 + \left(524288 c^6 \pi^{15} - 1966080 c^6 \pi^{14} \theta - 1769472 c^4 \pi^{18} \theta + 3244032 c^6 \pi^{13} \theta^2 + 9732096 c^4 \pi^{17} \theta^2 - 3088384 c^6 \pi^{12} \theta^3 - 24440832 c^4 \pi^{16} \theta^3 + 1867776 c^6 \pi^{11} \theta^4 + 37048320 c^4 \pi^{15} \theta^4 - 743424 c^6 \pi^{10} \theta^5 - 37739520 c^4 \pi^{14} \theta^5 + 194560 c^6 \pi^9 \theta^6 + 27205632 c^4 \pi^{13} \theta^6 - 32256 c^6 \pi^8 \theta^7 - 14224896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5432832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1503360 c^4 \pi^{10} \theta^9 + 293760 c^4 \pi^9 \theta^{10} - 38448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\Big(524288 c^6 \pi^{15} - 1966080 c^6 \pi^{14} \theta - 1769472 c^4 \pi^{18} \theta + 3244032 c^6 \pi^{13} \theta^2 + 9732096 c^4 \pi^{17} \theta^2 - 3088384 c^6 \pi^{12} \theta^3 - 24440832 c^4 \pi^{16} \theta^3 + 1867776 c^6 \pi^{11} \theta^4 + 37048320 c^4 \pi^{15} \theta^4 - 743424 c^6 \pi^{10} \theta^5 - 37739520 c^4 \pi^{14} \theta^5 + 194560 c^6 \pi^9 \theta^6 + 27205632 c^4 \pi^{13} \theta^6 -$$

$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+$$
$$293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+}$$
$$256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-$$
$$1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-$$
$$3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+$$
$$37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560$$
$$c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+$$
$$293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big/$$
$$\left(3\times 2^{1/3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\right)\Bigg)\Bigg),$$

$$\Bigg(\sqrt{\Bigg(-\frac{128\,c^2\,\pi^5}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+}$$
$$\frac{160\,c^2\,\pi^4\,\theta}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}-$$
$$\frac{64\,c^2\,\pi^3\,\theta^2}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$
$$\frac{8\,c^2\,\pi^2\,\theta^3}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$
$$\left(4096\times 2^{1/3}\right.$$
$$\left.c^4\,\pi^{10}\right)\Big/$$
$$\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$$
$$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$

$$5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 - 1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} - 108\ c^4\,\pi^6\,\theta^{13})^2))^{1/3}) -$$
$$(10\,240 \times 2^{1/3}\ c^4\,\pi^9\,\theta) \Big/ \Big(3\ (-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5)$$
$$(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 - 32\,256\ c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} - 38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} -$$
$$108\ c^4\,\pi^6\,\theta^{13} + \sqrt{(}4\ (-4096\ c^4\,\pi^{10} + 10\,240\ c^4\,\pi^9\,\theta - 10\,496\ c^4\,\pi^8\,\theta^2 +$$
$$5632\ c^4\,\pi^7\,\theta^3 - 1664\ c^4\,\pi^6\,\theta^4 + 256\ c^4\,\pi^5\,\theta^5 - 16\ c^4\,\pi^4\,\theta^6)^3 +$$
$$(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\ c^6\,\pi^8\,\theta^7 - 14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 +$$
$$5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 - 1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} - 108\ c^4\,\pi^6\,\theta^{13})^2))^{1/3}\Big) +$$
$$(10\,496 \times 2^{1/3}\ c^4\,\pi^8\,\theta^2) \Big/ \Big(3\ (-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5)$$
$$(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 - 32\,256\ c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} - 38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} -$$
$$108\ c^4\,\pi^6\,\theta^{13} + \sqrt{(}4\ (-4096\ c^4\,\pi^{10} + 10\,240\ c^4\,\pi^9\,\theta - 10\,496\ c^4\,\pi^8\,\theta^2 +$$
$$5632\ c^4\,\pi^7\,\theta^3 - 1664\ c^4\,\pi^6\,\theta^4 + 256\ c^4\,\pi^5\,\theta^5 - 16\ c^4\,\pi^4\,\theta^6)^3 +$$
$$(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\ c^6\,\pi^8\,\theta^7 - 14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 +$$
$$5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 - 1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} - 108\ c^4\,\pi^6\,\theta^{13})^2))^{1/3}\Big) -$$
$$(5632 \times 2^{1/3}\ c^4\,\pi^7\,\theta^3) \Big/ \Big(3\ (-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5)$$
$$(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$

$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 + \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg) +$$

$$\left(1664 \times 2^{1/3}\, c^4\, \pi^6\, \theta^4\right) \Big/ \Bigg(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right) \Bigg(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 + \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg) -$$

$$\left(256 \times 2^{1/3}\, c^4\, \pi^5\, \theta^5\right) \Big/ \Bigg(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right) \Bigg(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 +$$

$$\left(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(16 \times 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$

$$\Big(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\Big(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3} \Big/$$

$$\left(3\times 2^{1/3}\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)\right)\Bigg)\Bigg),$$

$$\Bigg(-\sqrt{\Bigg(-\frac{128\,c^2\pi^5}{3\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)}+\frac{160\,c^2\pi^4\theta}{3\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)}-\frac{64\,c^2\pi^3\theta^2}{3\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)}+\frac{8\,c^2\pi^2\theta^3}{3\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)}-}$$

$$\left(2048\times 2^{1/3}c^4\pi^{10}\right)\Big/\Bigg(3\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)\Big(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}+\sqrt{\Big(4\left(-4096\,c^4\pi^{10}+10\,240\,c^4\pi^9\theta-10\,496\,c^4\pi^8\theta^2+5632\,c^4\pi^7\theta^3-1664\,c^4\pi^6\theta^4+256\,c^4\pi^5\theta^5-16\,c^4\pi^4\theta^6\right)^3+\left(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}\right)^2\Big)}\Big)^{1/3}\Bigg)+$$

$$\left(2048\,i\,2^{1/3}c^4\pi^{10}\right)\Big/\Bigg(\sqrt{3}\left(-64\pi^5+144\pi^4\theta-128\pi^3\theta^2+56\pi^2\theta^3-12\pi\theta^4+\theta^5\right)\Big(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}+\sqrt{\Big(4\left(-4096\,c^4\pi^{10}+10\,240\,c^4\pi^9\theta-10\,496\,c^4\pi^8\theta^2+5632\,c^4\pi^7\theta^3-1664\,c^4\pi^6\theta^4+256\,c^4\pi^5\theta^5-16\,c^4\pi^4\theta^6\right)^3+$$

$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(5120 \times 2^{1/3} c^4 \pi^9 \theta\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) -$$

$$\left(5120\, i\, 2^{1/3} c^4 \pi^9 \theta\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$

$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(5248 \times 2^{1/3}\, c^4 \pi^8 \theta^2\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 -$$
$$14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 -$$
$$1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} -$$
$$108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 +\right.}$$
$$\left. 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6$$
$$\pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832$$
$$c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(5248\, i\, 2^{1/3}\, c^4 \pi^8 \theta^2\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 -$$
$$14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 -$$
$$1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} -$$
$$108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 +\right.}$$
$$\left. 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6$$
$$\pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832$$
$$c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(2816 \times 2^{1/3}\, c^4 \pi^7 \theta^3\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$

$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 - 32\,256\ c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} - 38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} -$$
$$108\ c^4\,\pi^6\,\theta^{13} + \sqrt{}\Big(4\ \big(-4096\ c^4\,\pi^{10} + 10\,240\ c^4\,\pi^9\,\theta - 10\,496\ c^4\,\pi^8\,\theta^2 +$$
$$5632\ c^4\,\pi^7\,\theta^3 - 1664\ c^4\,\pi^6\,\theta^4 + 256\ c^4\,\pi^5\,\theta^5 - 16\ c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\ c^6\,\pi^8\,\theta^7 - 14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 - 1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} - 108\ c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(2816\ i\ 2^{1/3}\ c^4\,\pi^7\,\theta^3\right) \Big/ \Big(\sqrt{3}\ \left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$
$$\Big(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 - 32\,256\ c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} - 38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} -$$
$$108\ c^4\,\pi^6\,\theta^{13} + \sqrt{}\Big(4\ \big(-4096\ c^4\,\pi^{10} + 10\,240\ c^4\,\pi^9\,\theta - 10\,496\ c^4\,\pi^8\,\theta^2 +$$
$$5632\ c^4\,\pi^7\,\theta^3 - 1664\ c^4\,\pi^6\,\theta^4 + 256\ c^4\,\pi^5\,\theta^5 - 16\ c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\ c^6\,\pi^8\,\theta^7 - 14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 - 1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} - 108\ c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(832 \times 2^{1/3}\ c^4\,\pi^6\,\theta^4\right) \Big/ \Big(3\ \left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$
$$\Big(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\ c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\ c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\ c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\ c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\ c^4\,\pi^{15}\,\theta^4 - 743\,424\ c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\ c^4\,\pi^{14}\,\theta^5 + 194\,560\ c^6\,\pi^9\,\theta^6 + 27\,205\,632\ c^4\,\pi^{13}\,\theta^6 - 32\,256\ c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\ c^4\,\pi^{12}\,\theta^7 + 3072\ c^6\,\pi^7\,\theta^8 + 5\,432\,832\ c^4\,\pi^{11}\,\theta^8 - 128\ c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\ c^4\,\pi^{10}\,\theta^9 + 293\,760\ c^4\,\pi^9\,\theta^{10} - 38\,448\ c^4\,\pi^8\,\theta^{11} + 3024\ c^4\,\pi^7\,\theta^{12} -$$
$$108\ c^4\,\pi^6\,\theta^{13} + \sqrt{}\Big(4\ \big(-4096\ c^4\,\pi^{10} + 10\,240\ c^4\,\pi^9\,\theta - 10\,496\ c^4\,\pi^8\,\theta^2 +$$
$$5632\ c^4\,\pi^7\,\theta^3 - 1664\ c^4\,\pi^6\,\theta^4 + 256\ c^4\,\pi^5\,\theta^5 - 16\ c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\ c^6\,\pi^{15} - 1\,966\,080\ c^6\,\pi^{14}\,\theta - 1\,769\,472\ c^4\,\pi^{18}\,\theta + 3\,244\,032\ c^6$$

$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(832\,i\,2^{1/3}\,c^4\,\pi^6\,\theta^4\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right) \Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(128 \times 2^{1/3}\,c^4\,\pi^5\,\theta^5\right) \Big/ \Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right) \Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) -$$

$$\left(128\, i\, 2^{1/3}\, c^4\, \pi^5\, \theta^5\right) \Big/ \left(\sqrt{3}\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right) \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 + \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)}\right)^{1/3}\right) -$$

$$\left(8 \times 2^{1/3}\, c^4\, \pi^4\, \theta^6\right) \Big/ \left(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right) \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} + \sqrt{\left(4\, \left(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\right)^3 + \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\right)^2\right)}\right)^{1/3}\right) +$$

$$\left(8\, i\, 2^{1/3}\, c^4\, \pi^4\, \theta^6\right) \Big/ \left(\sqrt{3}\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right) \left(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 -$$

$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +}$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 +$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$$
$$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$$
$$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 +}$$
$$256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 + \big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta -$$
$$1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 -$$
$$3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 +$$
$$37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560$$
$$c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$$
$$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$$
$$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3} \Big/$$
$$\Big(6 \times 2^{1/3}\,\big(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\big)\Big) -$$
$$\Big(i\,\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +}$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$

$$c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} - 38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13})^2))^{1/3}\Big) \Big/ \left(2 \times 2^{1/3} \sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right)\Big)\Big),$$

$$\Bigg(\sqrt{}\Bigg(-\frac{128 c^2 \pi^5}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} + \frac{160 c^2 \pi^4 \theta}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} - \frac{64 c^2 \pi^3 \theta^2}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} + \frac{8 c^2 \pi^2 \theta^3}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} -$$

$$\left(2048 \times 2^{1/3} c^4 \pi^{10}\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 + 9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 + 1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 - 37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 - 32\,256 c^6 \pi^8 \theta^7 - 14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} - 38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096 c^4 \pi^{10} + 10\,240 c^4 \pi^9 \theta - 10\,496 c^4 \pi^8 \theta^2 + 5632 c^4 \pi^7 \theta^3 - 1664 c^4 \pi^6 \theta^4 + 256 c^4 \pi^5 \theta^5 - 16 c^4 \pi^4 \theta^6\right)^3 + \left(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 + 9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 + 1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 - 37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 - 32\,256 c^6 \pi^8 \theta^7 - 14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} - 38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(2048\, i\, 2^{1/3} c^4 \pi^{10}\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right) \Big(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 + 9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 -$$

$$24\,440\,832\,c^{4}\pi^{16}\theta^{3}+1\,867\,776\,c^{6}\pi^{11}\theta^{4}+37\,048\,320\,c^{4}\pi^{15}\theta^{4}-$$
$$743\,424\,c^{6}\pi^{10}\theta^{5}-37\,739\,520\,c^{4}\pi^{14}\theta^{5}+194\,560\,c^{6}\pi^{9}\theta^{6}+$$
$$27\,205\,632\,c^{4}\pi^{13}\theta^{6}-32\,256\,c^{6}\pi^{8}\theta^{7}-14\,224\,896\,c^{4}\pi^{12}\theta^{7}+$$
$$3072\,c^{6}\pi^{7}\theta^{8}+5\,432\,832\,c^{4}\pi^{11}\theta^{8}-128\,c^{6}\pi^{6}\theta^{9}-1\,503\,360\,c^{4}\pi^{10}\theta^{9}+$$
$$293\,760\,c^{4}\pi^{9}\theta^{10}-38\,448\,c^{4}\pi^{8}\theta^{11}+3024\,c^{4}\pi^{7}\theta^{12}-108\,c^{4}\pi^{6}\theta^{13}+$$
$$\surd\Big(4\,\big(-4096\,c^{4}\pi^{10}+10\,240\,c^{4}\pi^{9}\theta-10\,496\,c^{4}\pi^{8}\theta^{2}+5632\,c^{4}\pi^{7}\theta^{3}-$$
$$1664\,c^{4}\pi^{6}\theta^{4}+256\,c^{4}\pi^{5}\theta^{5}-16\,c^{4}\pi^{4}\theta^{6}\big)^{3}+$$
$$\big(524\,288\,c^{6}\pi^{15}-1\,966\,080\,c^{6}\pi^{14}\theta-1\,769\,472\,c^{4}\pi^{18}\theta+3\,244\,032$$
$$c^{6}\pi^{13}\theta^{2}+9\,732\,096\,c^{4}\pi^{17}\theta^{2}-3\,088\,384\,c^{6}\pi^{12}\theta^{3}-24\,440\,832\,c^{4}\pi^{16}\theta^{3}+$$
$$1\,867\,776\,c^{6}\pi^{11}\theta^{4}+37\,048\,320\,c^{4}\pi^{15}\theta^{4}-743\,424\,c^{6}\pi^{10}\theta^{5}-$$
$$37\,739\,520\,c^{4}\pi^{14}\theta^{5}+194\,560\,c^{6}\pi^{9}\theta^{6}+27\,205\,632\,c^{4}\pi^{13}\theta^{6}-$$
$$32\,256\,c^{6}\pi^{8}\theta^{7}-14\,224\,896\,c^{4}\pi^{12}\theta^{7}+3072\,c^{6}\pi^{7}\theta^{8}+$$
$$5\,432\,832\,c^{4}\pi^{11}\theta^{8}-128\,c^{6}\pi^{6}\theta^{9}-1\,503\,360\,c^{4}\pi^{10}\theta^{9}+293\,760\,c^{4}\pi^{9}\theta^{10}-$$
$$38\,448\,c^{4}\pi^{8}\theta^{11}+3024\,c^{4}\pi^{7}\theta^{12}-108\,c^{4}\pi^{6}\theta^{13}\big)^{2}\Big)\Big)^{1/3}\Big)+$$

$$\left(5120\times2^{1/3}\,c^{4}\pi^{9}\theta\right)\Big/\ \Big(3\,\left(-64\,\pi^{5}+144\,\pi^{4}\theta-128\,\pi^{3}\theta^{2}+56\,\pi^{2}\theta^{3}-12\,\pi\,\theta^{4}+\theta^{5}\right)$$
$$\Big(524\,288\,c^{6}\pi^{15}-1\,966\,080\,c^{6}\pi^{14}\theta-1\,769\,472\,c^{4}\pi^{18}\theta+$$
$$3\,244\,032\,c^{6}\pi^{13}\theta^{2}+9\,732\,096\,c^{4}\pi^{17}\theta^{2}-3\,088\,384\,c^{6}\pi^{12}\theta^{3}-$$
$$24\,440\,832\,c^{4}\pi^{16}\theta^{3}+1\,867\,776\,c^{6}\pi^{11}\theta^{4}+37\,048\,320\,c^{4}\pi^{15}\theta^{4}-$$
$$743\,424\,c^{6}\pi^{10}\theta^{5}-37\,739\,520\,c^{4}\pi^{14}\theta^{5}+194\,560\,c^{6}\pi^{9}\theta^{6}+$$
$$27\,205\,632\,c^{4}\pi^{13}\theta^{6}-32\,256\,c^{6}\pi^{8}\theta^{7}-14\,224\,896\,c^{4}\pi^{12}\theta^{7}+$$
$$3072\,c^{6}\pi^{7}\theta^{8}+5\,432\,832\,c^{4}\pi^{11}\theta^{8}-128\,c^{6}\pi^{6}\theta^{9}-1\,503\,360\,c^{4}\pi^{10}\theta^{9}+$$
$$293\,760\,c^{4}\pi^{9}\theta^{10}-38\,448\,c^{4}\pi^{8}\theta^{11}+3024\,c^{4}\pi^{7}\theta^{12}-108\,c^{4}\pi^{6}\theta^{13}+$$
$$\surd\Big(4\,\big(-4096\,c^{4}\pi^{10}+10\,240\,c^{4}\pi^{9}\theta-10\,496\,c^{4}\pi^{8}\theta^{2}+5632\,c^{4}\pi^{7}\theta^{3}-$$
$$1664\,c^{4}\pi^{6}\theta^{4}+256\,c^{4}\pi^{5}\theta^{5}-16\,c^{4}\pi^{4}\theta^{6}\big)^{3}+$$
$$\big(524\,288\,c^{6}\pi^{15}-1\,966\,080\,c^{6}\pi^{14}\theta-1\,769\,472\,c^{4}\pi^{18}\theta+3\,244\,032$$
$$c^{6}\pi^{13}\theta^{2}+9\,732\,096\,c^{4}\pi^{17}\theta^{2}-3\,088\,384\,c^{6}\pi^{12}\theta^{3}-24\,440\,832\,c^{4}\pi^{16}\theta^{3}+$$
$$1\,867\,776\,c^{6}\pi^{11}\theta^{4}+37\,048\,320\,c^{4}\pi^{15}\theta^{4}-743\,424\,c^{6}\pi^{10}\theta^{5}-$$
$$37\,739\,520\,c^{4}\pi^{14}\theta^{5}+194\,560\,c^{6}\pi^{9}\theta^{6}+27\,205\,632\,c^{4}\pi^{13}\theta^{6}-$$
$$32\,256\,c^{6}\pi^{8}\theta^{7}-14\,224\,896\,c^{4}\pi^{12}\theta^{7}+3072\,c^{6}\pi^{7}\theta^{8}+$$
$$5\,432\,832\,c^{4}\pi^{11}\theta^{8}-128\,c^{6}\pi^{6}\theta^{9}-1\,503\,360\,c^{4}\pi^{10}\theta^{9}+293\,760\,c^{4}\pi^{9}\theta^{10}-$$
$$38\,448\,c^{4}\pi^{8}\theta^{11}+3024\,c^{4}\pi^{7}\theta^{12}-108\,c^{4}\pi^{6}\theta^{13}\big)^{2}\Big)\Big)^{1/3}\Big)-$$

$$\left(5120\,i\,2^{1/3}\,c^{4}\pi^{9}\theta\right)\Big/\ \Big(\sqrt{3}\,\left(-64\,\pi^{5}+144\,\pi^{4}\theta-128\,\pi^{3}\theta^{2}+56\,\pi^{2}\theta^{3}-12\,\pi\,\theta^{4}+\theta^{5}\right)$$
$$\Big(524\,288\,c^{6}\pi^{15}-1\,966\,080\,c^{6}\pi^{14}\theta-1\,769\,472\,c^{4}\pi^{18}\theta+$$
$$3\,244\,032\,c^{6}\pi^{13}\theta^{2}+9\,732\,096\,c^{4}\pi^{17}\theta^{2}-3\,088\,384\,c^{6}\pi^{12}\theta^{3}-$$
$$24\,440\,832\,c^{4}\pi^{16}\theta^{3}+1\,867\,776\,c^{6}\pi^{11}\theta^{4}+37\,048\,320\,c^{4}\pi^{15}\theta^{4}-$$
$$743\,424\,c^{6}\pi^{10}\theta^{5}-37\,739\,520\,c^{4}\pi^{14}\theta^{5}+194\,560\,c^{6}\pi^{9}\theta^{6}+$$
$$27\,205\,632\,c^{4}\pi^{13}\theta^{6}-32\,256\,c^{6}\pi^{8}\theta^{7}-14\,224\,896\,c^{4}\pi^{12}\theta^{7}+$$
$$3072\,c^{6}\pi^{7}\theta^{8}+5\,432\,832\,c^{4}\pi^{11}\theta^{8}-128\,c^{6}\pi^{6}\theta^{9}-1\,503\,360\,c^{4}\pi^{10}\theta^{9}+$$
$$293\,760\,c^{4}\pi^{9}\theta^{10}-38\,448\,c^{4}\pi^{8}\theta^{11}+3024\,c^{4}\pi^{7}\theta^{12}-108\,c^{4}\pi^{6}\theta^{13}+$$

$$\surd\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 -$$
$$1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 +$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\big(5248 \times 2^{1/3}\,c^4\,\pi^8\,\theta^2\big) \Big/ \Big(3\,\big(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\big)$$
$$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta +$$
$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 -$$
$$24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 -$$
$$743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 +$$
$$27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$$
$$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$$
$$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$$
$$\surd\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 -$$
$$1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 +$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\big(5248\,i\,2^{1/3}\,c^4\,\pi^8\,\theta^2\big) \Big/ \Big(\sqrt{3}\,\big(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\big)$$
$$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta +$$
$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 -$$
$$24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 -$$
$$743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 +$$
$$27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$$
$$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$$
$$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$$
$$\surd\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 -$$
$$1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032$$
$$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$

$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 +$$
$$5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} -$$
$$38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(2816 \times 2^{1/3}\, c^4\, \pi^7\, \theta^3\right) \Big/ \Big(3\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta +$$
$$3244032\, c^6\, \pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 -$$
$$24440832\, c^4\, \pi^{16}\, \theta^3 + 1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 -$$
$$743424\, c^6\, \pi^{10}\, \theta^5 - 37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 +$$
$$27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293760\, c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} +$$
$$\sqrt{\Big(4\, \big(-4096\, c^4\, \pi^{10} + 10240\, c^4\, \pi^9\, \theta - 10496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 -}$$
$$1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\big)^3 +$$
$$\big(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032$$
$$c^6\, \pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 +$$
$$5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} -$$
$$38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(2816\, i\, 2^{1/3}\, c^4\, \pi^7\, \theta^3\right) \Big/ \Big(\sqrt{3}\, \left(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta +$$
$$3244032\, c^6\, \pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 -$$
$$24440832\, c^4\, \pi^{16}\, \theta^3 + 1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 -$$
$$743424\, c^6\, \pi^{10}\, \theta^5 - 37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 +$$
$$27205632\, c^4\, \pi^{13}\, \theta^6 - 32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293760\, c^4\, \pi^9\, \theta^{10} - 38448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} +$$
$$\sqrt{\Big(4\, \big(-4096\, c^4\, \pi^{10} + 10240\, c^4\, \pi^9\, \theta - 10496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 -}$$
$$1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\big)^3 +$$
$$\big(524288\, c^6\, \pi^{15} - 1966080\, c^6\, \pi^{14}\, \theta - 1769472\, c^4\, \pi^{18}\, \theta + 3244032$$
$$c^6\, \pi^{13}\, \theta^2 + 9732096\, c^4\, \pi^{17}\, \theta^2 - 3088384\, c^6\, \pi^{12}\, \theta^3 - 24440832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1867776\, c^6\, \pi^{11}\, \theta^4 + 37048320\, c^4\, \pi^{15}\, \theta^4 - 743424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37739520\, c^4\, \pi^{14}\, \theta^5 + 194560\, c^6\, \pi^9\, \theta^6 + 27205632\, c^4\, \pi^{13}\, \theta^6 -$$
$$32256\, c^6\, \pi^8\, \theta^7 - 14224896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 +$$
$$5432832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1503360\, c^4\, \pi^{10}\, \theta^9 + 293760\, c^4\, \pi^9\, \theta^{10} -$$

$$38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(832\times2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+$$
$$3244032\,c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-$$
$$24440832\,c^4\,\pi^{16}\,\theta^3+1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-$$
$$743424\,c^6\,\pi^{10}\,\theta^5-37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+$$
$$27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+$$
$$293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{}\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-$$
$$1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032$$
$$c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+$$
$$1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-$$
$$37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-$$
$$32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-$$
$$38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)+$$

$$\left(832\,i\,2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+$$
$$3244032\,c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-$$
$$24440832\,c^4\,\pi^{16}\,\theta^3+1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-$$
$$743424\,c^6\,\pi^{10}\,\theta^5-37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+$$
$$27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+$$
$$293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{}\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-$$
$$1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032$$
$$c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+$$
$$1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-$$
$$37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-$$
$$32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-$$
$$38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)+$$

$$\left(128\times2^{1/3}\,c^4\,\pi^5\,\theta^5\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+$$

$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Big)^{1/3}\Big) -$$

$$\left(128\,i\,2^{1/3}\,c^4\,\pi^5\,\theta^5\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right) \Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Big)^{1/3}\Big) -$$

$$\left(8 \times 2^{1/3}\,c^4\,\pi^4\,\theta^6\right) \Big/ \Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right) \Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$$

$$293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 -\right.}$$
$$\left. 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032$$
$$c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 +$$
$$5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\Big)^2\Big)}\Bigg)^{1/3}\Bigg) +$$

$$\left(8\, i\, 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \left(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right.$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta +$$
$$3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 -$$
$$24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 -$$
$$743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 +$$
$$27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 +$$
$$3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 -\right.}$$
$$\left. 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032$$
$$c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 +$$
$$5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\Big)^2\Big)}\Bigg)^{1/3}\Bigg) -$$

$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 -$$
$$24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 +$$
$$37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 +$$
$$27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 -$$
$$14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 +$$
$$5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 -$$
$$1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 +\right.}$$
$$\left. 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$

$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\Big)^{1/3} \Big/$$

$$\left(6 \times 2^{1/3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right) -$$

$$\Big(\mathbb{i} \Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$

$$\sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) \Big/$$

$$\left(2 \times 2^{1/3} \sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right)\Big)\Big),$$

$$\Big(-\sqrt{\Big(} - \frac{128\, c^2 \pi^5}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} + \frac{160\, c^2 \pi^4 \theta}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} - \frac{64\, c^2 \pi^3 \theta^2}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} + \frac{8\, c^2 \pi^2 \theta^3}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} -$$

$$\left(2048 \times 2^{1/3}\, c^4 \pi^{10}\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$

$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +$$

$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +}$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$
$$\left(2048\,i\,2^{1/3}\,c^4\,\pi^{10}\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$
$$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +}$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$$
$$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big) +$$
$$\left(5120 \times 2^{1/3}\,c^4\,\pi^9\,\theta\right) \Big/ \Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$
$$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +}$$

$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6)^3 +$$
$$(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13})^2))^{1/3}) +$$
$$(5120\,i\,2^{1/3}\,c^4\,\pi^9\,\theta) \Big/ \Big(\sqrt{3}\,(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5)$$
$$(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\;}\,(4\,(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6)^3 +$$
$$(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$$
$$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13})^2))^{1/3}\Big) -$$
$$(5248 \times 2^{1/3}\,c^4\,\pi^8\,\theta^2) \Big/ \Big(3\,(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5)$$
$$(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 +$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 -$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 -$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} -$$
$$108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\;}\,(4\,(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 +$$
$$5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6)^3 +$$
$$(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$$
$$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832$$

$$c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} -$$
$$38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13})^2))^{1/3}) -$$
$$(5248 i\, 2^{1/3} c^4 \pi^8 \theta^2) \Big/ \Big(\sqrt{3} \, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5)$$
$$(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 +$$
$$9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 +$$
$$1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 -$$
$$37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 - 32\,256 c^6 \pi^8 \theta^7 -$$
$$14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 -$$
$$1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} - 38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} -$$
$$108 c^4 \pi^6 \theta^{13} + \sqrt{} \Big(4 \, (-4096 c^4 \pi^{10} + 10\,240 c^4 \pi^9 \theta - 10\,496 c^4 \pi^8 \theta^2 +$$
$$5632 c^4 \pi^7 \theta^3 - 1664 c^4 \pi^6 \theta^4 + 256 c^4 \pi^5 \theta^5 - 16 c^4 \pi^4 \theta^6)^3 +$$
$$(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6$$
$$\pi^{13} \theta^2 + 9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 +$$
$$1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 -$$
$$37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 -$$
$$32\,256 c^6 \pi^8 \theta^7 - 14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832$$
$$c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} -$$
$$38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13})^2))^{1/3}) +$$
$$(2816 \times 2^{1/3} c^4 \pi^7 \theta^3) \Big/ \Big(3 \, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5)$$
$$(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 +$$
$$9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 +$$
$$1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 -$$
$$37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 - 32\,256 c^6 \pi^8 \theta^7 -$$
$$14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832 c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 -$$
$$1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} - 38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} -$$
$$108 c^4 \pi^6 \theta^{13} + \sqrt{} \Big(4 \, (-4096 c^4 \pi^{10} + 10\,240 c^4 \pi^9 \theta - 10\,496 c^4 \pi^8 \theta^2 +$$
$$5632 c^4 \pi^7 \theta^3 - 1664 c^4 \pi^6 \theta^4 + 256 c^4 \pi^5 \theta^5 - 16 c^4 \pi^4 \theta^6)^3 +$$
$$(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6$$
$$\pi^{13} \theta^2 + 9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 +$$
$$1\,867\,776 c^6 \pi^{11} \theta^4 + 37\,048\,320 c^4 \pi^{15} \theta^4 - 743\,424 c^6 \pi^{10} \theta^5 -$$
$$37\,739\,520 c^4 \pi^{14} \theta^5 + 194\,560 c^6 \pi^9 \theta^6 + 27\,205\,632 c^4 \pi^{13} \theta^6 -$$
$$32\,256 c^6 \pi^8 \theta^7 - 14\,224\,896 c^4 \pi^{12} \theta^7 + 3072 c^6 \pi^7 \theta^8 + 5\,432\,832$$
$$c^4 \pi^{11} \theta^8 - 128 c^6 \pi^6 \theta^9 - 1\,503\,360 c^4 \pi^{10} \theta^9 + 293\,760 c^4 \pi^9 \theta^{10} -$$
$$38\,448 c^4 \pi^8 \theta^{11} + 3024 c^4 \pi^7 \theta^{12} - 108 c^4 \pi^6 \theta^{13})^2))^{1/3}) +$$
$$(2816 i\, 2^{1/3} c^4 \pi^7 \theta^3) \Big/ \Big(\sqrt{3} \, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5)$$
$$(524\,288 c^6 \pi^{15} - 1\,966\,080 c^6 \pi^{14} \theta - 1\,769\,472 c^4 \pi^{18} \theta + 3\,244\,032 c^6 \pi^{13} \theta^2 +$$
$$9\,732\,096 c^4 \pi^{17} \theta^2 - 3\,088\,384 c^6 \pi^{12} \theta^3 - 24\,440\,832 c^4 \pi^{16} \theta^3 +$$

$$
\begin{gathered}
1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-\\
37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-\\
14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-\\
1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-\\
108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\;}\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+\\
5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+\\
\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\\
\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+\\
1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-\\
37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-\\
32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5432832\\
c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-\\
38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-\\
\left(832\times 2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\\
\Big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\,\pi^{13}\,\theta^2+\\
9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+\\
1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-\\
37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-\\
14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-\\
1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-\\
108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\;}\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+\\
5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+\\
\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\\
\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+\\
1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-\\
37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-\\
32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5432832\\
c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-\\
38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-\\
\left(832\,i\,2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\\
\Big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\,\pi^{13}\,\theta^2+\\
9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+\\
1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-\\
37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-\\
14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-\\
1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-\\
108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\;}\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+\\
5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+
\end{gathered}
$$

$$\left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(128 \times 2^{1/3}\,c^4\,\pi^5\,\theta^5\right) \Big/ \Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\Big(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10} + 10240\,c^4\,\pi^9\,\theta - 10496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(128\,\mathbb{i}\,2^{1/3}\,c^4\,\pi^5\,\theta^5\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\Big(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10} + 10240\,c^4\,\pi^9\,\theta - 10496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \Big(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} -$$

$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(8\times 2^{1/3}\,c^4\,\pi^4\,\theta^6\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$

$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+\right.}$$
$$\left.5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(8\,i\,2^{1/3}\,c^4\,\pi^4\,\theta^6\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$

$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+\right.}$$
$$\left.5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$

$$5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 +$$
$$293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{\left(4 \left(-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\right)}\Bigg)^{1/3} \Bigg/$$
$$\left(6 \times 2^{1/3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right) +$$
$$\Bigg(\mathrm{i} \Bigg(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\left(4 \left(-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + 9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg) \Bigg/$$
$$\left(2 \times 2^{1/3} \sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)\right)\Bigg)\Bigg),$$

$$\Bigg(\sqrt{\Bigg(-\frac{128\, c^2 \pi^5}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} +}$$
$$\frac{160\, c^2 \pi^4 \theta}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} -$$
$$\frac{64\, c^2 \pi^3 \theta^2}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} +$$
$$\frac{8\, c^2 \pi^2 \theta^3}{3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)} -$$
$$\Big(2048 \times$$

$$2^{1/3}\ c^4\ \pi^{10}\Big) \Big/ \Big(3\ \left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right) \Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)}\Big)^{1/3}\Big)-$$

$$\left(2048\,\mathbb{i}\,2^{1/3}\,c^4\,\pi^{10}\right) \Big/ \Big(\sqrt{3}\ \left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right) \Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)}\Big)^{1/3}\Big)+$$

$$\left(5120\times 2^{1/3}\,c^4\,\pi^9\,\theta\right)\Big/\Bigg(3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Bigg(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+$$
$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-$$
$$24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-$$
$$743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+$$
$$27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+$$
$$293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{\Big(4\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-\right.}$$
$$\left.1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+$$
$$\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\right.$$
$$c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$\left.38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)\Bigg)^{1/3}\Bigg)+$$

$$\left(5120\,i\,2^{1/3}\,c^4\,\pi^9\,\theta\right)\Big/\Bigg(\sqrt{3}\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Bigg(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+$$
$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-$$
$$24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-$$
$$743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+$$
$$27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+$$
$$293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{\Big(4\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-\right.}$$
$$\left.1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+$$
$$\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\right.$$
$$c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$\left.38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\Big)\Bigg)^{1/3}\Bigg)-$$

$$\left(5248\times 2^{1/3}\,c^4\,\pi^8\,\theta^2\right)\Big/\Bigg(3\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Bigg(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+$$
$$3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-$$
$$24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-$$

$743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 +$
$27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$
$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$
$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$
$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 -}$
$1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$
$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032$
$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$
$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$
$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$
$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 +$
$5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$
$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)}\Big)^{1/3}\Big) -$

$\left(5248\,i\,2^{1/3}\,c^4\,\pi^8\,\theta^2\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$
$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta +$
$3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 -$
$24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 -$
$743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 +$
$27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$
$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$
$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$
$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 -}$
$1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\big)^3 +$
$\big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032$
$c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 +$
$1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 -$
$37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 -$
$32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 +$
$5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} -$
$38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)}\Big)^{1/3}\Big) +$

$\left(2816 \times 2^{1/3}\,c^4\,\pi^7\,\theta^3\right) \Big/ \Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$
$\Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta +$
$3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 -$
$24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 -$
$743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 +$
$27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 +$
$3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 +$
$293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} +$

$$\sqrt{\left(4\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg)+$$

$$\left(2816\,i\,2^{1/3}\,c^4\,\pi^7\,\theta^3\right)\Big/\Bigg(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\Bigg(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\left(4\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\left(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg)-$$

$$\left(832\times 2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Bigg(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\Bigg(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+}$$

$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(832\,\mathbb{i}\,2^{1/3}\,c^4\,\pi^6\,\theta^4\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)}\Big)^{1/3}\Big)+$$

$$\left(128\times 2^{1/3}\,c^4\,\pi^5\,\theta^5\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\right)^3+\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$

$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(128\, i\, 2^{1/3} c^4 \pi^5 \theta^5\right) \Big/ \Big(\sqrt{3}\, \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta +$$
$$3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 -$$
$$24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 -$$
$$743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 +$$
$$27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 +$$
$$3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{}\Big(4\, \big(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 -$$
$$1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\big)^3 +$$
$$\big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032$$
$$c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 +$$
$$5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(8 \times 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(3\, \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta +$$
$$3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 -$$
$$24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 -$$
$$743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 +$$
$$27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 +$$
$$3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{}\Big(4\, \big(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 -$$
$$1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\big)^3 +$$
$$\big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032$$
$$c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 -$$
$$32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 +$$
$$5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$
$$38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(8\, i\, 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(\sqrt{3}\, \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta +$$

$$3\,244\,032\ c^6\ \pi^{13}\ \theta^2 + 9\,732\,096\ c^4\ \pi^{17}\ \theta^2 - 3\,088\,384\ c^6\ \pi^{12}\ \theta^3 -$$
$$24\,440\,832\ c^4\ \pi^{16}\ \theta^3 + 1\,867\,776\ c^6\ \pi^{11}\ \theta^4 + 37\,048\,320\ c^4\ \pi^{15}\ \theta^4 -$$
$$743\,424\ c^6\ \pi^{10}\ \theta^5 - 37\,739\,520\ c^4\ \pi^{14}\ \theta^5 + 194\,560\ c^6\ \pi^9\ \theta^6 +$$
$$27\,205\,632\ c^4\ \pi^{13}\ \theta^6 - 32\,256\ c^6\ \pi^8\ \theta^7 - 14\,224\,896\ c^4\ \pi^{12}\ \theta^7 +$$
$$3072\ c^6\ \pi^7\ \theta^8 + 5\,432\,832\ c^4\ \pi^{11}\ \theta^8 - 128\ c^6\ \pi^6\ \theta^9 - 1\,503\,360\ c^4\ \pi^{10}\ \theta^9 +$$
$$293\,760\ c^4\ \pi^9\ \theta^{10} - 38\,448\ c^4\ \pi^8\ \theta^{11} + 3024\ c^4\ \pi^7\ \theta^{12} - 108\ c^4\ \pi^6\ \theta^{13} +$$
$$\sqrt{}\ \Big(4\ \big(-4096\ c^4\ \pi^{10} + 10\,240\ c^4\ \pi^9\ \theta - 10\,496\ c^4\ \pi^8\ \theta^2 + 5632\ c^4\ \pi^7\ \theta^3 -$$
$$1664\ c^4\ \pi^6\ \theta^4 + 256\ c^4\ \pi^5\ \theta^5 - 16\ c^4\ \pi^4\ \theta^6\big)^3 +$$
$$\big(524\,288\ c^6\ \pi^{15} - 1\,966\,080\ c^6\ \pi^{14}\ \theta - 1\,769\,472\ c^4\ \pi^{18}\ \theta + 3\,244\,032$$
$$c^6\ \pi^{13}\ \theta^2 + 9\,732\,096\ c^4\ \pi^{17}\ \theta^2 - 3\,088\,384\ c^6\ \pi^{12}\ \theta^3 - 24\,440\,832\ c^4\ \pi^{16}\ \theta^3 +$$
$$1\,867\,776\ c^6\ \pi^{11}\ \theta^4 + 37\,048\,320\ c^4\ \pi^{15}\ \theta^4 - 743\,424\ c^6\ \pi^{10}\ \theta^5 -$$
$$37\,739\,520\ c^4\ \pi^{14}\ \theta^5 + 194\,560\ c^6\ \pi^9\ \theta^6 + 27\,205\,632\ c^4\ \pi^{13}\ \theta^6 -$$
$$32\,256\ c^6\ \pi^8\ \theta^7 - 14\,224\,896\ c^4\ \pi^{12}\ \theta^7 + 3072\ c^6\ \pi^7\ \theta^8 +$$
$$5\,432\,832\ c^4\ \pi^{11}\ \theta^8 - 128\ c^6\ \pi^6\ \theta^9 - 1\,503\,360\ c^4\ \pi^{10}\ \theta^9 + 293\,760\ c^4\ \pi^9\ \theta^{10} -$$
$$38\,448\ c^4\ \pi^8\ \theta^{11} + 3024\ c^4\ \pi^7\ \theta^{12} - 108\ c^4\ \pi^6\ \theta^{13}\big)^2\Big)\Big)^{1/3}\Big) -$$
$$\Big(524\,288\ c^6\ \pi^{15} - 1\,966\,080\ c^6\ \pi^{14}\ \theta - 1\,769\,472\ c^4\ \pi^{18}\ \theta + 3\,244\,032\ c^6\ \pi^{13}\ \theta^2 +$$
$$9\,732\,096\ c^4\ \pi^{17}\ \theta^2 - 3\,088\,384\ c^6\ \pi^{12}\ \theta^3 -$$
$$24\,440\,832\ c^4\ \pi^{16}\ \theta^3 + 1\,867\,776\ c^6\ \pi^{11}\ \theta^4 +$$
$$37\,048\,320\ c^4\ \pi^{15}\ \theta^4 - 743\,424\ c^6\ \pi^{10}\ \theta^5 -$$
$$37\,739\,520\ c^4\ \pi^{14}\ \theta^5 + 194\,560\ c^6\ \pi^9\ \theta^6 +$$
$$27\,205\,632\ c^4\ \pi^{13}\ \theta^6 - 32\,256\ c^6\ \pi^8\ \theta^7 -$$
$$14\,224\,896\ c^4\ \pi^{12}\ \theta^7 + 3072\ c^6\ \pi^7\ \theta^8 +$$
$$5\,432\,832\ c^4\ \pi^{11}\ \theta^8 - 128\ c^6\ \pi^6\ \theta^9 -$$
$$1\,503\,360\ c^4\ \pi^{10}\ \theta^9 + 293\,760\ c^4\ \pi^9\ \theta^{10} -$$
$$38\,448\ c^4\ \pi^8\ \theta^{11} + 3024\ c^4\ \pi^7\ \theta^{12} - 108\ c^4\ \pi^6\ \theta^{13} +$$
$$\sqrt{}\ \Big(4\ \big(-4096\ c^4\ \pi^{10} + 10\,240\ c^4\ \pi^9\ \theta - 10\,496\ c^4\ \pi^8\ \theta^2 +$$
$$5632\ c^4\ \pi^7\ \theta^3 - 1664\ c^4\ \pi^6\ \theta^4 + 256\ c^4\ \pi^5\ \theta^5 - 16\ c^4\ \pi^4\ \theta^6\big)^3 +$$
$$\big(524\,288\ c^6\ \pi^{15} - 1\,966\,080\ c^6\ \pi^{14}\ \theta - 1\,769\,472\ c^4\ \pi^{18}\ \theta + 3\,244\,032\ c^6\ \pi^{13}\ \theta^2 +$$
$$9\,732\,096\ c^4\ \pi^{17}\ \theta^2 - 3\,088\,384\ c^6\ \pi^{12}\ \theta^3 - 24\,440\,832\ c^4\ \pi^{16}\ \theta^3 + 1\,867\,776$$
$$c^6\ \pi^{11}\ \theta^4 + 37\,048\,320\ c^4\ \pi^{15}\ \theta^4 - 743\,424\ c^6\ \pi^{10}\ \theta^5 - 37\,739\,520\ c^4\ \pi^{14}\ \theta^5 +$$
$$194\,560\ c^6\ \pi^9\ \theta^6 + 27\,205\,632\ c^4\ \pi^{13}\ \theta^6 - 32\,256\ c^6\ \pi^8\ \theta^7 - 14\,224\,896\ c^4\ \pi^{12}$$
$$\theta^7 + 3072\ c^6\ \pi^7\ \theta^8 + 5\,432\,832\ c^4\ \pi^{11}\ \theta^8 - 128\ c^6\ \pi^6\ \theta^9 - 1\,503\,360\ c^4\ \pi^{10}\ \theta^9 +$$
$$293\,760\ c^4\ \pi^9\ \theta^{10} - 38\,448\ c^4\ \pi^8\ \theta^{11} + 3024\ c^4\ \pi^7\ \theta^{12} - 108\ c^4\ \pi^6\ \theta^{13}\big)^2\Big)\Big)^{1/3}\Big/$$
$$\Big(6 \times 2^{1/3}\ \big(-64\ \pi^5 + 144\ \pi^4\ \theta - 128\ \pi^3\ \theta^2 + 56\ \pi^2\ \theta^3 - 12\ \pi\ \theta^4 + \theta^5\big)\Big) +$$
$$\Big(i\ \Big(524\,288\ c^6\ \pi^{15} - 1\,966\,080\ c^6\ \pi^{14}\ \theta - 1\,769\,472\ c^4\ \pi^{18}\ \theta + 3\,244\,032\ c^6\ \pi^{13}\ \theta^2 +$$
$$9\,732\,096\ c^4\ \pi^{17}\ \theta^2 - 3\,088\,384\ c^6\ \pi^{12}\ \theta^3 - 24\,440\,832\ c^4\ \pi^{16}\ \theta^3 +$$
$$1\,867\,776\ c^6\ \pi^{11}\ \theta^4 + 37\,048\,320\ c^4\ \pi^{15}\ \theta^4 - 743\,424\ c^6\ \pi^{10}\ \theta^5 -$$
$$37\,739\,520\ c^4\ \pi^{14}\ \theta^5 + 194\,560\ c^6\ \pi^9\ \theta^6 + 27\,205\,632\ c^4\ \pi^{13}\ \theta^6 -$$
$$32\,256\ c^6\ \pi^8\ \theta^7 - 14\,224\,896\ c^4\ \pi^{12}\ \theta^7 + 3072\ c^6\ \pi^7\ \theta^8 +$$
$$5\,432\,832\ c^4\ \pi^{11}\ \theta^8 - 128\ c^6\ \pi^6\ \theta^9 - 1\,503\,360\ c^4\ \pi^{10}\ \theta^9 +$$

$$293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-}$$
$$1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032$$
$$c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+$$
$$1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-$$
$$37739520\,c^4\,\pi^{14}\,\theta^5+194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-$$
$$32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+$$
$$5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+293760\,c^4\,\pi^9\,\theta^{10}-$$
$$38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)\Big/$$
$$\Big(2\times 2^{1/3}\,\sqrt{3}\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)\Big)\Big)\Big)\Big\}$$

$$\text{Plot3D}\Big[\Big\{\sqrt{\Big(-\frac{128\,c^2\,\pi^5}{3\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)}+}$$
$$\frac{160\,c^2\,\pi^4\,\theta}{3\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)}-$$
$$\frac{64\,c^2\,\pi^3\,\theta^2}{3\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)}+$$
$$\frac{8\,c^2\,\pi^2\,\theta^3}{3\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)}-$$
$$\big(2048\times 2^{1/3}\,c^4\,\pi^{10}\big)\Big/\Big(3\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)$$
$$\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\,\pi^{13}\,\theta^2+$$
$$9732096\,c^4\,\pi^{17}\,\theta^2-3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+$$
$$1867776\,c^6\,\pi^{11}\,\theta^4+37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-37739520\,c^4\,\pi^{14}\,\theta^5+$$
$$194560\,c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+$$
$$293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}+$$
$$\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10240\,c^4\,\pi^9\,\theta-10496\,c^4\,\pi^8\,\theta^2+5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+}$$
$$256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+\big(524288\,c^6\,\pi^{15}-1966080\,c^6\,\pi^{14}\,\theta-$$
$$1769472\,c^4\,\pi^{18}\,\theta+3244032\,c^6\,\pi^{13}\,\theta^2+9732096\,c^4\,\pi^{17}\,\theta^2-$$
$$3088384\,c^6\,\pi^{12}\,\theta^3-24440832\,c^4\,\pi^{16}\,\theta^3+1867776\,c^6\,\pi^{11}\,\theta^4+$$
$$37048320\,c^4\,\pi^{15}\,\theta^4-743424\,c^6\,\pi^{10}\,\theta^5-37739520\,c^4\,\pi^{14}\,\theta^5+194560$$
$$c^6\,\pi^9\,\theta^6+27205632\,c^4\,\pi^{13}\,\theta^6-32256\,c^6\,\pi^8\,\theta^7-14224896\,c^4\,\pi^{12}\,\theta^7+$$
$$3072\,c^6\,\pi^7\,\theta^8+5432832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1503360\,c^4\,\pi^{10}\,\theta^9+$$
$$293760\,c^4\,\pi^9\,\theta^{10}-38448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)+$$
$$\big(2048\,i\,2^{1/3}\,c^4\,\pi^{10}\big)\Big/\Big(\sqrt{3}\,\big(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\big)$$

$$\Big(524288\,c^6\pi^{15} - 1966080\,c^6\pi^{14}\theta - 1769472\,c^4\pi^{18}\theta + 3244032\,c^6\pi^{13}\theta^2 + 9732096\,c^4\pi^{17}\theta^2 - 3088384\,c^6\pi^{12}\theta^3 - 24440832\,c^4\pi^{16}\theta^3 + 1867776\,c^6\pi^{11}\theta^4 + 37048320\,c^4\pi^{15}\theta^4 - 743424\,c^6\pi^{10}\theta^5 - 37739520\,c^4\pi^{14}\theta^5 + 194560\,c^6\pi^9\theta^6 + 27205632\,c^4\pi^{13}\theta^6 - 32256\,c^6\pi^8\theta^7 - 14224896\,c^4\pi^{12}\theta^7 + 3072\,c^6\pi^7\theta^8 + 5432832\,c^4\pi^{11}\theta^8 - 128\,c^6\pi^6\theta^9 - 1503360\,c^4\pi^{10}\theta^9 + 293760\,c^4\pi^9\theta^{10} - 38448\,c^4\pi^8\theta^{11} + 3024\,c^4\pi^7\theta^{12} - 108\,c^4\pi^6\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\pi^{10} + 10240\,c^4\pi^9\theta - 10496\,c^4\pi^8\theta^2 + 5632\,c^4\pi^7\theta^3 - 1664\,c^4\pi^6\theta^4 + 256\,c^4\pi^5\theta^5 - 16\,c^4\pi^4\theta^6\big)^3 + \big(524288\,c^6\pi^{15} - 1966080\,c^6\pi^{14}\theta - 1769472\,c^4\pi^{18}\theta + 3244032\,c^6\pi^{13}\theta^2 + 9732096\,c^4\pi^{17}\theta^2 - 3088384\,c^6\pi^{12}\theta^3 - 24440832\,c^4\pi^{16}\theta^3 + 1867776\,c^6\pi^{11}\theta^4 + 37048320\,c^4\pi^{15}\theta^4 - 743424\,c^6\pi^{10}\theta^5 - 37739520\,c^4\pi^{14}\theta^5 + 194560\,c^6\pi^9\theta^6 + 27205632\,c^4\pi^{13}\theta^6 - 32256\,c^6\pi^8\theta^7 - 14224896\,c^4\pi^{12}\theta^7 + 3072\,c^6\pi^7\theta^8 + 5432832\,c^4\pi^{11}\theta^8 - 128\,c^6\pi^6\theta^9 - 1503360\,c^4\pi^{10}\theta^9 + 293760\,c^4\pi^9\theta^{10} - 38448\,c^4\pi^8\theta^{11} + 3024\,c^4\pi^7\theta^{12} - 108\,c^4\pi^6\theta^{13}\big)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(5120\times 2^{1/3}\,c^4\pi^9\theta\right)\Big/\Big(3\,\left(-64\,\pi^5 + 144\,\pi^4\theta - 128\,\pi^3\theta^2 + 56\,\pi^2\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\Big(524288\,c^6\pi^{15} - 1966080\,c^6\pi^{14}\theta - 1769472\,c^4\pi^{18}\theta + 3244032\,c^6\pi^{13}\theta^2 + 9732096\,c^4\pi^{17}\theta^2 - 3088384\,c^6\pi^{12}\theta^3 - 24440832\,c^4\pi^{16}\theta^3 + 1867776\,c^6\pi^{11}\theta^4 + 37048320\,c^4\pi^{15}\theta^4 - 743424\,c^6\pi^{10}\theta^5 - 37739520\,c^4\pi^{14}\theta^5 + 194560\,c^6\pi^9\theta^6 + 27205632\,c^4\pi^{13}\theta^6 - 32256\,c^6\pi^8\theta^7 - 14224896\,c^4\pi^{12}\theta^7 + 3072\,c^6\pi^7\theta^8 + 5432832\,c^4\pi^{11}\theta^8 - 128\,c^6\pi^6\theta^9 - 1503360\,c^4\pi^{10}\theta^9 + 293760\,c^4\pi^9\theta^{10} - 38448\,c^4\pi^8\theta^{11} + 3024\,c^4\pi^7\theta^{12} - 108\,c^4\pi^6\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\pi^{10} + 10240\,c^4\pi^9\theta - 10496\,c^4\pi^8\theta^2 + 5632\,c^4\pi^7\theta^3 - 1664\,c^4\pi^6\theta^4 + 256\,c^4\pi^5\theta^5 - 16\,c^4\pi^4\theta^6\big)^3 + \big(524288\,c^6\pi^{15} - 1966080\,c^6\pi^{14}\theta - 1769472\,c^4\pi^{18}\theta + 3244032\,c^6\pi^{13}\theta^2 + 9732096\,c^4\pi^{17}\theta^2 - 3088384\,c^6\pi^{12}\theta^3 - 24440832\,c^4\pi^{16}\theta^3 + 1867776\,c^6\pi^{11}\theta^4 + 37048320\,c^4\pi^{15}\theta^4 - 743424\,c^6\pi^{10}\theta^5 - 37739520\,c^4\pi^{14}\theta^5 + 194560\,c^6\pi^9\theta^6 + 27205632\,c^4\pi^{13}\theta^6 - 32256\,c^6\pi^8\theta^7 - 14224896\,c^4\pi^{12}\theta^7 + 3072\,c^6\pi^7\theta^8 + 5432832\,c^4\pi^{11}\theta^8 - 128\,c^6\pi^6\theta^9 - 1503360\,c^4\pi^{10}\theta^9 + 293760\,c^4\pi^9\theta^{10} - 38448\,c^4\pi^8\theta^{11} + 3024\,c^4\pi^7\theta^{12} - 108\,c^4\pi^6\theta^{13}\big)^2\Big)}\Big)^{1/3}\Big) -$$

$$\left(5120\,i\,2^{1/3}\,c^4\pi^9\theta\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\theta - 128\,\pi^3\theta^2 + 56\,\pi^2\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\Big(524288\,c^6\pi^{15} - 1966080\,c^6\pi^{14}\theta - 1769472\,c^4\pi^{18}\theta + 3244032\,c^6\pi^{13}\theta^2 + 9732096\,c^4\pi^{17}\theta^2 - 3088384\,c^6\pi^{12}\theta^3 - 24440832\,c^4\pi^{16}\theta^3 + 1867776\,c^6\pi^{11}\theta^4 + 37048320\,c^4\pi^{15}\theta^4 - 743424\,c^6\pi^{10}\theta^5 - 37739520\,c^4\pi^{14}\theta^5 + 194560\,c^6\pi^9\theta^6 + 27205632\,c^4\pi^{13}\theta^6 - 32256\,c^6\pi^8\theta^7 - 14224896\,c^4\pi^{12}\theta^7 + 3072\,c^6\pi^7\theta^8 + 5432832\,c^4\pi^{11}\theta^8 - 128\,c^6\pi^6\theta^9 - 1503360\,c^4\pi^{10}\theta^9 + 293760\,c^4\pi^9\theta^{10} - 38448\,c^4\pi^8\theta^{11} + 3024\,c^4\pi^7\theta^{12} - 108\,c^4\pi^6\theta^{13} + \sqrt{\Big(4\,\big(-4096\,c^4\pi^{10} + 10240\,c^4\pi^9\theta - 10496\,c^4\pi^8\theta^2 + 5632\,c^4\pi^7\theta^3 - 1664\,c^4\pi^6\theta^4 + 256\,c^4\pi^5\theta^5 - 16\,c^4\pi^4\theta^6\big)^3 +$$

$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\Big)^{1/3}\Big) -$$

$$\left(5248 \times 2^{1/3}\, c^4 \pi^8 \theta^2\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(5248\, i\, 2^{1/3}\, c^4 \pi^8 \theta^2\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(2816 \times 2^{1/3}\, c^4 \pi^7 \theta^3\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$

$$\left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\left(-4096\,c^4\,\pi^{10} + 10240\,c^4\,\pi^9\,\theta - 10496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\right)^{1/3}\Bigg) -$$

$$\left(2816\,i\,2^{1/3}\,c^4\,\pi^7\,\theta^3\right) \Big/ \Bigg(\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\left(-4096\,c^4\,\pi^{10} + 10240\,c^4\,\pi^9\,\theta - 10496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\right)^{1/3}\Bigg) -$$

$$\left(832 \times 2^{1/3}\,c^4\,\pi^6\,\theta^4\right) \Big/ \Bigg(3\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)$$

$$\left(524288\,c^6\,\pi^{15} - 1966080\,c^6\,\pi^{14}\,\theta - 1769472\,c^4\,\pi^{18}\,\theta + 3244032\,c^6\,\pi^{13}\,\theta^2 + 9732096\,c^4\,\pi^{17}\,\theta^2 - 3088384\,c^6\,\pi^{12}\,\theta^3 - 24440832\,c^4\,\pi^{16}\,\theta^3 + 1867776\,c^6\,\pi^{11}\,\theta^4 + 37048320\,c^4\,\pi^{15}\,\theta^4 - 743424\,c^6\,\pi^{10}\,\theta^5 - 37739520\,c^4\,\pi^{14}\,\theta^5 + 194560\,c^6\,\pi^9\,\theta^6 + 27205632\,c^4\,\pi^{13}\,\theta^6 - 32256\,c^6\,\pi^8\,\theta^7 - 14224896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5432832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1503360\,c^4\,\pi^{10}\,\theta^9 + 293760\,c^4\,\pi^9\,\theta^{10} - 38448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\left(-4096\,c^4\,\pi^{10} + 10240\,c^4\,\pi^9\,\theta - 10496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 +}$$

$$\begin{aligned}
&(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + \\
&9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776 \\
&c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + \\
&194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \\
&\theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + \\
&293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13})^2))^{1/3}) +
\end{aligned}$$

$$\begin{aligned}
&(832\, i\, 2^{1/3} c^4 \pi^6 \theta^4) \Big/ \Big(\sqrt{3}\, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5) \\
&(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + \\
&9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + \\
&1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - \\
&37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - \\
&14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - \\
&1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - \\
&108\, c^4 \pi^6 \theta^{13} + \sqrt{(4\, (-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 +} \\
&5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6)^3 + \\
&(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + \\
&9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776 \\
&c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + \\
&194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \\
&\theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + \\
&293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13})^2))^{1/3}\Big) +
\end{aligned}$$

$$\begin{aligned}
&(128 \times 2^{1/3} c^4 \pi^5 \theta^5) \Big/ \Big(3\, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5) \\
&(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + \\
&9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + \\
&1\,867\,776\, c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - \\
&37\,739\,520\, c^4 \pi^{14} \theta^5 + 194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - \\
&14\,224\,896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - \\
&1\,503\,360\, c^4 \pi^{10} \theta^9 + 293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - \\
&108\, c^4 \pi^6 \theta^{13} + \sqrt{(4\, (-4096\, c^4 \pi^{10} + 10\,240\, c^4 \pi^9 \theta - 10\,496\, c^4 \pi^8 \theta^2 +} \\
&5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6)^3 + \\
&(524\,288\, c^6 \pi^{15} - 1\,966\,080\, c^6 \pi^{14} \theta - 1\,769\,472\, c^4 \pi^{18} \theta + 3\,244\,032\, c^6 \pi^{13} \theta^2 + \\
&9\,732\,096\, c^4 \pi^{17} \theta^2 - 3\,088\,384\, c^6 \pi^{12} \theta^3 - 24\,440\,832\, c^4 \pi^{16} \theta^3 + 1\,867\,776 \\
&c^6 \pi^{11} \theta^4 + 37\,048\,320\, c^4 \pi^{15} \theta^4 - 743\,424\, c^6 \pi^{10} \theta^5 - 37\,739\,520\, c^4 \pi^{14} \theta^5 + \\
&194\,560\, c^6 \pi^9 \theta^6 + 27\,205\,632\, c^4 \pi^{13} \theta^6 - 32\,256\, c^6 \pi^8 \theta^7 - 14\,224\,896\, c^4 \pi^{12} \\
&\theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5\,432\,832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1\,503\,360\, c^4 \pi^{10} \theta^9 + \\
&293\,760\, c^4 \pi^9 \theta^{10} - 38\,448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13})^2))^{1/3}\Big) -
\end{aligned}$$

$$(128\, i\, 2^{1/3} c^4 \pi^5 \theta^5) \Big/ \Big(\sqrt{3}\, (-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5)$$

$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +\right.$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 -$$
$$14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 -$$
$$1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} -$$
$$108\, c^4 \pi^6 \theta^{13} + \sqrt{} \Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 +\right.$$
$$\left. 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +\right.$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776$$
$$c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 +$$
$$194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12}$$
$$\theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$\left.\left. 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\right)^{1/3}\Big) -$$

$$\left(8 \times 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +\right.$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 +$$
$$1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 -$$
$$37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 -$$
$$14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 -$$
$$1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} -$$
$$108\, c^4 \pi^6 \theta^{13} + \sqrt{} \Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 +\right.$$
$$\left. 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 +$$
$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 +\right.$$
$$9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776$$
$$c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 +$$
$$194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12}$$
$$\theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$\left.\left. 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\right)^{1/3}\Big) +$$

$$\left(8\, i\, 2^{1/3} c^4 \pi^4 \theta^6\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta +\right.$$
$$3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 -$$
$$24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 -$$
$$743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 +$$
$$27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 +$$
$$3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 +$$
$$293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} +$$
$$\sqrt{} \Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 +\right.$$

$$256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 + \Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta -$$
$$1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 -$$
$$3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 +$$
$$37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560$$
$$c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) -$$

$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 +$$
$$9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 -$$
$$24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 +$$
$$37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 -$$
$$37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 +$$
$$27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 -$$
$$14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 -$$
$$128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} -$$
$$38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} +$$
$$\sqrt{\Big(4\,\Big(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 +}$$
$$5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 + 256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 +$$
$$\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 +$$
$$9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776$$
$$c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 +$$
$$194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\Big)^2\Big)\Big)^{1/3} \Big/$$

$$\Big(6 \times 2^{1/3}\,\Big(-64\, \pi^5 + 144\, \pi^4\, \theta - 128\, \pi^3\, \theta^2 + 56\, \pi^2\, \theta^3 - 12\, \pi\, \theta^4 + \theta^5\Big)\Big) -$$

$$\Big(i\,\Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta - 1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 +$$
$$9\,732\,096\, c^4\, \pi^{17}\, \theta^2 - 3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 +$$
$$1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320\, c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 +$$
$$194\,560\, c^6\, \pi^9\, \theta^6 + 27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 +$$
$$3072\, c^6\, \pi^7\, \theta^8 + 5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 +$$
$$293\,760\, c^4\, \pi^9\, \theta^{10} - 38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13} +$$
$$\sqrt{\Big(4\,\Big(-4096\, c^4\, \pi^{10} + 10\,240\, c^4\, \pi^9\, \theta - 10\,496\, c^4\, \pi^8\, \theta^2 + 5632\, c^4\, \pi^7\, \theta^3 - 1664\, c^4\, \pi^6\, \theta^4 +}$$
$$256\, c^4\, \pi^5\, \theta^5 - 16\, c^4\, \pi^4\, \theta^6\Big)^3 + \Big(524\,288\, c^6\, \pi^{15} - 1\,966\,080\, c^6\, \pi^{14}\, \theta -$$
$$1\,769\,472\, c^4\, \pi^{18}\, \theta + 3\,244\,032\, c^6\, \pi^{13}\, \theta^2 + 9\,732\,096\, c^4\, \pi^{17}\, \theta^2 -$$
$$3\,088\,384\, c^6\, \pi^{12}\, \theta^3 - 24\,440\,832\, c^4\, \pi^{16}\, \theta^3 + 1\,867\,776\, c^6\, \pi^{11}\, \theta^4 + 37\,048\,320$$
$$c^4\, \pi^{15}\, \theta^4 - 743\,424\, c^6\, \pi^{10}\, \theta^5 - 37\,739\,520\, c^4\, \pi^{14}\, \theta^5 + 194\,560\, c^6\, \pi^9\, \theta^6 +$$
$$27\,205\,632\, c^4\, \pi^{13}\, \theta^6 - 32\,256\, c^6\, \pi^8\, \theta^7 - 14\,224\,896\, c^4\, \pi^{12}\, \theta^7 + 3072\, c^6\, \pi^7\, \theta^8 +$$
$$5\,432\,832\, c^4\, \pi^{11}\, \theta^8 - 128\, c^6\, \pi^6\, \theta^9 - 1\,503\,360\, c^4\, \pi^{10}\, \theta^9 + 293\,760\, c^4\, \pi^9\, \theta^{10} -$$
$$38\,448\, c^4\, \pi^8\, \theta^{11} + 3024\, c^4\, \pi^7\, \theta^{12} - 108\, c^4\, \pi^6\, \theta^{13}\Big)^2\Big)\Big)^{1/3}\Big) \Big/$$

$$\left(2\times 2^{1/3}\ \sqrt{3}\ \left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)\right)\Bigg),$$

$$\Bigg(-\sqrt{\Bigg(-\frac{128\,c^2\,\pi^5}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+}$$

$$\frac{160\,c^2\,\pi^4\,\theta}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}-$$

$$\frac{64\,c^2\,\pi^3\,\theta^2}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}+$$

$$\frac{8\,c^2\,\pi^2\,\theta^3}{3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)}-$$

$$\left(2048\times 2^{1/3}\,c^4\,\pi^{10}\right)\Big/$$

$$\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$

$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$$
$$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(2048\,i\,2^{1/3}\,c^4\,\pi^{10}\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$

$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$$
$$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$

$$\left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)\Big)^{1/3}\Big) +$$

$$\left(5120 \times 2^{1/3}\, c^4 \pi^9 \theta\right) \Big/ \Big(3 \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13}\right)^2\Big)}\Big)^{1/3}\Big) +$$

$$\left(5120\, \mathbb{i}\, 2^{1/3}\, c^4 \pi^9 \theta\right) \Big/ \Big(\sqrt{3} \left(-64 \pi^5 + 144 \pi^4 \theta - 128 \pi^3 \theta^2 + 56 \pi^2 \theta^3 - 12 \pi \theta^4 + \theta^5\right)$$
$$\Big(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} - 38448\, c^4 \pi^8 \theta^{11} + 3024\, c^4 \pi^7 \theta^{12} - 108\, c^4 \pi^6 \theta^{13} + \sqrt{\Big(4 \left(-4096\, c^4 \pi^{10} + 10240\, c^4 \pi^9 \theta - 10496\, c^4 \pi^8 \theta^2 + 5632\, c^4 \pi^7 \theta^3 - 1664\, c^4 \pi^6 \theta^4 + 256\, c^4 \pi^5 \theta^5 - 16\, c^4 \pi^4 \theta^6\right)^3 + \left(524288\, c^6 \pi^{15} - 1966080\, c^6 \pi^{14} \theta - 1769472\, c^4 \pi^{18} \theta + 3244032\, c^6 \pi^{13} \theta^2 + 9732096\, c^4 \pi^{17} \theta^2 - 3088384\, c^6 \pi^{12} \theta^3 - 24440832\, c^4 \pi^{16} \theta^3 + 1867776\, c^6 \pi^{11} \theta^4 + 37048320\, c^4 \pi^{15} \theta^4 - 743424\, c^6 \pi^{10} \theta^5 - 37739520\, c^4 \pi^{14} \theta^5 + 194560\, c^6 \pi^9 \theta^6 + 27205632\, c^4 \pi^{13} \theta^6 - 32256\, c^6 \pi^8 \theta^7 - 14224896\, c^4 \pi^{12} \theta^7 + 3072\, c^6 \pi^7 \theta^8 + 5432832\, c^4 \pi^{11} \theta^8 - 128\, c^6 \pi^6 \theta^9 - 1503360\, c^4 \pi^{10} \theta^9 + 293760\, c^4 \pi^9 \theta^{10} -$$

$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(5248\times 2^{1/3}\,c^4\,\pi^8\,\theta^2\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$$
$$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)-$$

$$\left(5248\,i\,2^{1/3}\,c^4\,\pi^8\,\theta^2\right)\Big/\Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$$
$$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$$
$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$$
$$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$$
$$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\big)^3+$$
$$\big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$$
$$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$
$$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$$
$$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$$
$$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$$
$$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\big)^2\Big)\Big)^{1/3}\Big)+$$

$$\left(2816\times 2^{1/3}\,c^4\,\pi^7\,\theta^3\right)\Big/\Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$$
$$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$$
$$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$$
$$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$$

$$37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}+\sqrt{\Big(4\,(-4096\,c^4\pi^{10}+10\,240\,c^4\pi^9\theta-10\,496\,c^4\pi^8\theta^2+5632\,c^4\pi^7\theta^3-1664\,c^4\pi^6\theta^4+256\,c^4\pi^5\theta^5-16\,c^4\pi^4\theta^6)^3+(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13})^2\Big)}\,\Big)^{1/3}\Big)+$$

$$\big(2816\,i\,2^{1/3}\,c^4\pi^7\theta^3\big)\Big/\Big(\sqrt{3}\,(-64\,\pi^5+144\,\pi^4\theta-128\,\pi^3\theta^2+56\,\pi^2\theta^3-12\,\pi\theta^4+\theta^5)\,\Big(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}+\sqrt{\Big(4\,(-4096\,c^4\pi^{10}+10\,240\,c^4\pi^9\theta-10\,496\,c^4\pi^8\theta^2+5632\,c^4\pi^7\theta^3-1664\,c^4\pi^6\theta^4+256\,c^4\pi^5\theta^5-16\,c^4\pi^4\theta^6)^3+(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13})^2\Big)}\,\Big)^{1/3}\Big)-$$

$$\big(832\times2^{1/3}\,c^4\pi^6\theta^4\big)\Big/\Big(3\,(-64\,\pi^5+144\,\pi^4\theta-128\,\pi^3\theta^2+56\,\pi^2\theta^3-12\,\pi\theta^4+\theta^5)\,\Big(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6\pi^{13}\theta^2+9\,732\,096\,c^4\pi^{17}\theta^2-3\,088\,384\,c^6\pi^{12}\theta^3-24\,440\,832\,c^4\pi^{16}\theta^3+1\,867\,776\,c^6\pi^{11}\theta^4+37\,048\,320\,c^4\pi^{15}\theta^4-743\,424\,c^6\pi^{10}\theta^5-37\,739\,520\,c^4\pi^{14}\theta^5+194\,560\,c^6\pi^9\theta^6+27\,205\,632\,c^4\pi^{13}\theta^6-32\,256\,c^6\pi^8\theta^7-14\,224\,896\,c^4\pi^{12}\theta^7+3072\,c^6\pi^7\theta^8+5\,432\,832\,c^4\pi^{11}\theta^8-128\,c^6\pi^6\theta^9-1\,503\,360\,c^4\pi^{10}\theta^9+293\,760\,c^4\pi^9\theta^{10}-38\,448\,c^4\pi^8\theta^{11}+3024\,c^4\pi^7\theta^{12}-108\,c^4\pi^6\theta^{13}+\sqrt{\Big(4\,(-4096\,c^4\pi^{10}+10\,240\,c^4\pi^9\theta-10\,496\,c^4\pi^8\theta^2+5632\,c^4\pi^7\theta^3-1664\,c^4\pi^6\theta^4+256\,c^4\pi^5\theta^5-16\,c^4\pi^4\theta^6)^3+(524\,288\,c^6\pi^{15}-1\,966\,080\,c^6\pi^{14}\theta-1\,769\,472\,c^4\pi^{18}\theta+3\,244\,032\,c^6}$$

$$
\begin{aligned}
&\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + \\
&1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - \\
&37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - \\
&32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832 \\
&c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - \\
&38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13})^2))^{1/3}) - \\
&(832\,\mathbb{i}\,2^{1/3}\,c^4\,\pi^6\,\theta^4) \Big/ \Big(\sqrt{3}\,(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5) \\
&(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + \\
&9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + \\
&1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - \\
&37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - \\
&14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - \\
&1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - \\
&108\,c^4\,\pi^6\,\theta^{13} + \sqrt{}(4\,(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + \\
&5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6)^3 + \\
&(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6 \\
&\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + \\
&1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - \\
&37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - \\
&32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832 \\
&c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - \\
&38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13})^2))^{1/3}) + \\
&(128 \times 2^{1/3}\,c^4\,\pi^5\,\theta^5) \Big/ \Big(3\,(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5) \\
&(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + \\
&9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + \\
&1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - \\
&37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - \\
&14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - \\
&1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - \\
&108\,c^4\,\pi^6\,\theta^{13} + \sqrt{}(4\,(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + \\
&5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6)^3 + \\
&(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6 \\
&\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + \\
&1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - \\
&37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - \\
&32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832 \\
&c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - \\
&38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13})^2))^{1/3}) +
\end{aligned}
$$

$\left(128\,i\,2^{1/3}\,c^4\,\pi^5\,\theta^5\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$

$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$

$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$

$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$

$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$

$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$

$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$

$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\Big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$

$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\Big)^3+$

$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$

$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$

$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$

$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$

$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$

$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$

$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\Big)^2\Big)\Big)^{1/3}\Big)-$

$\left(8\times 2^{1/3}\,c^4\,\pi^4\,\theta^6\right) \Big/ \Big(3\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$

$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$

$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$

$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$

$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$

$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$

$1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-$

$108\,c^4\,\pi^6\,\theta^{13}+\sqrt{\Big(4\,\Big(-4096\,c^4\,\pi^{10}+10\,240\,c^4\,\pi^9\,\theta-10\,496\,c^4\,\pi^8\,\theta^2+}$

$5632\,c^4\,\pi^7\,\theta^3-1664\,c^4\,\pi^6\,\theta^4+256\,c^4\,\pi^5\,\theta^5-16\,c^4\,\pi^4\,\theta^6\Big)^3+$

$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6$

$\pi^{13}\,\theta^2+9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$

$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$

$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-$

$32\,256\,c^6\,\pi^8\,\theta^7-14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832$

$c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-1\,503\,360\,c^4\,\pi^{10}\,\theta^9+293\,760\,c^4\,\pi^9\,\theta^{10}-$

$38\,448\,c^4\,\pi^8\,\theta^{11}+3024\,c^4\,\pi^7\,\theta^{12}-108\,c^4\,\pi^6\,\theta^{13}\Big)^2\Big)\Big)^{1/3}\Big)-$

$\left(8\,i\,2^{1/3}\,c^4\,\pi^4\,\theta^6\right) \Big/ \Big(\sqrt{3}\,\left(-64\,\pi^5+144\,\pi^4\,\theta-128\,\pi^3\,\theta^2+56\,\pi^2\,\theta^3-12\,\pi\,\theta^4+\theta^5\right)$

$\Big(524\,288\,c^6\,\pi^{15}-1\,966\,080\,c^6\,\pi^{14}\,\theta-1\,769\,472\,c^4\,\pi^{18}\,\theta+3\,244\,032\,c^6\,\pi^{13}\,\theta^2+$

$9\,732\,096\,c^4\,\pi^{17}\,\theta^2-3\,088\,384\,c^6\,\pi^{12}\,\theta^3-24\,440\,832\,c^4\,\pi^{16}\,\theta^3+$

$1\,867\,776\,c^6\,\pi^{11}\,\theta^4+37\,048\,320\,c^4\,\pi^{15}\,\theta^4-743\,424\,c^6\,\pi^{10}\,\theta^5-$

$37\,739\,520\,c^4\,\pi^{14}\,\theta^5+194\,560\,c^6\,\pi^9\,\theta^6+27\,205\,632\,c^4\,\pi^{13}\,\theta^6-32\,256\,c^6\,\pi^8\,\theta^7-$

$14\,224\,896\,c^4\,\pi^{12}\,\theta^7+3072\,c^6\,\pi^7\,\theta^8+5\,432\,832\,c^4\,\pi^{11}\,\theta^8-128\,c^6\,\pi^6\,\theta^9-$

$$1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Bigg)^{1/3}\Bigg) -$$

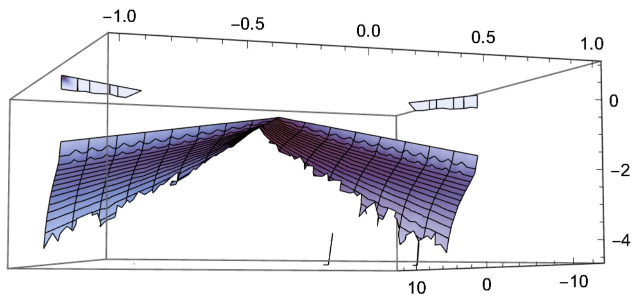
$$\Bigg(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\left(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \left(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\right)^2\right)}\Bigg)^{1/3} \Big/$$

$$\left(6 \times 2^{1/3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)\right) +$$

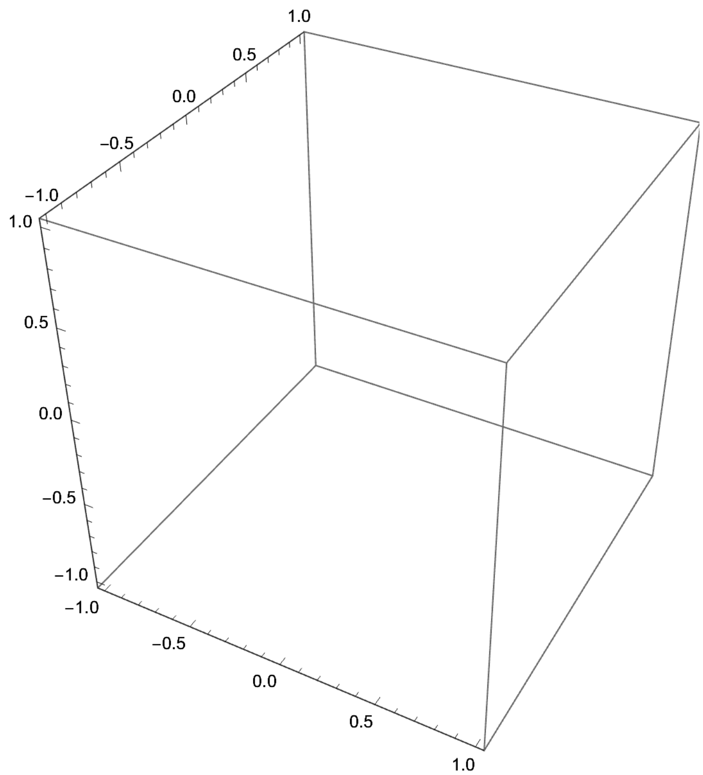
$$\Bigg(i\,\Bigg(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832\,c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13} + \sqrt{\Big(4\,\left(-4096\,c^4\,\pi^{10} + 10\,240\,c^4\,\pi^9\,\theta - 10\,496\,c^4\,\pi^8\,\theta^2 + 5632\,c^4\,\pi^7\,\theta^3 - 1664\,c^4\,\pi^6\,\theta^4 + 256\,c^4\,\pi^5\,\theta^5 - 16\,c^4\,\pi^4\,\theta^6\right)^3 + \Big(524\,288\,c^6\,\pi^{15} - 1\,966\,080\,c^6\,\pi^{14}\,\theta - 1\,769\,472\,c^4\,\pi^{18}\,\theta + 3\,244\,032\,c^6\,\pi^{13}\,\theta^2 + 9\,732\,096\,c^4\,\pi^{17}\,\theta^2 - 3\,088\,384\,c^6\,\pi^{12}\,\theta^3 - 24\,440\,832\,c^4\,\pi^{16}\,\theta^3 + 1\,867\,776\,c^6\,\pi^{11}\,\theta^4 + 37\,048\,320\,c^4\,\pi^{15}\,\theta^4 - 743\,424\,c^6\,\pi^{10}\,\theta^5 - 37\,739\,520\,c^4\,\pi^{14}\,\theta^5 + 194\,560\,c^6\,\pi^9\,\theta^6 + 27\,205\,632\,c^4\,\pi^{13}\,\theta^6 - 32\,256\,c^6\,\pi^8\,\theta^7 - 14\,224\,896\,c^4\,\pi^{12}\,\theta^7 + 3072\,c^6\,\pi^7\,\theta^8 + 5\,432\,832}$$

$$c^4\,\pi^{11}\,\theta^8 - 128\,c^6\,\pi^6\,\theta^9 - 1\,503\,360\,c^4\,\pi^{10}\,\theta^9 + 293\,760\,c^4\,\pi^9\,\theta^{10} - 38\,448\,c^4\,\pi^8\,\theta^{11} + 3024\,c^4\,\pi^7\,\theta^{12} - 108\,c^4\,\pi^6\,\theta^{13}\Big)^2\Big)\Big)^{1/3}\Big)\Big/$$

$$\Big(2\times 2^{1/3}\,\sqrt{3}\,\left(-64\,\pi^5 + 144\,\pi^4\,\theta - 128\,\pi^3\,\theta^2 + 56\,\pi^2\,\theta^3 - 12\,\pi\,\theta^4 + \theta^5\right)\Big)\Big)\Big\}, \{c, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\Big]$$



```
RevolutionPlot3D[
 {(Root[-16 c^4 π r^2 + (4 c^4 π^4 + 4 c^4 r^2) #1 + (-4 c^4 π^3 + 32 c^2 π r^4) #1^2 + (c^4 π^2 - 8 c^2 r^4) #1^3 -
      16 π r^6 #1^4 + 4 r^6 #1^5 &, 1]), (Root[-16 c^4 π r^2 + (4 c^4 π^4 + 4 c^4 r^2) #1 +
      (-4 c^4 π^3 + 32 c^2 π r^4) #1^2 + (c^4 π^2 - 8 c^2 r^4) #1^3 - 16 π r^6 #1^4 + 4 r^6 #1^5 &, 2]),
  (Root[-16 c^4 π r^2 + (4 c^4 π^4 + 4 c^4 r^2) #1 + (-4 c^4 π^3 + 32 c^2 π r^4) #1^2 +
      (c^4 π^2 - 8 c^2 r^4) #1^3 - 16 π r^6 #1^4 + 4 r^6 #1^5 &, 3]),
  (Root[-16 c^4 π r^2 + (4 c^4 π^4 + 4 c^4 r^2) #1 + (-4 c^4 π^3 + 32 c^2 π r^4) #1^2 +
      (c^4 π^2 - 8 c^2 r^4) #1^3 - 16 π r^6 #1^4 + 4 r^6 #1^5 &, 4]),
  (Root[-16 c^4 π r^2 + (4 c^4 π^4 + 4 c^4 r^2) #1 + (-4 c^4 π^3 + 32 c^2 π r^4) #1^2 + (c^4 π^2 - 8 c^2 r^4) #1^3 -
      16 π r^6 #1^4 + 4 r^6 #1^5 &, 5])}, {r, -10 000 000 000 000, 10 000 000 000 000}]
```



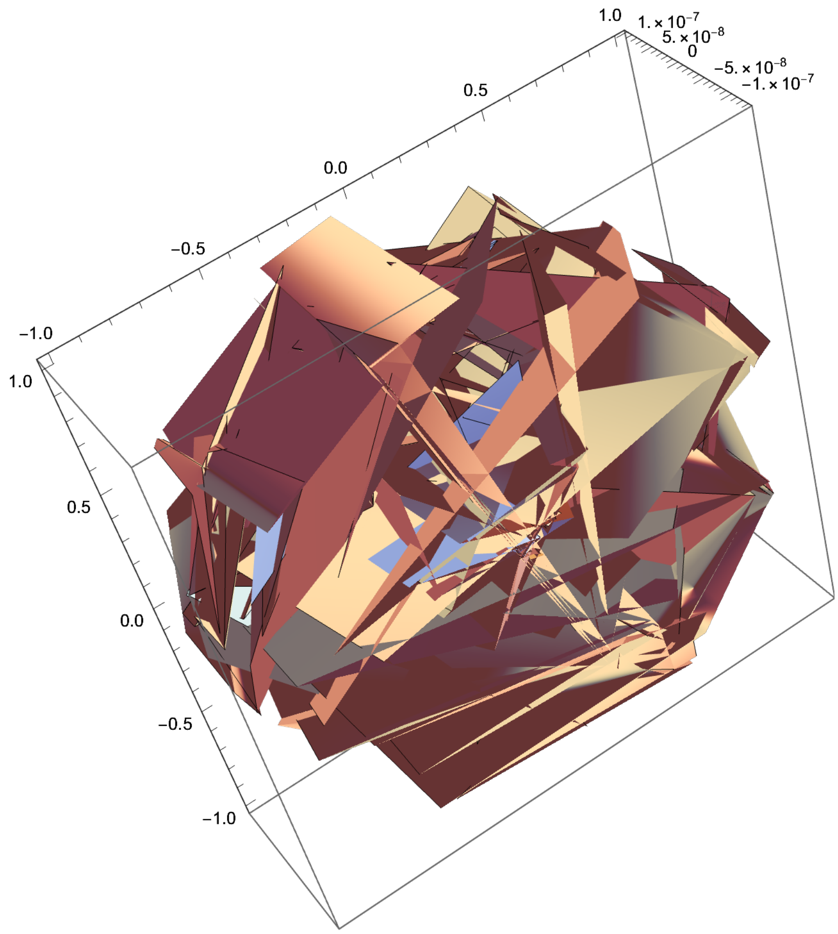
$$(1/2\,\pi)\ \mathrm{D}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}},\ r,\ \theta\right]$$

$$\frac{1}{2}\pi\left(\left(\frac{3.54814\times10^{18}\,r^2\,(4\,\pi-\theta)\,\theta}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.77407\times10^{18}\,r^2\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{8.47057\times10^{17}\,r^2\,(4\,\pi-\theta)\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{2.82352\times10^{17}\,r^2\,\theta^3}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.77407\times10^{18}}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{5.64705\times10^{17}\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}-\frac{2.66111\times10^{18}\,r^2\,(4\,\pi-\theta)\,\theta^2\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{5/2}}+\frac{4.23528\times10^{17}\,r^2\,(4\,\pi-\theta)\,\theta^3\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{5/2}}+\frac{8.87036\times10^{17}\,\theta\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.41176\times10^{17}\,\theta^2\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}\right)\Big/\left(2\,\sqrt{2}\,\sqrt{1.79751\times10^{17}-\frac{1.77407\times10^{18}\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2.82352\times10^{17}\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}\right)-\left(\left(\frac{1.77407\times10^{18}\,r^2\,(4\,\pi-\theta)\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{2.82352\times10^{17}\,r^2\,(4\,\pi-\theta)\,\theta^3}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.77407\times10^{18}\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2.82352\times10^{17}\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)\left(-\frac{1.77407\times10^{18}\,r}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{5.64705\times10^{17}\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{8.87036\times10^{17}\,r\,\theta\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.41176\times10^{17}\,r\,\theta^2\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}\right)\right)\Big/\left(4\,\sqrt{2}\left(1.79751\times10^{17}-\frac{1.77407\times10^{18}\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2.82352\times10^{17}\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)^{3/2}\right)\right)$$

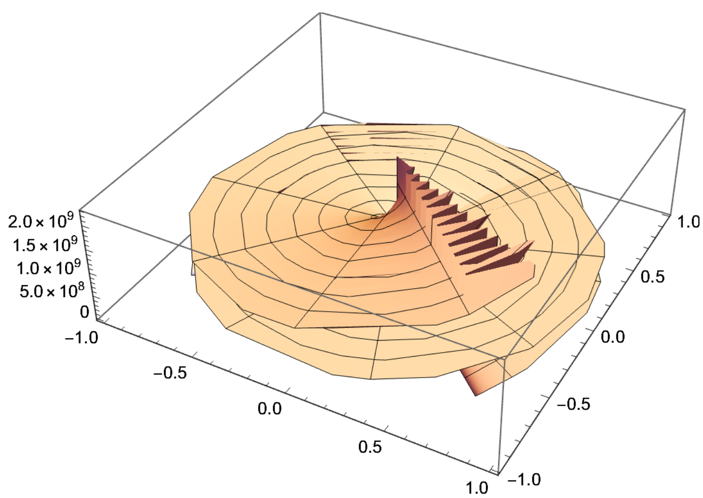
RevolutionPlot3D[

$$\frac{1}{2}\pi\left(\left(\left(\frac{3.5481432270250993\text{`*\^{}18}\,r^2\,(4\,\pi-\theta)\,\theta}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.7740716135125496\text{`*\^{}18}\,r^2\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{8.470568000686103\text{`*\^{}17}\,r^2\,(4\,\pi-\theta)\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{2.8235226668953677\text{`*\^{}17}\,r^2\,\theta^3}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{1.7740716135125496\text{`*\^{}18}}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{5.6470453337907354\text{`*\^{}17}\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$
\begin{aligned}
&\frac{2.6611074202688246`{*}{\wedge}18\, r^2\, (4\,\pi-\theta)\,\theta^2\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{5/2}}+\\
&\frac{4.2352840003430515`{*}{\wedge}17\, r^2\, (4\,\pi-\theta)\,\theta^3\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{5/2}}+\\
&\frac{8.870358067562748`{*}{\wedge}17\,\theta\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\\
&\left.\frac{1.4117613334476838`{*}{\wedge}17\,\theta^2\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}\right)\Big/\\
&\left(2\,\sqrt{2}\,\sqrt{\left(1.7975103574736352`{*}{\wedge}17-\frac{1.7740716135125496`{*}{\wedge}18\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\right.}\right.\\
&\qquad\left.\left.\frac{2.8235226668953677`{*}{\wedge}17\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)\right)-\\
&\left(\left(\frac{1.7740716135125496`{*}{\wedge}18\,r^2\,(4\,\pi-\theta)\,\theta^2}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{2.8235226668953677`{*}{\wedge}17\,r^2\,(4\,\pi-\theta)\,\theta^3}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\right.\right.\\
&\qquad\left.\frac{1.7740716135125496`{*}{\wedge}18\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{2.8235226668953677`{*}{\wedge}17\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)\\
&\quad\left(-\frac{1.7740716135125496`{*}{\wedge}18\,r}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{5.6470453337907354`{*}{\wedge}17\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\right.\\
&\qquad\frac{8.870358067562748`{*}{\wedge}17\,r\,\theta\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}-\\
&\qquad\left.\left.\frac{1.4117613334476838`{*}{\wedge}17\,r\,\theta^2\,\left(r^2\,(4\,\pi-\theta)-r^2\,\theta\right)}{\left(r^2\,(4\,\pi-\theta)\,\theta\right)^{3/2}}\right)\right)\Big/\\
&\left(4\,\sqrt{2}\,\left(1.7975103574736352`{*}{\wedge}17-\frac{1.7740716135125496`{*}{\wedge}18\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\right.\right.\\
&\qquad\left.\left.\left.\frac{2.8235226668953677`{*}{\wedge}17\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right)^{3/2}\right)\right),\ \{r,\ -1,\ 1\},\ \{\theta,\ -40\,\pi,\ 40\,\pi\}\Big]
\end{aligned}
$$



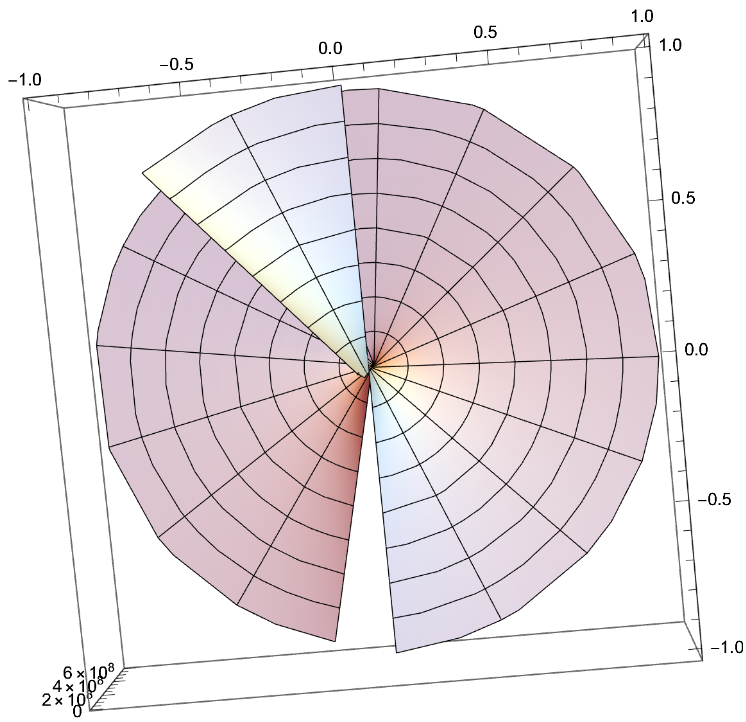
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}},\ \{r,\,-1,\,1\},\ \{\theta,\,-4\,\pi,\,4\,\pi\}\right]$$



$$\text{Solve}\left[\frac{r\left(1-\frac{v^2}{c^2}\right)}{2\,\pi\,\theta}==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\,v\right]$$

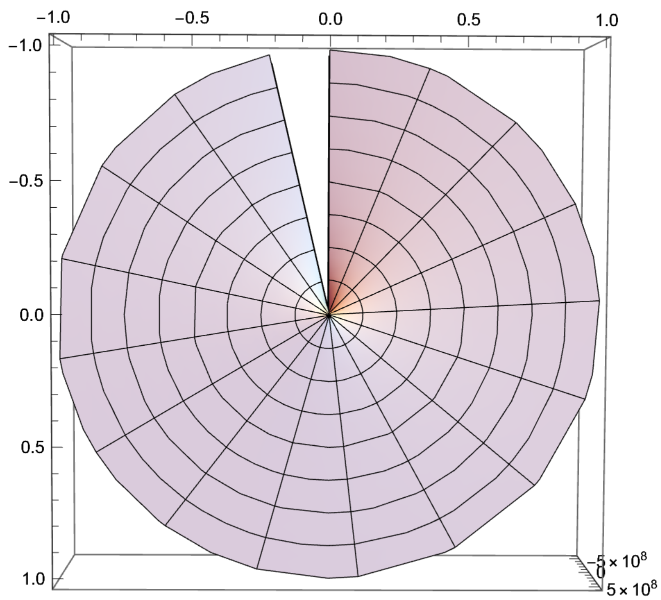
$$\left\{\left\{v\to-\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\},\,\left\{v\to\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}},\,\{r,\,-1,\,1\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

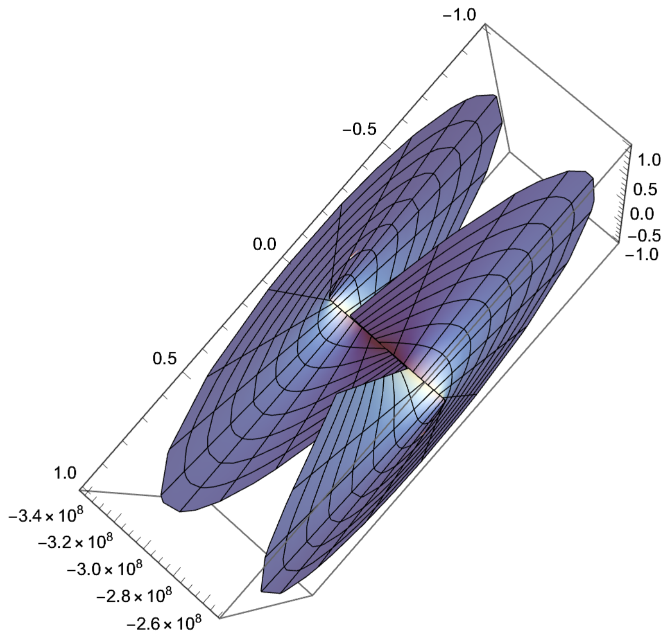


$$\text{RevolutionPlot3D}\left[\left\{\left\{-\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\},\right.\right.$$

$$\left.\left.\left\{\frac{\sqrt{2\,c^2-\frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\}\right\},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\mathrm{i}\, c\, \sqrt{\theta}\, \sqrt{-\frac{2}{\theta}+\frac{2 r}{\sqrt{4 \pi r^2 \theta-r^2 \theta^2}}-\frac{r \theta}{\pi \sqrt{4 \pi r^2 \theta-r^2 \theta^2}}}}{\sqrt{2}}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$

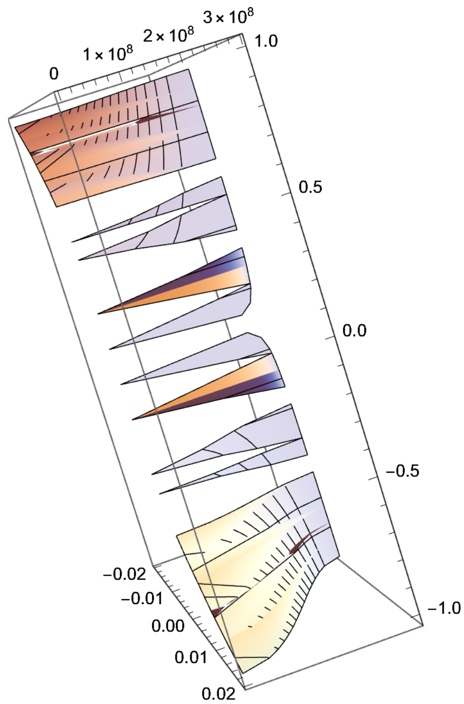


$$\text{Solve}\left[\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta} == \frac{8 \pi r \theta - 2 r \theta^2}{4 \pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}, v\right]$$

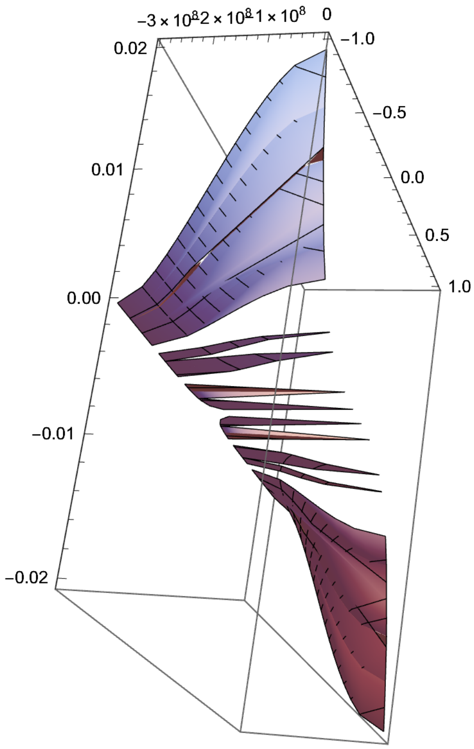
$$\left\{\left\{v \to -\frac{\mathrm{i}\, c\, \sqrt{\theta}\, \sqrt{-\frac{2}{\theta}+\frac{4 \theta}{\sqrt{4 \pi r^2 \theta-r^2 \theta^2}}-\frac{\theta^2}{\pi \sqrt{4 \pi r^2 \theta-r^2 \theta^2}}}}{\sqrt{2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\mathrm{i}\, c\, \sqrt{\theta}\, \sqrt{-\frac{2}{\theta}+\frac{4 \theta}{\sqrt{4 \pi r^2 \theta-r^2 \theta^2}}-\frac{\theta^2}{\pi \sqrt{4 \pi r^2 \theta-r^2 \theta^2}}}}{\sqrt{2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[-\frac{i\, c\,\sqrt{\theta}\,\sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\mathrm{i}\, c \sqrt{\theta} \sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$



$$\left(r \sqrt{1-((v)\,^\wedge 2/c\,^\wedge 2)}\right) \Big/ \left(\theta \Big/ \sqrt{1-((v)\,^\wedge 2/c\,^\wedge 2)}\right) ==$$

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}, r, \theta\right]$$

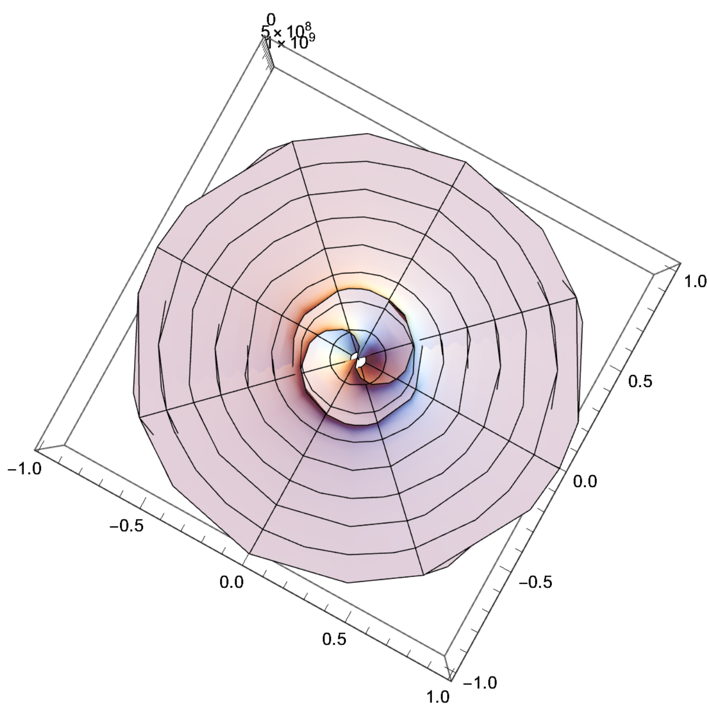
$$\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta} == -\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}$$

```
Solve[r (1 - v^2/c^2)/θ == -((4 π r^2 - 2 r^2 θ) (8 π r θ - 2 r θ^2))/(8 π (4 π r^2 θ - r^2 θ^2)^(3/2)) + (8 π r - 4 r θ)/(4 π Sqrt[4 π r^2 θ - r^2 θ^2]), v]
```

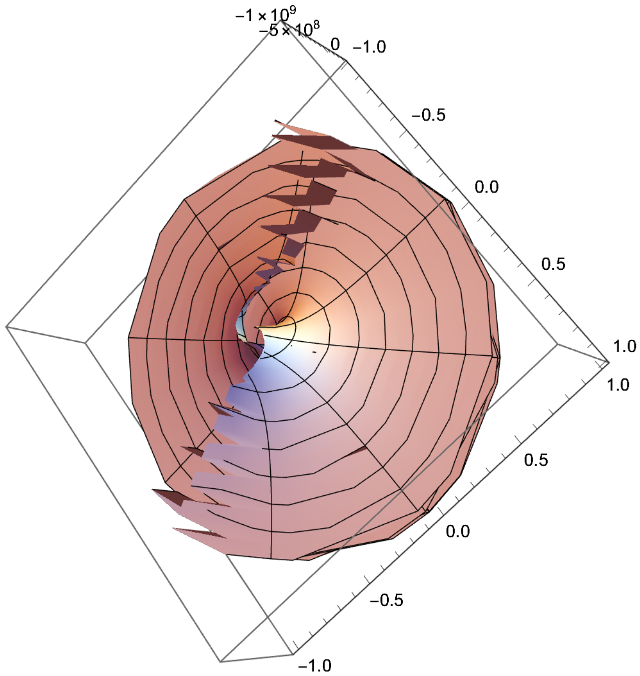
$$\left\{\left\{v \to -\frac{1}{\sqrt{2}} i\, c \sqrt{\theta} \sqrt{\left(-\frac{2}{\theta} - \frac{8 \pi r^2 \theta}{(4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{6 r^2 \theta^2}{(4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} - \frac{r^2 \theta^3}{\pi (4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{4}{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}} - \frac{2 \theta}{\pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right)}\right\},\right.$$

$$\left.\left\{v \to \frac{1}{\sqrt{2}} i\, c \sqrt{\theta} \sqrt{\left(-\frac{2}{\theta} - \frac{8 \pi r^2 \theta}{(4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{6 r^2 \theta^2}{(4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} - \frac{r^2 \theta^3}{\pi (4 \pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{4}{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}} - \frac{2 \theta}{\pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right)}\right\}\right\}$$

```
RevolutionPlot3D[
 -1/Sqrt[2] i c Sqrt[θ] Sqrt[(-2/θ - (8 π r^2 θ)/(4 π r^2 θ - r^2 θ^2)^(3/2) + (6 r^2 θ^2)/(4 π r^2 θ - r^2 θ^2)^(3/2) - (r^2 θ^3)/(π (4 π r^2 θ - r^2 θ^2)^(3/2)) +
   4/Sqrt[4 π r^2 θ - r^2 θ^2] - (2 θ)/(π Sqrt[4 π r^2 θ - r^2 θ^2]))], {r, -1, 1}, {θ, -4 π, 4 π}]
```



$$\text{RevolutionPlot3D}\Big[\frac{1}{\sqrt{2}}\, i\, c\, \sqrt{\theta}\, \sqrt{\left(-\frac{2}{\theta} - \frac{8\,\pi\, r^2\, \theta}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{6\, r^2\, \theta^2}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} - \frac{r^2\, \theta^3}{\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{4}{\sqrt{4\,\pi\, r^2\, \theta - r^2\, \theta^2}} - \frac{2\,\theta}{\pi\,\sqrt{4\,\pi\, r^2\, \theta - r^2\, \theta^2}}\right)}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\Big]$$



$$D\Big[\frac{1}{\sqrt{2}}\, i\, c\, \sqrt{\theta}\, \sqrt{\left(-\frac{2}{\theta} - \frac{8\,\pi\, r^2\, \theta}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{6\, r^2\, \theta^2}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} - \frac{r^2\, \theta^3}{\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{4}{\sqrt{4\,\pi\, r^2\, \theta - r^2\, \theta^2}} - \frac{2\,\theta}{\pi\,\sqrt{4\,\pi\, r^2\, \theta - r^2\, \theta^2}}\right)}, r, \theta\Big]$$

$$-\Bigg(5.29963\times10^7\, i\, \sqrt{\theta}\, \Bigg(\frac{12\,\pi\, r^2\, \theta\,(8\,\pi\, r\, \theta - 2\, r\, \theta^2)}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} - \frac{9\, r^2\, \theta^2\,(8\,\pi\, r\, \theta - 2\, r\, \theta^2)}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} + \frac{3\, r^2\, \theta^3\,(8\,\pi\, r\, \theta - 2\, r\, \theta^2)}{2\,\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} - \frac{16\,\pi\, r\, \theta}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{12\, r\, \theta^2}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} - \frac{2\, r\, \theta^3}{\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} - \frac{2\,(8\,\pi\, r\, \theta - 2\, r\, \theta^2)}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}} + \frac{\theta\,(8\,\pi\, r\, \theta - 2\, r\, \theta^2)}{\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{3/2}}\Bigg)$$

$$\Bigg(\frac{2}{\theta^2} + \frac{12\,\pi\, r^2\, \theta\,(4\,\pi\, r^2 - 2\, r^2\, \theta)}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} - \frac{9\, r^2\, \theta^2\,(4\,\pi\, r^2 - 2\, r^2\, \theta)}{(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} + \frac{3\, r^2\, \theta^3\,(4\,\pi\, r^2 - 2\, r^2\, \theta)}{2\,\pi\,(4\,\pi\, r^2\, \theta - r^2\, \theta^2)^{5/2}} -$$

$$\frac{8\,\pi\,r^2}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{12\,r^2\,\theta}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{3\,r^2\,\theta^2}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} -$$

$$\left.\left.\frac{2\,(4\,\pi\,r^2 - 2\,r^2\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{\theta\,(4\,\pi\,r^2 - 2\,r^2\,\theta)}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{2}{\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)\right)\Big/$$

$$\left(-\frac{2}{\theta} - \frac{8\,\pi\,r^2\,\theta}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{6\,r^2\,\theta^2}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{r^2\,\theta^3}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \right.$$

$$\left.\frac{4}{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} - \frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)^{3/2} +$$

$$\left(1.05993\times 10^8\,i\,\sqrt{\theta}\,\left(-\frac{30\,\pi\,r^2\,\theta\,(4\,\pi\,r^2 - 2\,r^2\,\theta)\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{7/2}} + \right.\right.$$

$$\frac{45\,r^2\,\theta^2\,(4\,\pi\,r^2 - 2\,r^2\,\theta)\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{2\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{7/2}} - \frac{15\,r^2\,\theta^3\,(4\,\pi\,r^2 - 2\,r^2\,\theta)\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{4\,\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{7/2}} +$$

$$\frac{12\,\pi\,r^2\,\theta\,(8\,\pi\,r - 4\,r\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} - \frac{9\,r^2\,\theta^2\,(8\,\pi\,r - 4\,r\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} + \frac{3\,r^2\,\theta^3\,(8\,\pi\,r - 4\,r\,\theta)}{2\,\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} +$$

$$\frac{24\,\pi\,r\,\theta\,(4\,\pi\,r^2 - 2\,r^2\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} - \frac{18\,r\,\theta^2\,(4\,\pi\,r^2 - 2\,r^2\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} + \frac{3\,r\,\theta^3\,(4\,\pi\,r^2 - 2\,r^2\,\theta)}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} +$$

$$\frac{12\,\pi\,r^2\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} - \frac{18\,r^2\,\theta\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} + \frac{9\,r^2\,\theta^2\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{2\,\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} +$$

$$\frac{3\,(4\,\pi\,r^2 - 2\,r^2\,\theta)\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} - \frac{3\,\theta\,(4\,\pi\,r^2 - 2\,r^2\,\theta)\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{2\,\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} -$$

$$\frac{16\,\pi\,r}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{24\,r\,\theta}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{6\,r\,\theta^2}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} -$$

$$\left.\left.\frac{2\,(8\,\pi\,r - 4\,r\,\theta)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{\theta\,(8\,\pi\,r - 4\,r\,\theta)}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{8\,\pi\,r\,\theta - 2\,r\,\theta^2}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}}\right)\right)\Big/$$

$$\left(\sqrt{\left(-\frac{2}{\theta} - \frac{8\,\pi\,r^2\,\theta}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \frac{6\,r^2\,\theta^2}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} - \frac{r^2\,\theta^3}{\pi\,(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{3/2}} + \right.}\right.$$

$$\left.\left.\frac{4}{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} - \frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)\right) +$$

$$\left(5.29963\times 10^7\,i\,\left(\frac{12\,\pi\,r^2\,\theta\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} - \frac{9\,r^2\,\theta^2\,(8\,\pi\,r\,\theta - 2\,r\,\theta^2)}{(4\,\pi\,r^2\,\theta - r^2\,\theta^2)^{5/2}} + \right.\right.$$

$$\frac{3\, r^2\, \theta^3 \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{2\, \pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} - \frac{16\, \pi\, r\, \theta}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{12\, r\, \theta^2}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} -$$

$$\left.\left.\frac{2\, r\, \theta^3}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{2 \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{\theta \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}}\right)\right) \Big/$$

$$\left(\sqrt{\theta}\, \sqrt{\left(-\frac{2}{\theta} - \frac{8\, \pi\, r^2\, \theta}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{6\, r^2\, \theta^2}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{r^2\, \theta^3}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{4}{\sqrt{4\, \pi\, r^2\, \theta - r^2\, \theta^2}} - \frac{2\, \theta}{\pi\, \sqrt{4\, \pi\, r^2\, \theta - r^2\, \theta^2}}\right)}\right)$$

RevolutionPlot3D[

$$-\left(\text{5.299632000009581`*^7}\, i\, \sqrt{\theta} \left(\frac{12\, \pi\, r^2\, \theta \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} - \frac{9\, r^2\, \theta^2 \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} + \right.\right.$$

$$\frac{3\, r^2\, \theta^3 \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{2\, \pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} - \frac{16\, \pi\, r\, \theta}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{12\, r\, \theta^2}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} -$$

$$\left.\frac{2\, r\, \theta^3}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{2 \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{\theta \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}}\right)$$

$$\left(\frac{2}{\theta^2} + \frac{12\, \pi\, r^2\, \theta \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} - \frac{9\, r^2\, \theta^2 \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} + \frac{3\, r^2\, \theta^3 \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right)}{2\, \pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{5/2}} - \right.$$

$$\frac{8\, \pi\, r^2}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{12\, r^2\, \theta}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{3\, r^2\, \theta^2}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} -$$

$$\left.\left.\frac{2 \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{\theta \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right)}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{2}{\pi\, \sqrt{4\, \pi\, r^2\, \theta - r^2\, \theta^2}}\right)\right) \Big/$$

$$\left(-\frac{2}{\theta} - \frac{8\, \pi\, r^2\, \theta}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{6\, r^2\, \theta^2}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} - \frac{r^2\, \theta^3}{\pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{3/2}} + \frac{4}{\sqrt{4\, \pi\, r^2\, \theta - r^2\, \theta^2}} - \frac{2\, \theta}{\pi\, \sqrt{4\, \pi\, r^2\, \theta - r^2\, \theta^2}}\right)^{3/2} +$$

$$\left(\text{1.0599264000019161`*^8}\, i\, \sqrt{\theta} \left(-\frac{30\, \pi\, r^2\, \theta \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right) \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{\left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{7/2}} + \right.\right.$$

$$\frac{45\, r^2\, \theta^2 \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right) \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{2 \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{7/2}} - \frac{15\, r^2\, \theta^3 \left(4\, \pi\, r^2 - 2\, r^2\, \theta\right) \left(8\, \pi\, r\, \theta - 2\, r\, \theta^2\right)}{4\, \pi \left(4\, \pi\, r^2\, \theta - r^2\, \theta^2\right)^{7/2}} +$$

$$\frac{12\,\pi\,r^2\,\theta\,(8\,\pi\,r-4\,r\,\theta)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{9\,r^2\,\theta^2\,(8\,\pi\,r-4\,r\,\theta)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+\frac{3\,r^2\,\theta^3\,(8\,\pi\,r-4\,r\,\theta)}{2\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+$$

$$\frac{24\,\pi\,r\,\theta\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{18\,r\,\theta^2\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+\frac{3\,r\,\theta^3\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+$$

$$\frac{12\,\pi\,r^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{18\,r^2\,\theta\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+\frac{9\,r^2\,\theta^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{2\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+$$

$$\frac{3\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{3\,\theta\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{2\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-$$

$$\frac{16\,\pi\,r}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{24\,r\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{6\,r\,\theta^2}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-$$

$$\left.\left.\frac{2\,(8\,\pi\,r-4\,r\,\theta)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{\theta\,(8\,\pi\,r-4\,r\,\theta)}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r\,\theta-2\,r\,\theta^2}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}\right)\right)\Big/$$

$$\left(\sqrt{\left(-\frac{2}{\theta}-\frac{8\,\pi\,r^2\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{6\,r^2\,\theta^2}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2\,\theta^3}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\right.}\right.$$

$$\left.\left.\frac{4}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)+$$

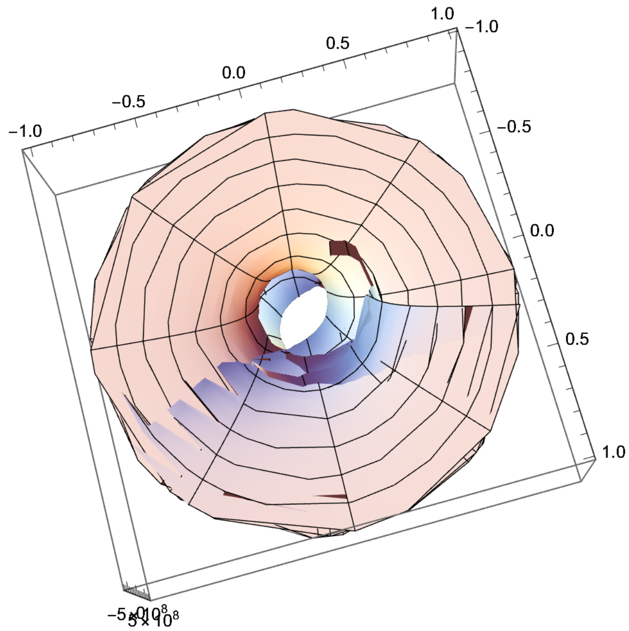
$$\left(5.299632000009581\text{\`{}}*\text{\^{}}7\,i\left(\frac{12\,\pi\,r^2\,\theta\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{9\,r^2\,\theta^2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}+\right.\right.$$

$$\frac{3\,r^2\,\theta^3\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{2\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{5/2}}-\frac{16\,\pi\,r\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{12\,r\,\theta^2}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-$$

$$\left.\left.\frac{2\,r\,\theta^3}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{2\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{\theta\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}\right)\right)\Big/$$

$$\left(\sqrt{\theta}\,\sqrt{\left(-\frac{2}{\theta}-\frac{8\,\pi\,r^2\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{6\,r^2\,\theta^2}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{r^2\,\theta^3}{\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\right.}\right.$$

$$\left.\left.\frac{4}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right),\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\Big]$$



RevolutionPlot3D

Solve

$$(2\,\pi))\;D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\sqrt{1-((v)\,^\wedge 2\,/\,c\,^\wedge 2)}\right),\,\theta\right] \tag{182}$$

When velocity is constant, we can find relativisitc velocity by engaging the idea of length contraction further.

$$r\,\theta = 2\,\pi\,r - 2\,\pi\,r_1 = 2\,\pi\,r - 2\,\pi\,\sqrt{r\,^\wedge 2 - \eta\,^\wedge 2} \tag{183}$$

$$t\,' = \left((\theta\,(1080\,/\,\pi))\Big/\left(\sqrt{1-((v)\,^\wedge 2\,/\,c\,^\wedge 2)}\right)\right) \tag{184}$$

$$t = 2\,\theta = \frac{1080\,\theta}{\pi} \tag{185}$$

$$t\,' = \frac{2\,\pi\,\theta}{\sqrt{1-\frac{v^2}{c^2}}} \tag{185}$$

$$(\pi\,/\,1080)\;t\,' = \theta\,' = \frac{\theta}{\sqrt{1-\frac{v^2}{c^2}}} \tag{186}$$

$$\left(r\left(\sqrt{1-((v)\,^\wedge 2\,/\,c\,^\wedge 2)}\right)\right) = r\,' \tag{187}$$

$$\left(r\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)\left(\theta\Big/\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)=r'*\theta'=r\,\theta \tag{188}$$

1 / (1080 / π) D[$\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}$, θ]

$$\frac{4\pi r^2-2r^2\theta}{4320\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

$$\text{RelativisitcVelocity}=D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right] \tag{189}$$

$$\frac{4\pi r^2-2r^2\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

$$\text{RelativisiticVelocityChangingr}=D\left[\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta,r\right] \tag{190}$$

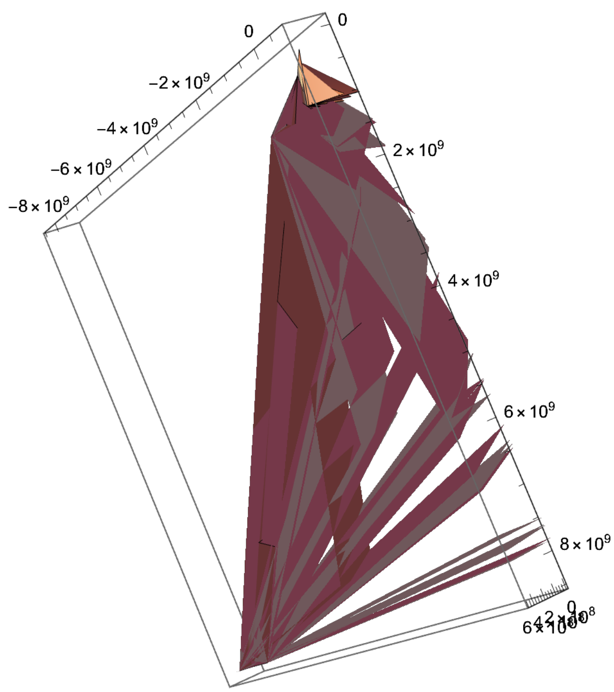
$$-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$$

$$r'/t'=r'\Big/\left((\theta\,(1080/\pi))\Big/\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)=\left(r\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)\Big/\left((\theta\,(1080/\pi))\Big/\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right) \tag{191}$$

Solve[$\left(r\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)\Big/\left((\theta\,(2\pi))\Big/\left(\sqrt{1-((v)^{\wedge}2/c^{\wedge}2)}\right)\right)==2\pi\,\frac{4\pi r^2-2r^2\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}$**, v]**

$$\left\{\left\{v\to-\sqrt{c^2-\frac{4c^2\pi^2 r\theta}{\sqrt{r^2(4\pi-\theta)\theta}}+\frac{2c^2\pi r\theta^2}{\sqrt{r^2(4\pi-\theta)\theta}}}\right\},\left\{v\to\sqrt{c^2-\frac{4c^2\pi^2 r\theta}{\sqrt{r^2(4\pi-\theta)\theta}}+\frac{2c^2\pi r\theta^2}{\sqrt{r^2(4\pi-\theta)\theta}}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left\{-\sqrt{c^2 - \frac{4\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{2\,c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}},\ \sqrt{c^2 - \frac{4\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{2\,c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}\right\}, \{r, -1, 1\}, \{\theta, -1600\,\pi, 1600\,\pi\}\right]$$




```
c := (2.99792458 * 10 ^ 8)
```

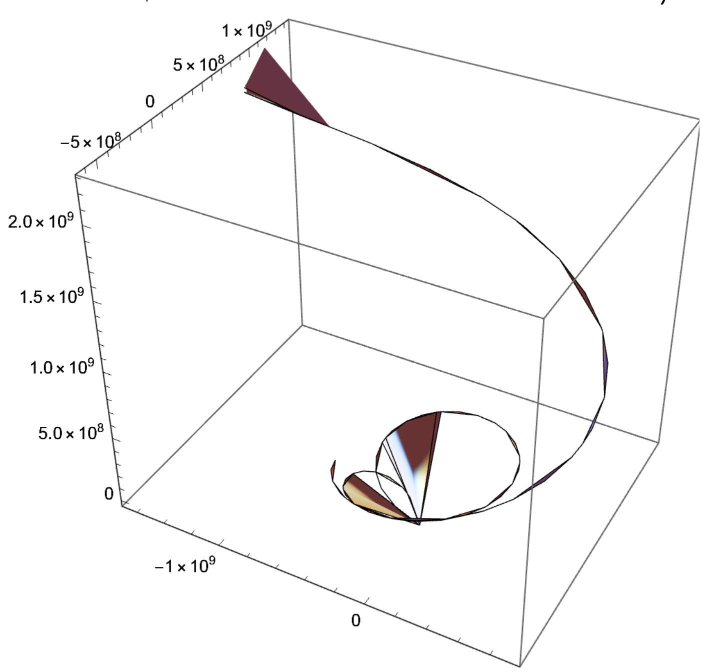
$$\text{Solve}\left[\left(r\left(\sqrt{1-((v)^2/c^2)}\right)\right)\Big/\left((\theta\,(2\,\pi))\Big/\left(\sqrt{1-((v)^2/c^2)}\right)\right) == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\ v\right]$$

$$\left\{\left\{v \to -\frac{\sqrt{2\,c^2 - \frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\},\ \left\{v \to \frac{\sqrt{2\,c^2 - \frac{2\,c^2\,\pi^2\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,\pi\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2}}\right\}\right\}$$

```
Solve[
 (r (Sqrt[1 - ((v)^2/c^2)]))/((θ (2 π))/(Sqrt[1 - ((v)^2/c^2)])) == (4 π r^2 - 2 r^2 θ)/(8 Sqrt[4 π r^2 θ - r^2 θ^2]), v]
```

$$\left\{\left\{v \to -7.51468\times 10^{8}\ \sqrt{\theta}\ \sqrt{\frac{0.159155}{\theta} - \frac{1.5708\,r}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}} + \frac{0.25\,r\,\theta}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}}}\right\},\right.$$
$$\left.\left\{v \to 7.51468\times 10^{8}\ \sqrt{\theta}\ \sqrt{\frac{0.159155}{\theta} - \frac{1.5708\,r}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}} + \frac{0.25\,r\,\theta}{\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}}}\right\}\right\}$$

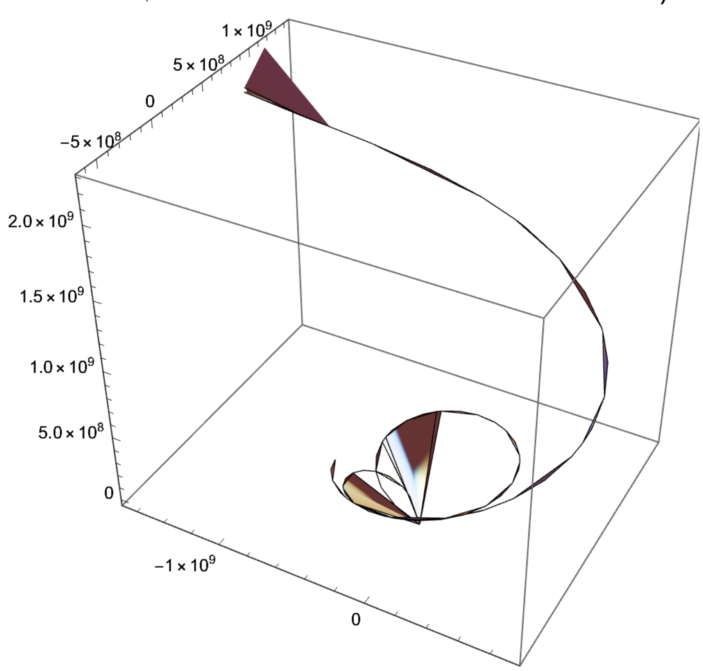
```
RevolutionPlot3D[{(-7.514682517439266`*^8 Sqrt[θ]
    Sqrt[(0.15915494309189535`/θ - 1.5707963267948966` r/Sqrt[12.566370614359172` r^2 θ - 1.` r^2 θ^2] +
      0.25` r θ/Sqrt[12.566370614359172` r^2 θ - 1.` r^2 θ^2])]), (7.514682517439266`*^8
    Sqrt[θ] Sqrt[(0.15915494309189535`/θ - 1.5707963267948966` r/Sqrt[12.566370614359172` r^2 θ - 1.` r^2 θ^2] +
      0.25` r θ/Sqrt[12.566370614359172` r^2 θ - 1.` r^2 θ^2])])}, {r, -1, 1}, {θ, -4 π, 4 π}]
```



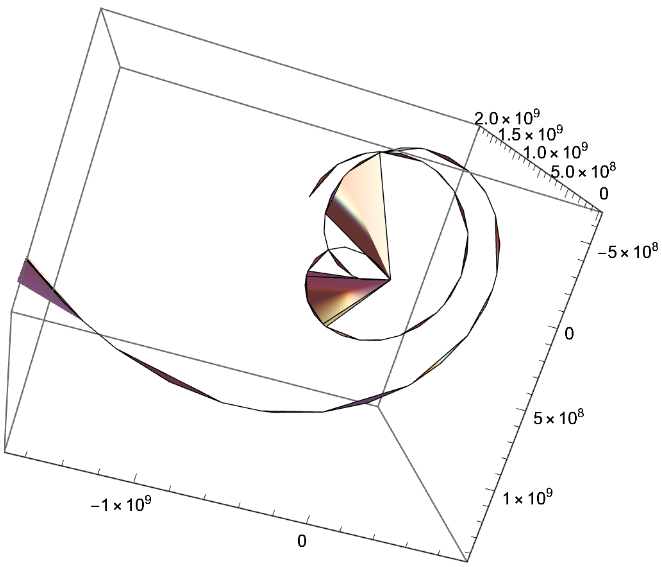
Solve$\left[\left(r\left(\sqrt{1-((v)^2/c^2)}\right)\right)\Big/\left((\theta\,(2\,\pi))\Big/\left(\sqrt{1-((v)^2/c^2)}\right)\right)==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{8\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ v\right]$

$$\left\{\left\{v\to-7.51468\times10^8\,\sqrt{\theta}\,\sqrt{\frac{0.159155}{\theta}-\frac{1.5708\,r}{\sqrt{12.5664\,r^2\,\theta-1.\,r^2\,\theta^2}}+\frac{0.25\,r\,\theta}{\sqrt{12.5664\,r^2\,\theta-1.\,r^2\,\theta^2}}}\right\},\right.$$
$$\left.\left\{v\to7.51468\times10^8\,\sqrt{\theta}\,\sqrt{\frac{0.159155}{\theta}-\frac{1.5708\,r}{\sqrt{12.5664\,r^2\,\theta-1.\,r^2\,\theta^2}}+\frac{0.25\,r\,\theta}{\sqrt{12.5664\,r^2\,\theta-1.\,r^2\,\theta^2}}}\right\}\right\}$$

RevolutionPlot3D$\left[\left\{-7.514682517439266\grave{}*\wedge 8\,\sqrt{\theta}\,\sqrt{\left(\frac{0.15915494309189535\grave{}}{\theta}-\frac{1.5707963267948966\grave{}\,r}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}+\frac{0.25\grave{}\,r\,\theta}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}\right)},\ \left(7.514682517439266\grave{}*\wedge 8\,\sqrt{\theta}\,\sqrt{\left(\frac{0.15915494309189535\grave{}}{\theta}-\frac{1.5707963267948966\grave{}\,r}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}+\frac{0.25\grave{}\,r\,\theta}{\sqrt{12.566370614359172\grave{}\,r^2\,\theta-1.\grave{}\,r^2\,\theta^2}}\right)}\right)\right\},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\right]$



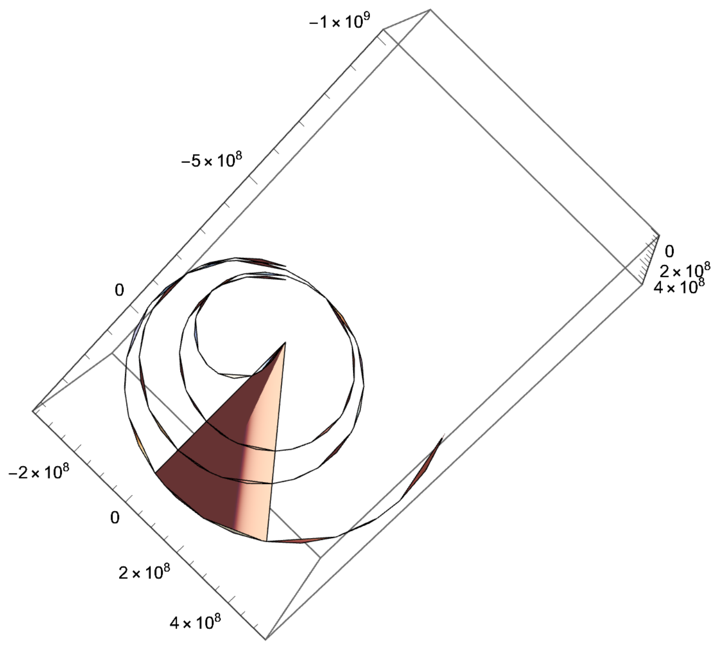
```
RevolutionPlot3D[{-7.514682517439266`*^8 √θ
  √((0.15915494309189535`/θ - 1.5707963267948966` r/√(12.566370614359172` r^2 θ - 1.` r^2 θ^2) +
     0.25` r θ/√(12.566370614359172` r^2 θ - 1.` r^2 θ^2))), (7.514682517439266`*^8
  √θ √((0.15915494309189535`/θ - 1.5707963267948966` r/√(12.566370614359172` r^2 θ - 1.` r^2 θ^2) +
     0.25` r θ/√(12.566370614359172` r^2 θ - 1.` r^2 θ^2)))}, {r, -1, 1}, {θ, -4 π, 4 π}]
```

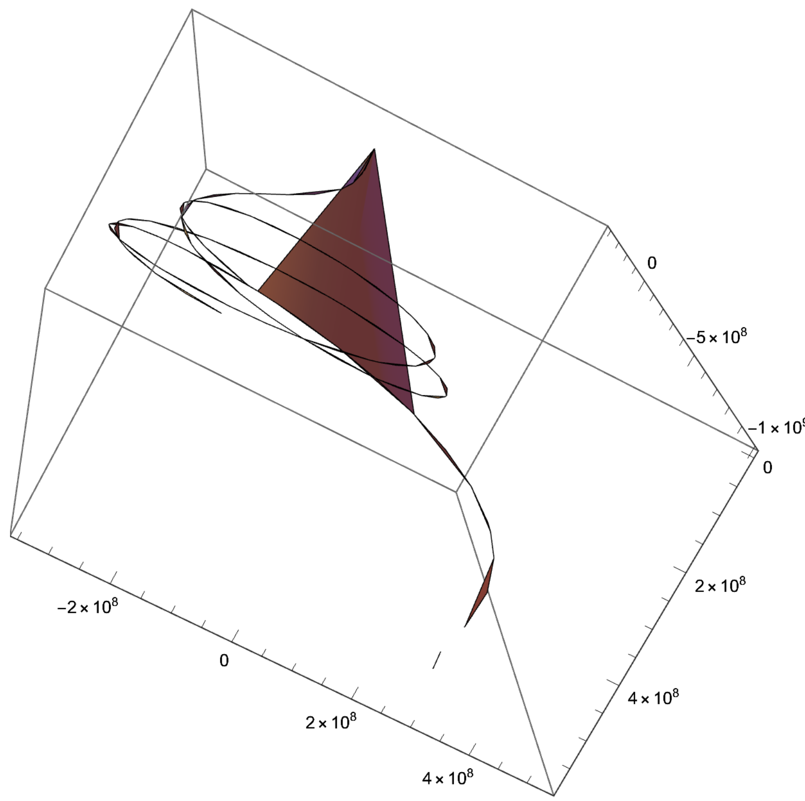



```
Solve[(r (√(1 - ((v)^2 / c^2))))/((θ (1080 / π))/(√(1 - ((v)^2 / c^2)))) ==
  (4 π r^2 - 2 r^2 θ)/(4320 √(4 π r^2 θ - r^2 θ^2)), v]
```

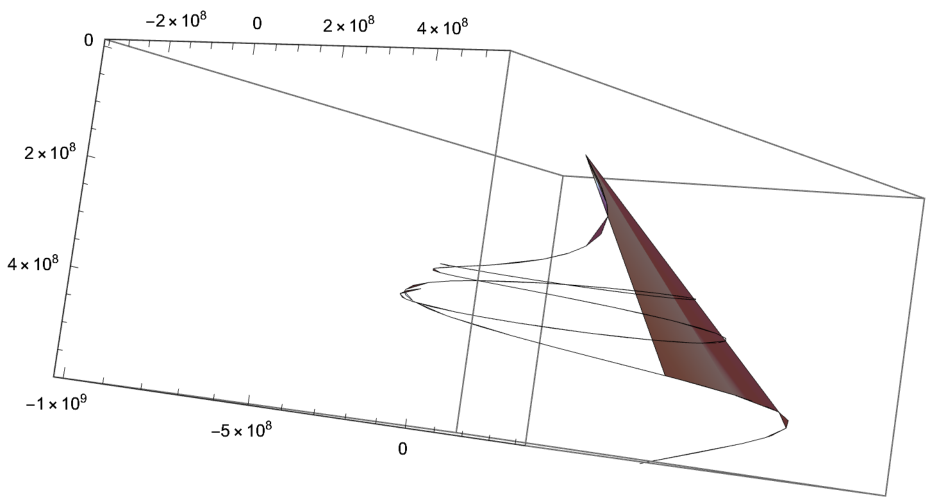
$$\left\{\left\{v \to -\frac{\sqrt{2 c^2 \pi - \frac{2 c^2 \pi r \theta}{\sqrt{r^2 (4\pi-\theta)\theta}} + \frac{c^2 r \theta^2}{\sqrt{r^2 (4\pi-\theta)\theta}}}}{\sqrt{2\pi}}\right\}, \left\{v \to \frac{\sqrt{2 c^2 \pi - \frac{2 c^2 \pi r \theta}{\sqrt{r^2 (4\pi-\theta)\theta}} + \frac{c^2 r \theta^2}{\sqrt{r^2 (4\pi-\theta)\theta}}}}{\sqrt{2\pi}}\right\}\right\} \quad (192)$$

$$\text{RevolutionPlot3D}\left[\left\{-\frac{\sqrt{2\,c^2\,\pi-\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}},\right.\right.$$
$$\left.\left.\frac{\sqrt{2\,c^2\,\pi-\frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}\right\},\ \{r,\ -1,\ 1\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



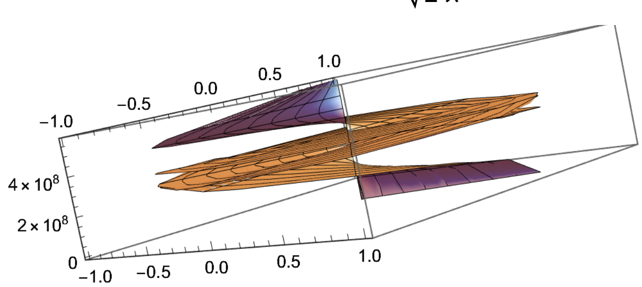


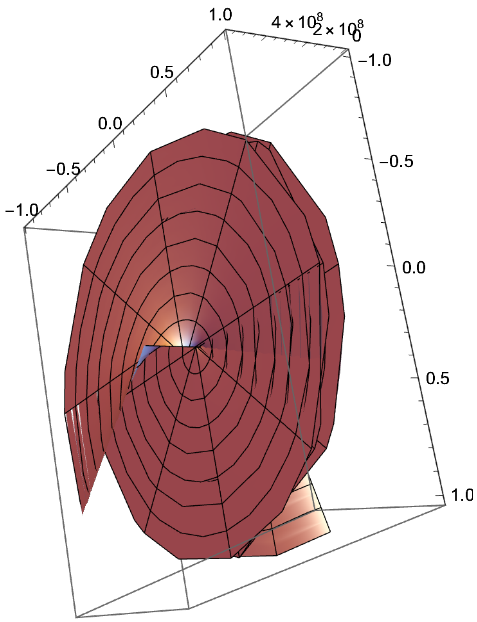
1.1.



$$\text{RevolutionPlot3D}\left[\left\{\frac{\sqrt{2\,c^2\,\pi - \frac{2\,c^2\,\pi\,r\,\theta}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}} + \frac{c^2\,r\,\theta^2}{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}}}{\sqrt{2\,\pi}}\right\}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$

2.

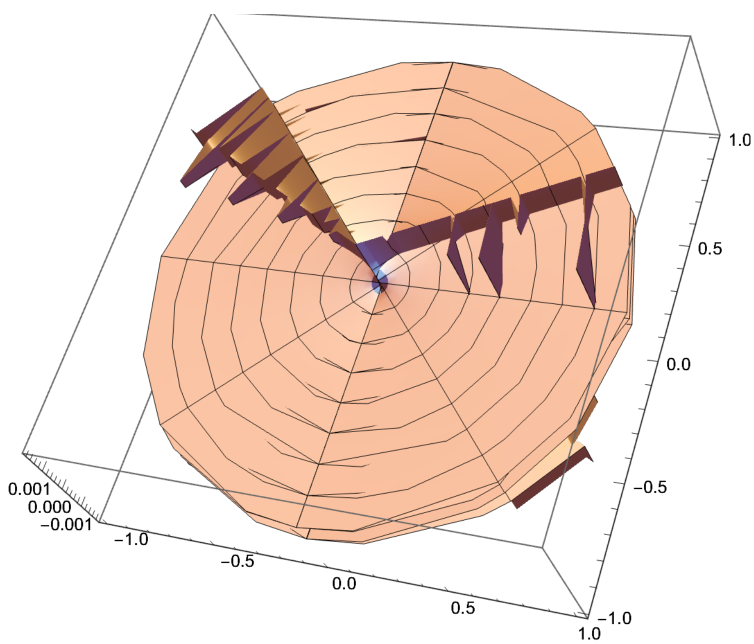




$$(1 / (1080 / \pi))\ D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}, \theta, r\right]$$

$$\frac{\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}{1080}$$

$$\text{RevolutionPlot3D}\left[\frac{\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}{1080}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}\right]$$

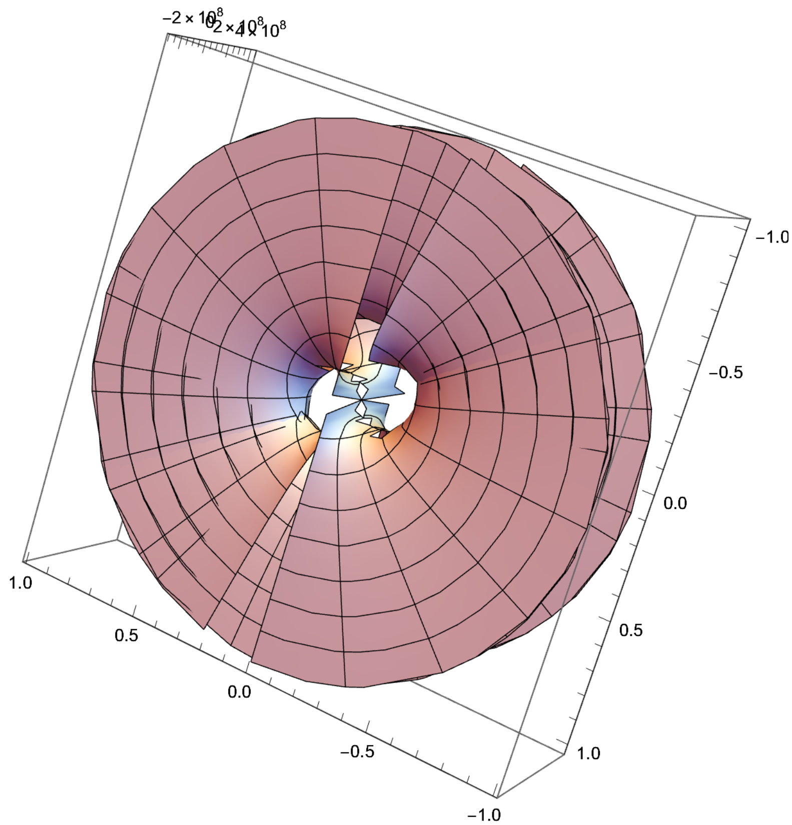


$$\text{Solve}\left[\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==\left(r\left(\sqrt{1-((v)\text{^}2/c\text{^}2)}\right)\right)\Big/\left((\theta\,(1080/\pi))\Big/\left(\sqrt{1-((v)\text{^}2/c\text{^}2)}\right)\right),v\right]$$

$$\left\{\left\{v\to-5.5585\times10^9\sqrt{\theta}\sqrt{\left(\frac{0.00290888}{\theta}+\frac{0.0365541\,r^2\theta}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}-\frac{0.00872665\,r^2\theta^2}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}+\frac{0.000462963\,r^2\theta^3}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}-\frac{0.00581776}{\sqrt{12.5664\,r^2\theta-1.\,r^2\theta^2}}+\frac{0.000925926\,\theta}{\sqrt{12.5664\,r^2\theta-1.\,r^2\theta^2}}\right)}\right\},\right.$$

$$\left.\left\{v\to5.5585\times10^9\sqrt{\theta}\sqrt{\left(\frac{0.00290888}{\theta}+\frac{0.0365541\,r^2\theta}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}-\frac{0.00872665\,r^2\theta^2}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}+\frac{0.000462963\,r^2\theta^3}{\left(12.5664\,r^2\theta-1.\,r^2\theta^2\right)^{3/2}}-\frac{0.00581776}{\sqrt{12.5664\,r^2\theta-1.\,r^2\theta^2}}+\frac{0.000925926\,\theta}{\sqrt{12.5664\,r^2\theta-1.\,r^2\theta^2}}\right)}\right\}\right\}$$

$$\text{RevolutionPlot3D}\Big[\Big\{\Big\{-5.558500439352987\text{`*^9}\ \sqrt{\theta}\ \sqrt{\Big(\frac{0.002908882086657216\text{`}}{\theta}+\frac{0.03655409037440503\text{`}\ r^2\,\theta}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}-\frac{0.008726646259971648\text{`}\ r^2\,\theta^2}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}+\frac{0.000462962962962963\text{`}\ r^2\,\theta^3}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}-\frac{0.005817764173314432\text{`}}{\sqrt{12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2}}+\frac{0.000925925925925926\text{`}\ \theta}{\sqrt{12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2}}\Big)}\Big\},\Big\{5.558500439352987\text{`*^9}\ \sqrt{\theta}\ \sqrt{\Big(\frac{0.002908882086657216\text{`}}{\theta}+\frac{0.03655409037440503\text{`}\ r^2\,\theta}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}-\frac{0.008726646259971648\text{`}\ r^2\,\theta^2}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}+\frac{0.000462962962962963\text{`}\ r^2\,\theta^3}{(12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2)^{3/2}}-\frac{0.005817764173314432\text{`}}{\sqrt{12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2}}+\frac{0.000925925925925926\text{`}\ \theta}{\sqrt{12.566370614359172\text{`}\ r^2\,\theta-1.\text{`}\ r^2\,\theta^2}}\Big)}\Big\}\Big\},\{r,-1,1\},\{\theta,-2\pi,2\pi\}\Big]$$



$$\text{Solve}\left[-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}==\left(r\left(\sqrt{1-((v)\wedge 2/c\wedge 2)}\right)\right)\Big/\left((\theta\,(1080/\pi))\Big/\left(\sqrt{1-((v)\wedge 2/c\wedge 2)}\right)\right),\ v\right]$$

$$\left\{\left\{v\to-\frac{1}{\sqrt{\pi}}c\sqrt{\theta}\sqrt{\left(\frac{\pi}{\theta}+\frac{4320\pi r^2\theta}{\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{3240 r^2\theta^2}{\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{540 r^2\theta^3}{\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{2160}{\sqrt{4\pi r^2\theta-r^2\theta^2}}+\frac{1080\theta}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}\right\},\right.$$

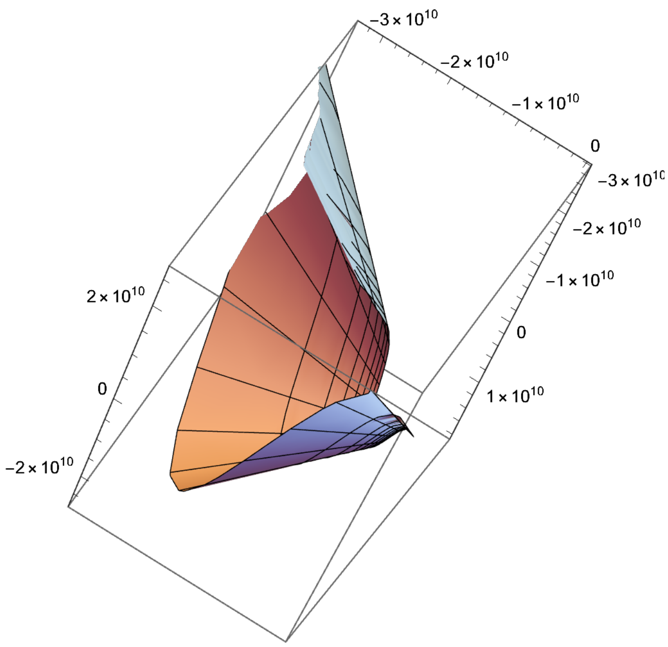
$$\left.\left\{v\to\frac{1}{\sqrt{\pi}}c\sqrt{\theta}\sqrt{\left(\frac{\pi}{\theta}+\frac{4320\pi r^2\theta}{\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{3240 r^2\theta^2}{\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{540 r^2\theta^3}{\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}-\frac{2160}{\sqrt{4\pi r^2\theta-r^2\theta^2}}+\frac{1080\theta}{\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}\right\}\right\}$$

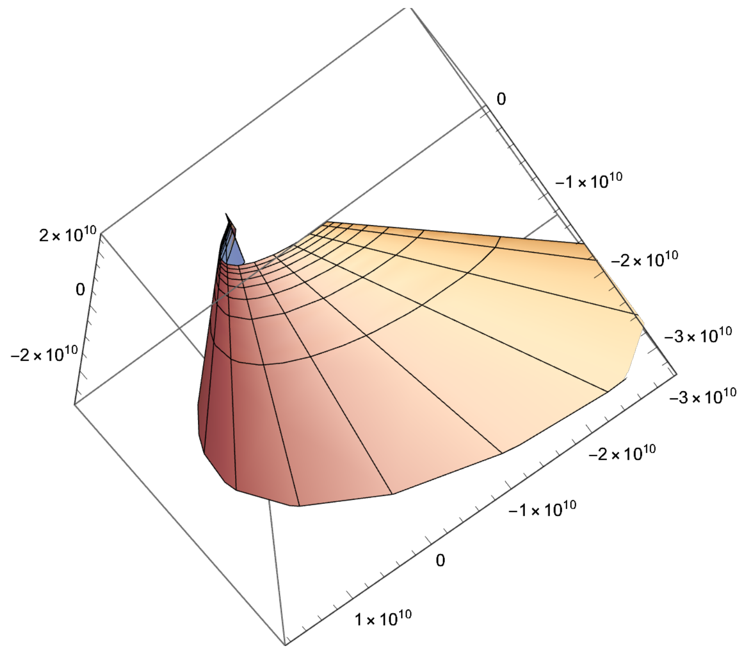
RevolutionPlot3D[

$$\left\{\frac{1}{\sqrt{\pi}}\, c\, \sqrt{\theta}\, \sqrt{\left(\frac{\pi}{\theta} + \frac{4320\,\pi\, r^2\,\theta}{\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} - \frac{3240\, r^2\,\theta^2}{\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} + \frac{540\, r^2\,\theta^3}{\pi\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} - \frac{2160}{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}} + \frac{1080\,\theta}{\pi\,\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}\right)},\right.$$

$$\left. -\frac{1}{\sqrt{\pi}}\, c\, \sqrt{\theta}\, \sqrt{\left(\frac{\pi}{\theta} + \frac{4320\,\pi\, r^2\,\theta}{\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} - \frac{3240\, r^2\,\theta^2}{\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} + \frac{540\, r^2\,\theta^3}{\pi\left(4\,\pi\, r^2\,\theta - r^2\,\theta^2\right)^{3/2}} - \frac{2160}{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}} + \frac{1080\,\theta}{\pi\,\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}\right)}\right\}, \{r, -1, 1\}, \{\theta, -4\,\pi, 4\,\pi\}]$$

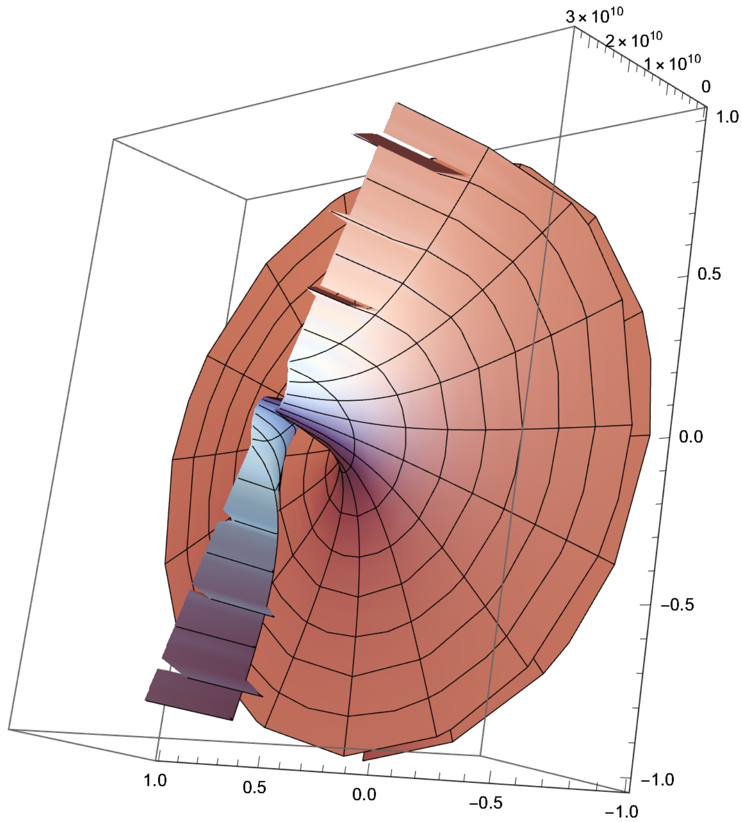
4.





RevolutionPlot3D[

$$\frac{1}{\sqrt{\pi}} c \sqrt{\theta} \sqrt{\left(\frac{\pi}{\theta} + \frac{4320 \pi r^2 \theta}{\left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} - \frac{3240 r^2 \theta^2}{\left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} + \frac{540 r^2 \theta^3}{\pi \left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} - \frac{2160}{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}} + \frac{1080 \theta}{\pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right)}, \{r, -1, 1\}, \{\theta, -4 \pi, 4 \pi\}]$$



Velocity from c * t' = η = η'

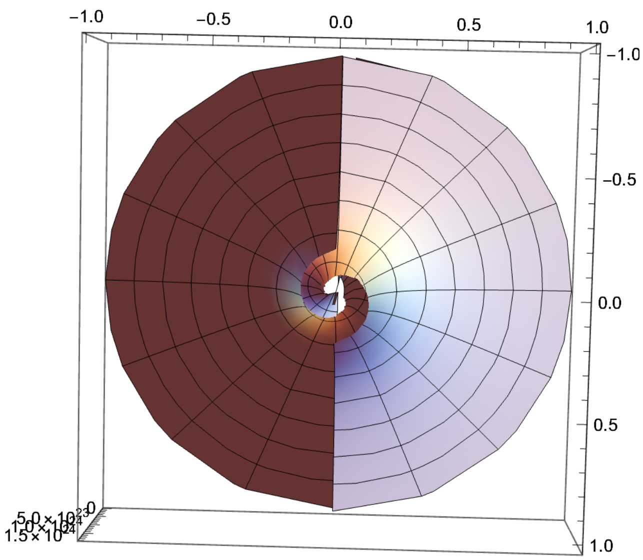
$$\text{Solve}\left[c\,\frac{1080\,\theta}{\pi\,\sqrt{1-\frac{v^2}{c^2}}} == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\ v\right]$$

$$\left\{\left\{v \to -\frac{1}{\pi}\,c\,\sqrt{\left(\pi^2 - \frac{21\,767\,823\,360\,000\,c^2\,\pi^2}{r^2} - \frac{87\,071\,293\,440\,000\,c^2\,\pi^4}{r^2\,(2\,\pi-\theta)^2} + \frac{87\,071\,293\,440\,000\,c^2\,\pi^3}{r^2\,(2\,\pi-\theta)} + \frac{5\,441\,955\,840\,000\,c^2\,\theta^2}{r^2}\right)}\right\},\right.$$
$$\left.\left\{v \to \frac{1}{\pi}\,c\,\sqrt{\left(\pi^2 - \frac{21\,767\,823\,360\,000\,c^2\,\pi^2}{r^2} - \frac{87\,071\,293\,440\,000\,c^2\,\pi^4}{r^2\,(2\,\pi-\theta)^2} + \frac{87\,071\,293\,440\,000\,c^2\,\pi^3}{r^2\,(2\,\pi-\theta)} + \frac{5\,441\,955\,840\,000\,c^2\,\theta^2}{r^2}\right)}\right\}\right\}$$

```
c := (2.99792458 * 10^8)
```

```
RevolutionPlot3D[
```

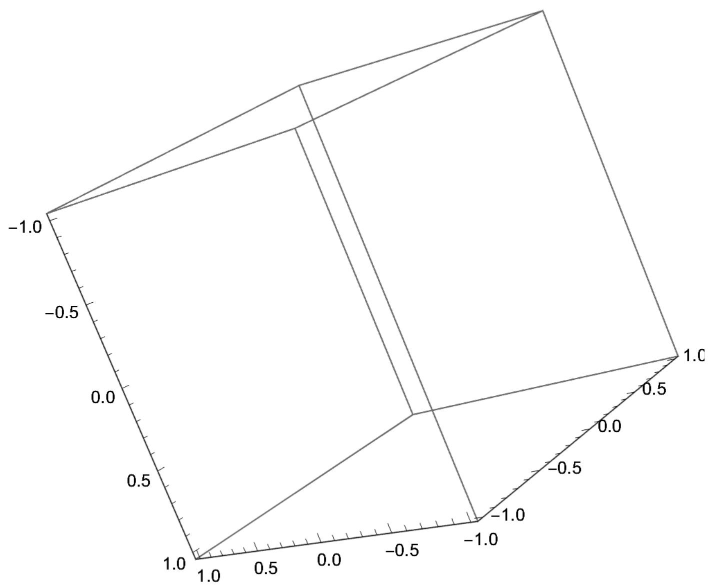
$$\frac{1}{\pi} c \sqrt{\left(\pi^2 - \frac{21\,767\,823\,360\,000\, c^2 \pi^2}{r^2} - \frac{87\,071\,293\,440\,000\, c^2 \pi^4}{r^2 (2\pi - \theta)^2} + \frac{87\,071\,293\,440\,000\, c^2 \pi^3}{r^2 (2\pi - \theta)} + \frac{5\,441\,955\,840\,000\, c^2 \theta^2}{r^2}\right)}, \{r, -1, 1\}, \{\theta, -2\pi, 2\pi\}]$$



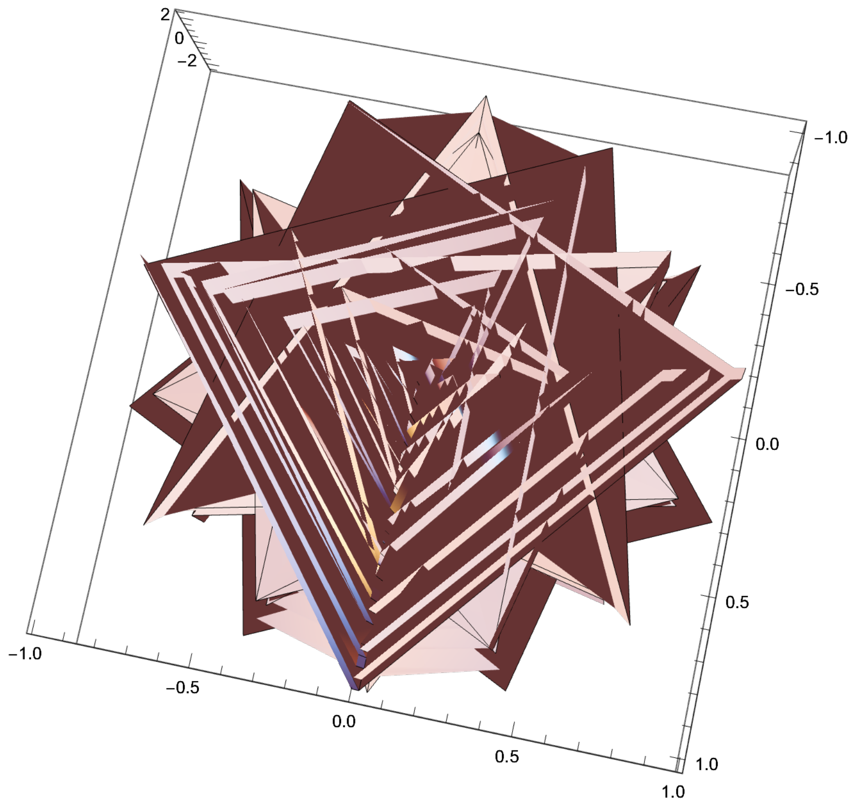
$$\left(\frac{1}{\pi} c \sqrt{\left(\pi^2 - \frac{21\,767\,823\,360\,000\, c^2 \pi^2}{r^2} - \frac{87\,071\,293\,440\,000\, c^2 \pi^4}{r^2 (2\pi - \theta)^2} + \frac{87\,071\,293\,440\,000\, c^2 \pi^3}{r^2 (2\pi - \theta)} + \frac{5\,441\,955\,840\,000\, c^2 \theta^2}{r^2}\right)}\right)$$

$$\left\{\left\{\eta \to -\left(r \sqrt{\left(-c^4 \pi^8 + 2 c^2 \pi^8 v^2 - \pi^8 v^4 + 145\,800\, c^6 \pi^4 \theta^2 - 145\,800\, c^4 \pi^4 v^2 \theta^2 - 5\,314\,410\,000\, c^8 \theta^4\right)}\right) \Big/ \left(\pi^2 \sqrt{-c^4 \pi^4 + 2 c^2 \pi^4 v^2 - \pi^4 v^4 + 72\,900\, c^6 \theta^2 - 72\,900\, c^4 v^2 \theta^2}\right)\right\}, \left\{\eta \to \left(r \sqrt{\left(-c^4 \pi^8 + 2 c^2 \pi^8 v^2 - \pi^8 v^4 + 145\,800\, c^6 \pi^4 \theta^2 - 145\,800\, c^4 \pi^4 v^2 \theta^2 - 5\,314\,410\,000\, c^8 \theta^4\right)}\right) \Big/ \left(\pi^2 \sqrt{-c^4 \pi^4 + 2 c^2 \pi^4 v^2 - \pi^4 v^4 + 72\,900\, c^6 \theta^2 - 72\,900\, c^4 v^2 \theta^2}\right)\right\}\right\}$$

```
SphericalPlot3D[
 (r √(-c^4 π^8 + 2 c^2 π^8 v^2 - π^8 v^4 + 145800 c^6 π^4 θ^2 - 145800 c^4 π^4 v^2 θ^2 - 5314410000 c^8 θ^4)) /
  (π^2 Sqrt[-c^4 π^4 + 2 c^2 π^4 v^2 - π^4 v^4 + 72900 c^6 θ^2 - 72900 c^4 v^2 θ^2]), {θ, -π, π}, {v, -4 π, 4 π}]
```



$$
\begin{aligned}
&\texttt{RevolutionPlot3D}\Bigg[\\
&\Bigg(r\sqrt{\Bigg(-c^4\pi^8+2c^2\pi^8\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\right.}\right.}\\
&\qquad\qquad\left.\left.\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^2-\\
&\qquad\pi^8\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\right.}\right.\\
&\qquad\qquad\left.\left.\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^4+\\
&\qquad 145\,800\,c^6\pi^4\theta^2-145\,800\,c^4\pi^4\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\right.}\right.\\
&\qquad\qquad\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\\
&\qquad\qquad\left.\left.\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^2\theta^2-5\,314\,410\,000\,c^8\theta^4\Bigg)\Bigg)\Bigg/\\
&\Bigg(\pi^2\sqrt{\Bigg(-c^4\pi^4+2c^2\pi^4\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\right.}\right.}\\
&\qquad\qquad\left.\left.\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^2-\\
&\qquad\pi^4\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\right.}\right.\\
&\qquad\qquad\left.\left.\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^4+\\
&\qquad 72\,900\,c^6\theta^2-72\,900\,c^4\left(\frac{1}{\pi}c\sqrt{\left(\pi^2-\frac{21\,767\,823\,360\,000\,c^2\pi^2}{r^2}-\right.}\right.\\
&\qquad\qquad\frac{87\,071\,293\,440\,000\,c^2\pi^4}{r^2\,(2\pi-\theta)^2}+\frac{87\,071\,293\,440\,000\,c^2\pi^3}{r^2\,(2\pi-\theta)}+\\
&\qquad\qquad\left.\left.\frac{5\,441\,955\,840\,000\,c^2\theta^2}{r^2}\right)\right)^2\theta^2\Bigg)\Bigg),\ \{r,-1,1\},\ \{\theta,-40\pi,40\pi\}\Bigg]
\end{aligned}
$$



$$\text{D}\left[\frac{\text{i}\, c\, \sqrt{\theta}\, \sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}},\ \theta\right]$$

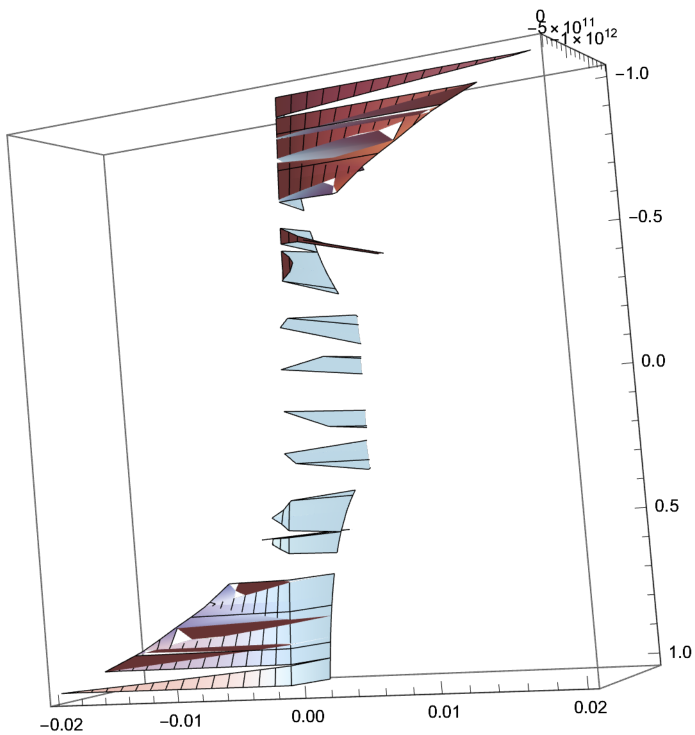
$$\left(1.05993\times 10^8\, \text{i}\, \sqrt{\theta}\, \left(\frac{2}{\theta^2}-\frac{2\,\theta\,\left(4\,\pi\, r^2-2\, r^2\,\theta\right)}{\left(4\,\pi\, r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{\theta^2\,\left(4\,\pi\, r^2-2\, r^2\,\theta\right)}{2\,\pi\,\left(4\,\pi\, r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{4}{\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}-\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}\right)\right)\Big/\left(\sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}}\right)+$$

$$\frac{1.05993\times 10^8\, \text{i}\, \sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\, r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{\theta}}$$

$$\text{RevolutionPlot3D}\Big[\left(1.0599264000019161\grave{}*\hat{}8\,\mathrm{i}\,\sqrt{\theta}\left(\frac{2}{\theta^2}-\frac{2\,\theta\,(4\,\pi\,r^2-2\,r^2\,\theta)}{(4\,\pi\,r^2\,\theta-r^2\,\theta^2)^{3/2}}+\frac{\theta^2\,(4\,\pi\,r^2-2\,r^2\,\theta)}{2\,\pi\,(4\,\pi\,r^2\,\theta-r^2\,\theta^2)^{3/2}}+\frac{4}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)\Big/$$

$$\left(\sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}+\frac{1.0599264000019161\grave{}*\hat{}8\,\mathrm{i}\,\sqrt{-\frac{2}{\theta}+\frac{4\,\theta}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}-\frac{\theta^2}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{\theta}}\right),$$

$$\{r,\,-1,\,1\},\,\{\theta,\,-4\,\pi,\,4\,\pi\}\Big]$$



$$\left(r\,\sqrt{1-((v)\,\hat{}\,2\,/\,c\,\hat{}\,2)}\right)\Big/\left(\theta\Big/\sqrt{1-((v)\,\hat{}\,2\,/\,c\,\hat{}\,2)}\right)=\mathrm{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,r\right]$$

I. Math for Transforming a Circle into a Cone

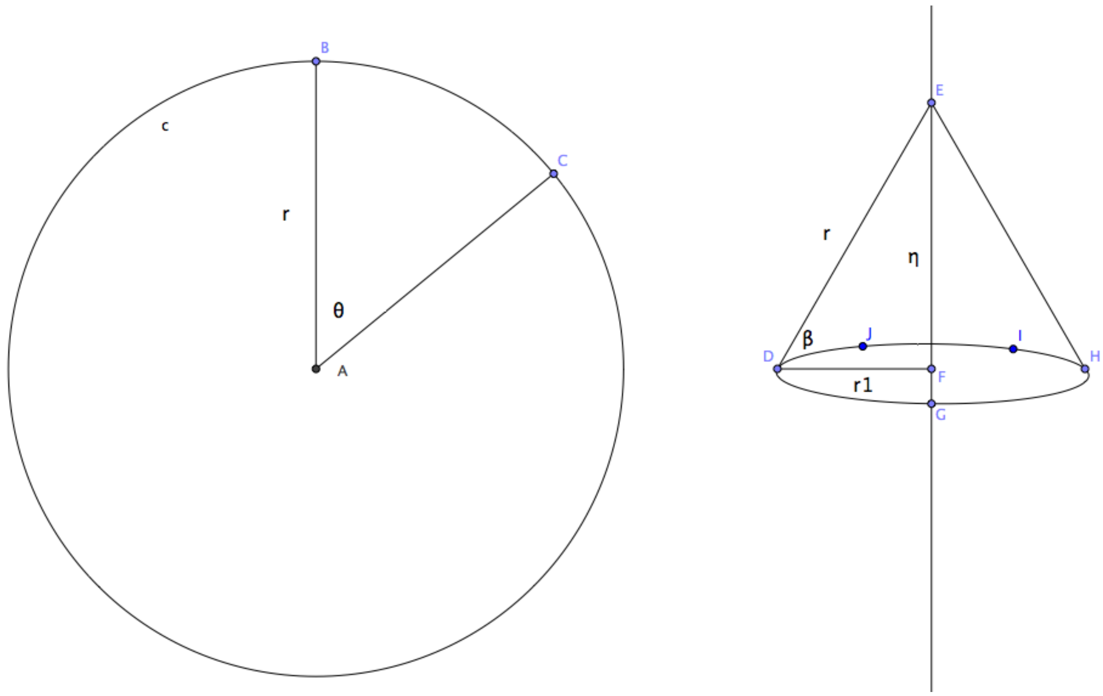


Figure 1

When a sector of a circle is removed, we may "fold up" the resulting shape into a cone. The parameters are related by the following theorem :

Theorem 1 *When a sector of angle θ is removed from a circle of radius r and the resulting shape is folded into a cone, then the base of the cone has radius r_1 given by $r_1 = r - \frac{(r\theta)}{2\pi}$; and height η, given by $\eta = \sqrt{r^2 - r_1^2}$* = r Sin[$\beta$]

Proof. The circumference of the initial circle is 2π r and the wedge removed has an arc length r θ. Therefore, the remaining circumference is of length r $(2\pi - \theta)$, and after the fold, this is the circumference of the base of the cone.

Establishing the circumference of the base of the cone, from the equation, $\theta\,r = 2\pi\,r - 2\pi\,r_1$, we calculate that its radius r_1 is $\frac{2\pi r - r\theta}{2\pi}$, which simplifies to r - $\frac{r\theta}{2\pi}$. Thus, we have proved the first part of the theorem.

To find the height of the cone, η, we apply the Pythagorean theorem to a right triangle formed between the apex of the cone, the center of the base, and a point on the circumference of the base. This gives $\eta = \sqrt{r^2 - r_1^2}$ = r Sin[β], where β is the angle formed by the slant of the cone and the base of the cone. The initial radius is always equal to the slant of the cone, and the height of the cone is always orthogonal to the center of the base of the cone.

This element of the theorem assumes modus ponens from the thought of $\eta = \sqrt{r^2 - r_1^2}$ = r Sin[β], and it assumes addition and commutation.

Lemma 1 The height of the cone can be caluclated in terms of r and θ.

Proof.

$$\theta\,r = 2\pi\,r - 2\pi\,r_1$$

$$\eta = \sqrt{r^2 - r_1^2}$$

$$\theta\,r = 2\pi\,r - 2\pi\sqrt{(r\hat{}2 - \eta\hat{}2)}$$

$$\eta = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$$

Lemma 2 The angle θ can be calculated in terms of r and η.

Proof

$$\text{Solve}\left[\eta == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\pi\left(r^2 - \sqrt{r^4 - r^2\eta^2}\right)}{r^2}\right\}, \left\{\theta \to \frac{2\pi\left(r^2 + \sqrt{r^4 - r^2\eta^2}\right)}{r^2}\right\}\right\}$$

Lemma 3 The initial radius is a function of θ and η.

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == \eta, r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}\right\}$$

Lemma 4 *The height of the cone can be calculated in terms of only r and* θ, thus β is a function of θ alone.

Proof. Since we have shown that $\theta\, r = 2\pi r - 2\pi r_1$ and $r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial radius of the circle, into the expression for θ r in terms of the change in circumference of the initial circle to the circle, which is the base of the cone. $\theta\, r = 2\pi r - 2\pi \sqrt{(r\wedge 2 - \eta\wedge 2)}$, thus, $\eta = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$ = (r Sin[β]). From $\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}$= r, we note that r = $\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}$, so

$\theta = 2\left(\pi \pm \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) = \frac{2\pi\left(r^2 + \sqrt{r^4 - r^2\eta^2}\right)}{r^2}$, because $1 = \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}$

Lemma 5 *The height of the cone can be calculated in terms of only r and* θ, thus θ is a function of β alone, and the initial radius can be calculated purely in terms of the angle θ.

$$\beta = \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right] = f\,(\theta)$$

$$\text{Sin}[\beta] = \frac{\eta}{r} = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{r\,2\pi} = \frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2 r} = \frac{r\,(4\pi - \theta)\,\theta}{4\pi^2}$$

$$\beta \to \text{ArcSin}\left[\frac{4\pi r\theta - r\theta^2}{4\pi^2}\right] = \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$\text{Solve}\left[\text{ArcSin}\left[\frac{4\pi r\theta - r\theta^2}{4\pi^2}\right] == \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right], r\right]$$

$$\left\{\left\{r \to \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right\}\right\}$$

$$\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta} = g\,(\theta)$$

$$\frac{d\eta}{d\frac{\theta}{(2\pi)}} =$$

$$D\left[2\pi\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right] = \frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}} = \text{Instantaneous Velocity} =$$

$$\text{Average Velocity} = \frac{2\pi\eta}{\theta}$$

$$\left\{\left\{\Theta \to \frac{4\pi}{3} + \frac{-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2}{6\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} - \frac{2\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},\right.$$

$$\left\{\Theta \to \frac{4\pi}{3} - \frac{\left(1 + i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 - i\sqrt{3}\right)\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\},$$

$$\left.\left\{\Theta \to \frac{4\pi}{3} - \frac{\left(1 - i\sqrt{3}\right)\left(-4\pi^2 r^4 + 12\pi^2 r^2 \eta^2\right)}{12\pi r^2 \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}} + \frac{\left(1 + i\sqrt{3}\right)\pi \left(r^6 - 18 r^4 \eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8 \eta^4 + r^6 \eta^6}\right)^{1/3}}{3 r^2}\right\}\right\}$$

$\frac{1}{0}$:= Where, := means

"by arbitrary pattern of subsitution of definitions within the lemmas of theorems one and two,"

Because, it can be shown that,

$1 = \frac{2\pi \text{Sin}[\beta]}{\sqrt{4\pi\Theta - \Theta^2}}$ and $0 = \Theta r - 2\pi r - 2\pi \sqrt{(r \wedge 2 - \eta \wedge 2)}$,

$$\frac{1}{0} := \frac{2\pi \text{Sin}[\beta]}{\sqrt{4\pi\Theta - \Theta^2}\left(2\pi r - r\Theta - 2\pi\sqrt{r^2 - \frac{4\pi r^2\Theta - r^2\Theta^2}{4\pi^2}}\right)}.$$

$$\frac{2\pi \text{Sin}[\beta]}{\sqrt{4\pi\Theta - \Theta^2}\left(2\pi r - r\Theta - 2\pi\sqrt{r^2 - \frac{4\pi r^2\Theta - r^2\Theta^2}{4\pi^2}}\right)} =$$

$$(2\pi \text{Sin}[\beta]) \Big/ \left(\sqrt{4\pi\Theta - \Theta^2}\left(2\pi \frac{2\pi\sqrt{(4\pi - \Theta)\Theta}}{(4\pi - \Theta)\Theta} - \frac{2\pi\sqrt{(4\pi - \Theta)\Theta}}{(4\pi - \Theta)\Theta}\Theta - \right.\right.$$

$$\left.\left. 2\pi\sqrt{\left(\frac{2\pi\sqrt{(4\pi - \Theta)\Theta}}{(4\pi - \Theta)\Theta}\right)^2 - \frac{4\pi\left(\frac{2\pi\sqrt{(4\pi - \Theta)\Theta}}{(4\pi - \Theta)\Theta}\right)^2\Theta - \left(\frac{2\pi\sqrt{(4\pi - \Theta)\Theta}}{(4\pi - \Theta)\Theta}\right)^2\Theta^2}{4\pi^2}}\right)\right) =$$

$$(2\pi \text{Sin}[\beta]) \Big/ \left(\sqrt{4\pi\Theta - \Theta^2}\left(2\pi \frac{1}{(4\pi - \Theta)\Theta} 2\pi\right.\right.$$

$$\sqrt{\left((4\pi - \Theta)\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + \right.\right.\right.\right.}$$

$$3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\Big)^{1/3}\Big) +$$

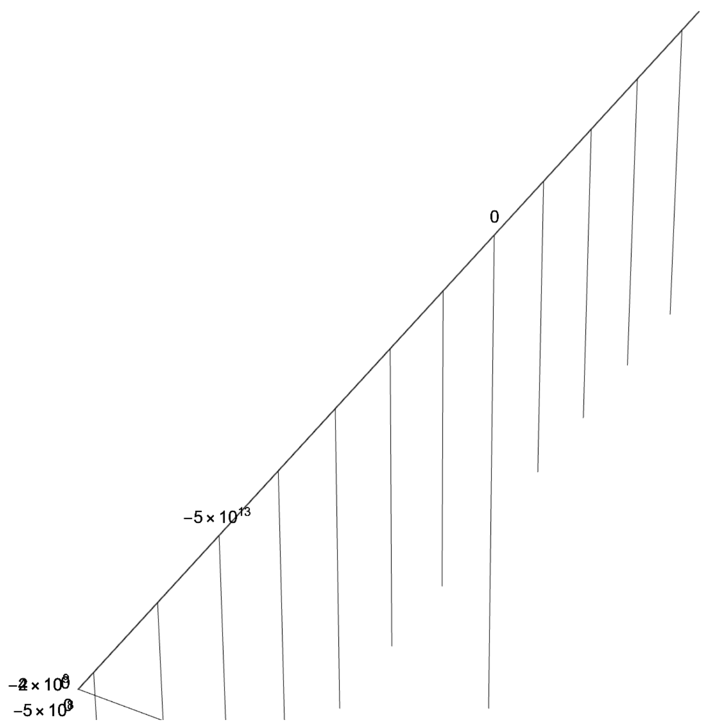
$$\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg)-$$

$$\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-2\,\pi\,\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2-\frac{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}{4\,\pi^2}}\Bigg)\Bigg)$$

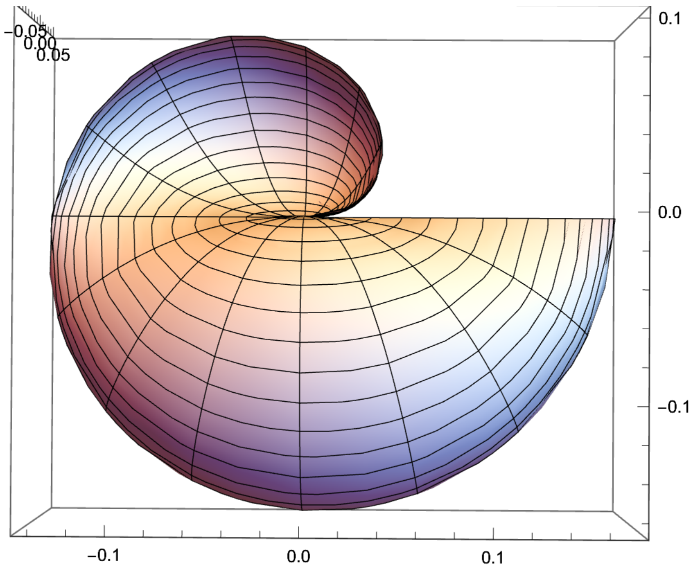
$$\textbf{SphericalPlot3D}\Big[(2\,\pi\,\text{Sin}[\beta])\Big/\left(\sqrt{4\,\pi\,\theta-\theta^2}\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\right.\right.$$

$$\left.\left.2\,\pi\,\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2-\frac{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}{4\,\pi^2}}\right)\right),$$

$$\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



```
SphericalPlot3D[(2 π Sin[β]) / (Sqrt[4 π θ - θ^2] (2 π 1/((4 π - θ) θ) 2 π Sqrt[((4 π - θ) (4 π/3 -
    (-4 π^2 + 12 π^2 Sin[β]^2)/(6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
    2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)))] -
  1/((4 π - θ) θ) 2 π Sqrt[((4 π - θ) ((2 π Sin[β]) / (Sqrt[4 π θ - θ^2] (2 π 1/((4 π - θ) θ) 2 π
      Sqrt[((4 π - θ) (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
            3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3]
            Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)))] -
      (2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ) θ - 2 π
      Sqrt[((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 - (4 π (((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ - ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ^2))/(4 π^2)]))))] θ -
  2 π Sqrt[((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 - (4 π (((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ - ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ^2))/(4 π^2)])),
 {θ, -2 π, 2 π}, {β,
  -π /
   2,
  π /
   2}]
```



$$(2\,\pi\,\mathrm{Sin}[\beta])\Big/\left(\sqrt{4\,\pi\,\theta-\theta^2}\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\right.\right.$$

$$\left.\left.2\,\pi\,\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2-\frac{4\,\pi\,\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}{4\,\pi^2}}\right)\right)$$

$$(2\,\pi\,\mathrm{Sin}[\beta])\Big/\left(\sqrt{4\,\pi\,\theta-\theta^2}\left(2\,\pi\,\frac{1}{(4\,\pi-\theta)\,\theta}\,2\,\pi\right.\right.$$

$$\sqrt{\left((4\,\pi-\theta)\,\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\,\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+\right.\right.\right.\right.}$$

$$\left.\left.3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\left.\left.\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\,\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)-$$

$$\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-$$

$$2$$

$$\pi$$

$$\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}{4\pi^2}}\,\Bigg)\Bigg)$$

$$\frac{4\pi}{3}-$$

$$\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+$$

$$\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}$$

$$(2\pi\,\mathrm{Sin}[\beta])\Bigg/\left(\sqrt{4\pi\theta-\theta^2}\left(2\pi\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\theta-\right.\right.$$

$$\left.\left.2\pi\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}{4\pi^2}}\right)\right)$$

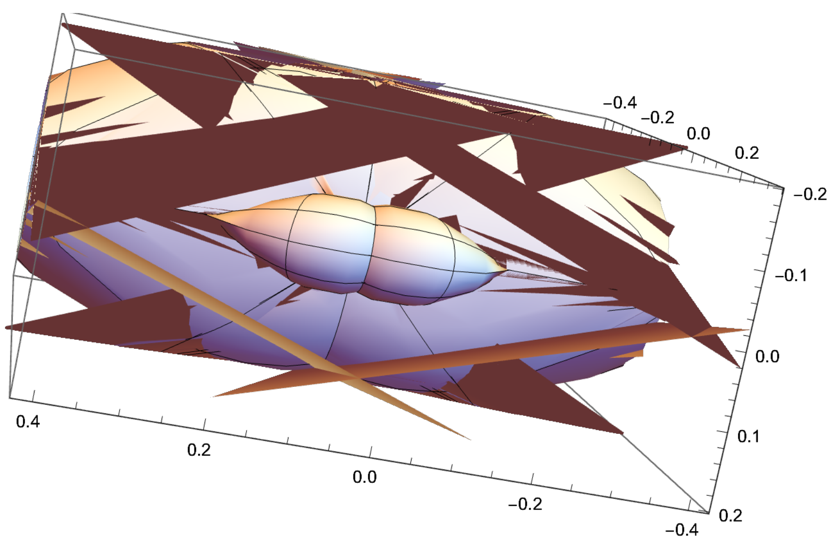
$$\mathbf{SphericalPlot3D}\Big[(2\pi\,\mathrm{Sin}[\beta])\,/\,\left(\sqrt{\left(4\pi\theta-\theta^2\right)}\right)\Big/$$

$$\left(\left(2\pi\frac{1}{(4\pi-\theta)\,\theta}2\pi\sqrt{((4\pi-\theta)\,(\theta))}-2\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\theta}{2\pi}\right)-\right.\right.$$

$$\left.\left.\theta\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)\hat{}\,2\right),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}\Big]$$

$$\texttt{SphericalPlot3D}\Big[(2\pi\,\mathrm{Sin}[\beta])\Big/\left(\sqrt{(4\pi\theta-(\theta)^2)}\left(2\pi\frac{1}{(4\pi-\theta)\,\theta}2\pi\sqrt{\left((4\pi-\theta)\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\theta-2\pi\sqrt{\left(\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-\frac{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}{4\pi^2}\right)}\right)\right),$$

$$\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\Big]$$



$$\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\Big\{\Big\{\theta\to\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\right.$$

$$\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} + \Big(\left(1 + \mathrm{i}\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2 \operatorname{Sin}[\beta]^2\right)\Big) \Big/ \Big(12\,\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big) - \frac{1}{3}\left(1 - \mathrm{i}\,\sqrt{3}\right)\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big\},$$

$$\Big\{\theta \to \frac{4\,\pi}{3} + \Big(\left(1 - \mathrm{i}\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2 \operatorname{Sin}[\beta]^2\right)\Big) \Big/ \Big(12\,\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big) - \frac{1}{3}\left(1 + \mathrm{i}\,\sqrt{3}\right)\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big\}\Big\}$$

$$\mathbf{ContourPlot3D}\Big[\frac{2\,\pi \operatorname{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} \Big/ \left(2\,\pi\,r - r\,\theta - 2\,\pi\,\sqrt{r^2 - \frac{4\,\pi\,r^2\,\theta - r^2\,\theta^2}{4\,\pi^2}}\right), \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}, \text{AxesLabel} \to \text{Automatic}\Big]$$

$$\frac{2\,\pi \operatorname{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} \Big/ \Bigg(2\,\pi\,\frac{1}{(4\,\pi - \theta)\,\theta}\,2\,\pi\,\sqrt{\Bigg((4\,\pi - \theta)\,\Bigg(\frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2 \operatorname{Sin}[\beta]^2\right) \Big/ \Big(6\,\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Big) + \frac{2}{3}\Big(-\pi^3 + 18\,\pi^3 \operatorname{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6 \operatorname{Sin}[\beta]^2 + 11\,\pi^6 \operatorname{Sin}[\beta]^4 + \pi^6 \operatorname{Sin}[\beta]^6}\Big)^{1/3}\Bigg)\Bigg)} -$$

$$\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$\theta -$$

2

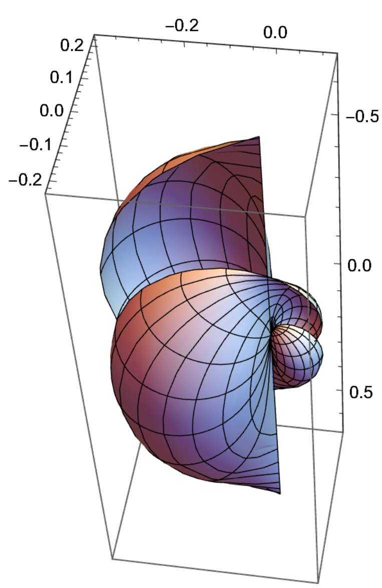
π

$$\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-\frac{4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}^{2}\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}{4\pi^2}}\Bigg)$$

SphericalPlot3D[

$$\frac{2\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\Bigg/\left(2\pi\,\frac{1}{(4\pi-\theta)\,\theta}\,2\pi\sqrt{\left((4\pi-\theta)\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta-2\pi\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2-\frac{4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}^{2}\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}{4\pi^2}}\right),$$

{θ, -2 π, 2 π}, {β, -π / 2, π / 2}]



$$\left(\left(2\pi\,\mathrm{Sin}[\beta]\right)\Big/\left(\sqrt{\left(4\pi\theta-\theta^2\right)}\right)\right)\Big/\left(\left(2\pi\,\frac{1}{(4\pi-\theta)\,\theta}\right.\right.$$

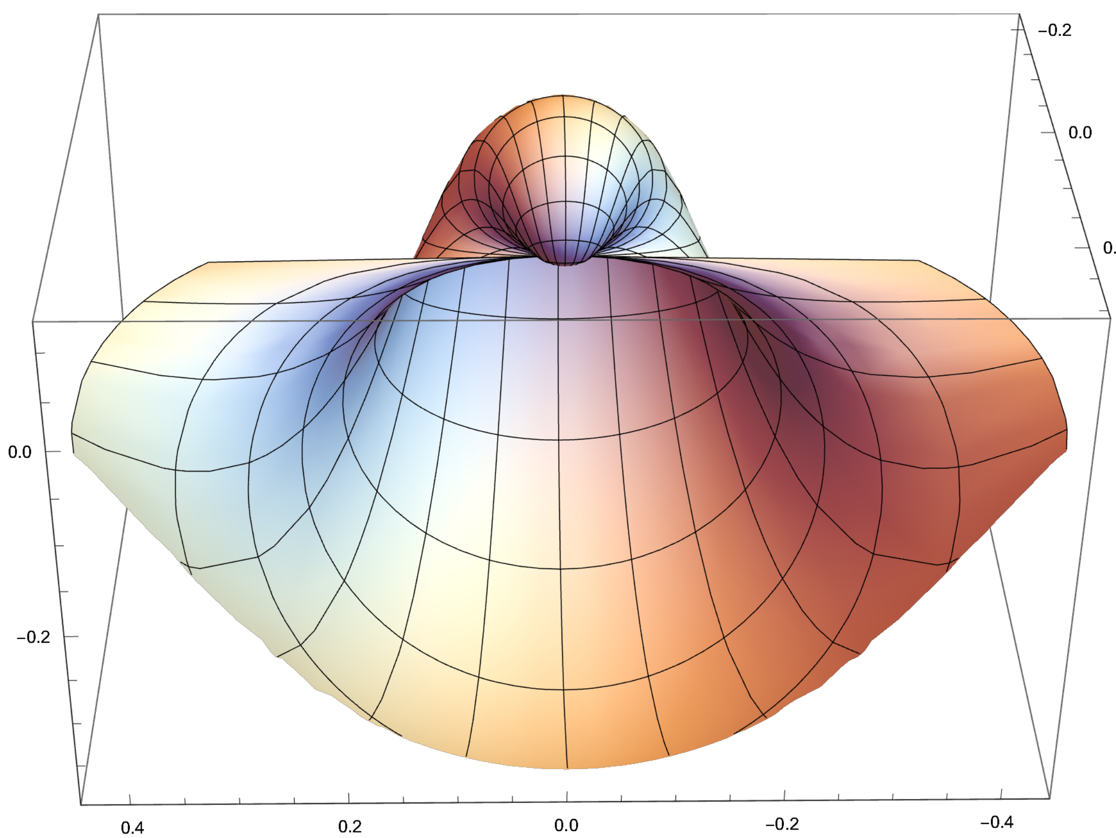
$$2\,\pi\sqrt{\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)-2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\text{^}2}$$

$$\frac{2\,\pi\,\text{r}-\text{r}\,\theta}{2\,\pi}$$

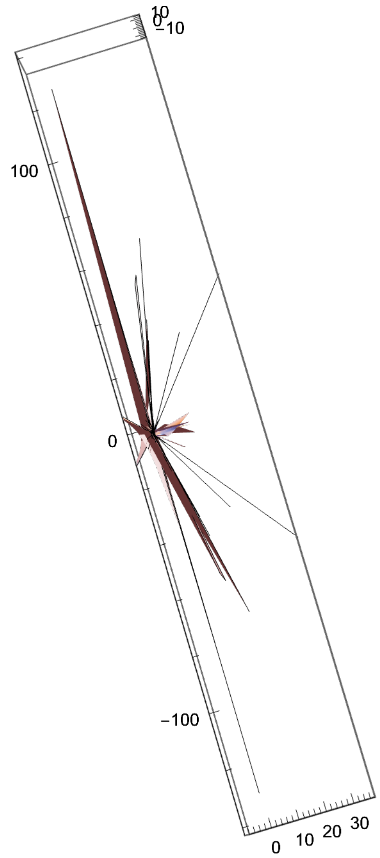
```
SphericalPlot3D[(2 π Sin[β]) /
  (Sqrt[4 π θ - θ^2] (2 π 1/((4 π - θ) θ) 2 π Sqrt[((4 π - θ) (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 +
          18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
        2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))) -
     (2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ) θ - 2 π ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ) - (2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ) θ)/(2 π)])),
 {β, -π / 2, π / 2}, {θ, -2 π, 2
   π}]
```

$$\text{SphericalPlot3D}\Bigg[(2\,\pi\,\text{Sin}[\beta])\Bigg/\left(\sqrt{4\,\pi\,\theta-\theta^{2}}\left(2\,\pi\,\frac{1}{(4\,\pi-\theta)\,\theta}\,2\,\pi\sqrt{\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\left(-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}\right)\Big/\left(6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)\right)}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-2\,\pi\,\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)\right),$$

$$\{\beta,\,-\pi/2,\,\pi/2\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\Bigg]$$



```
SphericalPlot3D[
 (2 π Sin[β]) / (Sqrt[4 π θ - (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2] (2 π 1/((4 π - θ) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))
     2 π Sqrt[((4 π - θ) (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
               3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)))] -
    (2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ) (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - 2 π 1/(2 π)
     (2 π (2 π Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ])/((4 π - θ) θ) -
       (2 π Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ])/((4 π - θ) θ)
        (2 (π + Sqrt[π^2 - π^2 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^2]))))),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



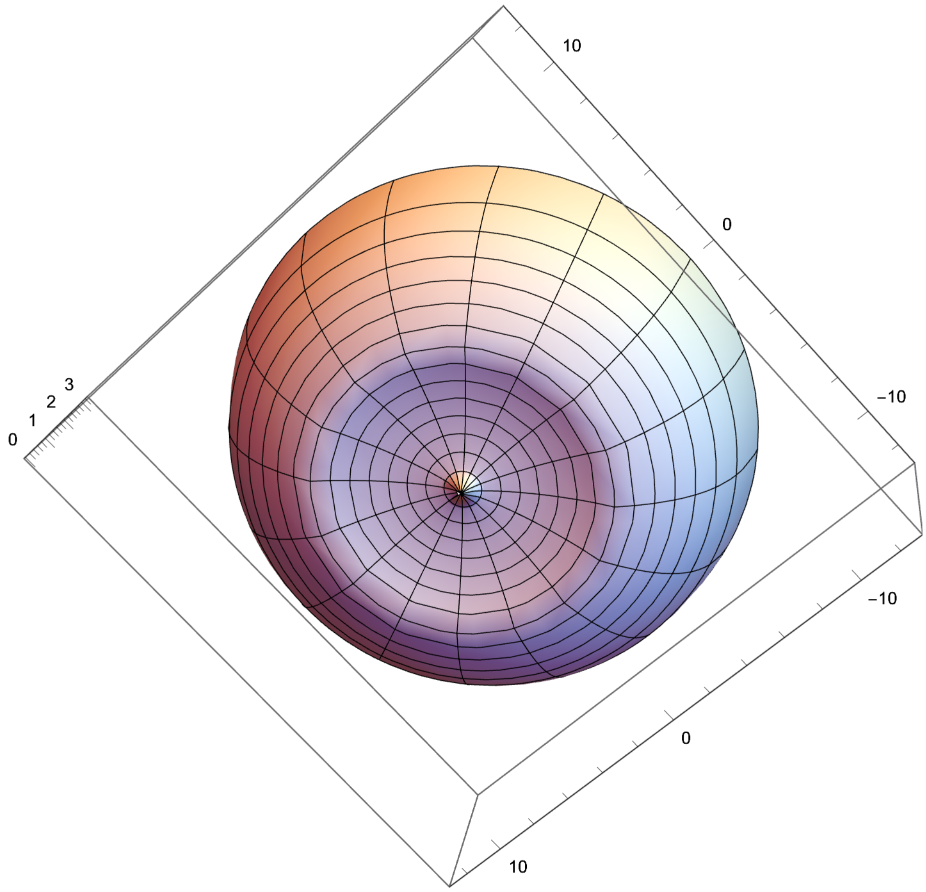
$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

RevolutionPlot3D$\left[\dfrac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\ \{r,-1,1\},\ \{\theta,-30\,\pi,30\,\pi\}\right]$

$$\texttt{RevolutionPlot3D}\Big[\left(\frac{\sqrt{4\,\pi\,\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)^2\theta-\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)$$

$$\left(\sqrt{\left(1-\left(\left(\left(\left(\frac{2\,\pi\,\left(\frac{\sqrt{4\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}\,\theta-\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\Big/\,((1080/\pi)\,\theta)\right)\texttt{^}2\right)\Big/\right.}\right.$$

$$\left.\left.(c\texttt{^}2)\right)\right)\right),\ \{\theta,\,-4\,\pi,\,4\,\pi\}\Big]$$



$$\eta = \frac{\sqrt{4\,\pi\,r'^2\,\theta' - r'^2\,\theta'^2}}{2\,\pi}$$

c := (2.99792458 * 10 ^ 8)

$$\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(r\,\sqrt{1-((u^2)/(c^2))}\right)^2\left(\theta\Big/\sqrt{1-((u^2)/(c^2))}\right) - \left(r\,\sqrt{1-((u^2)/(c^2))}\right)^2\left(\theta\Big/\sqrt{1-((u^2)/(c^2))}\right)^2\right)}\right)$$

$$\frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{u^2}{c^2}}\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$\eta = \frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{u^2}{c^2}}\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{(r/\theta)^2}{c^2}}\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{(v)^2}{c^2}}\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{4\,\pi\,r^2\,\sqrt{1-\frac{v^2}{c^2}}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{v^2}{c^2}}\,\theta-r^2\,\theta^2}}$$

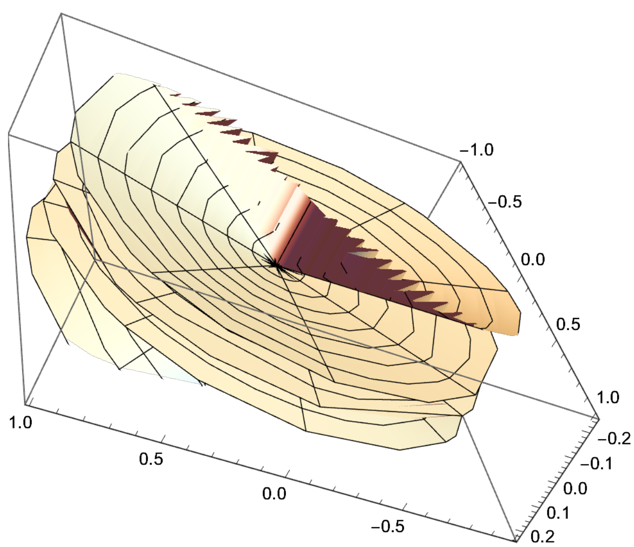
$$\text{Solve}\left[\frac{4\,\pi\,r^2\,\sqrt{1-\frac{v^2}{c^2}}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{v^2}{c^2}}\,\theta-r^2\,\theta^2}}==v,\,v\right]$$

Velocity is constant and so is r ' or r.

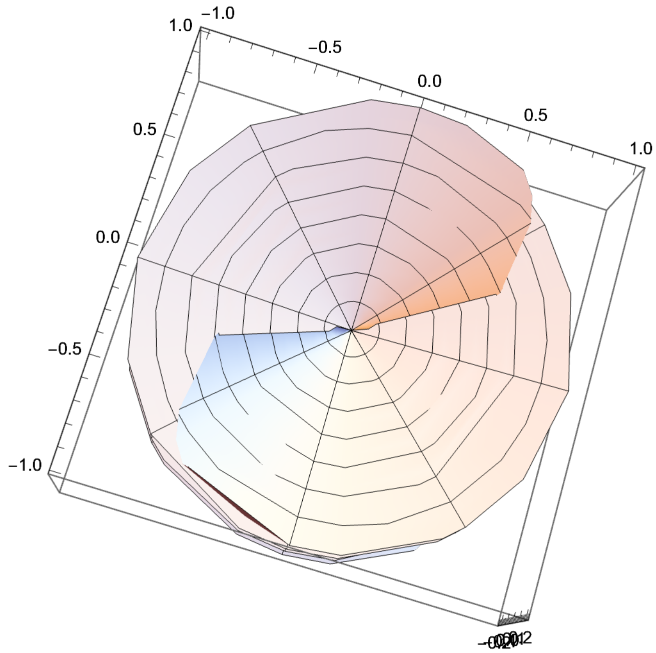
$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{((1/(1080/\pi))\,(r/\theta))^2}{c^2}}\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}$$

$$\text{RevolutionPlot3D}\left[\frac{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}},\,\{r,-1,1\},\,\{\theta,-4\,\pi,4\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}+\frac{4\,\pi\,r^4}{c^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta-r^2\,\theta^2}},\{r,-1,1\},\{\theta,-4\,\pi,4\,\pi\}\right]$$



$$D\left[\frac{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}},\theta\right]$$

$$-\frac{\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2\right)^{3/2}}+$$

$$\frac{-2\,r^2-\frac{\pi^5\,r^6}{340\,122\,240\,000\,c^4\,\left(1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}\right)^{3/2}\,\theta^5}-\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^3}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}$$

$$\text{RevolutionPlot3D}\Bigg[\left(\frac{h\,\pi^3\,r^2}{1\,259\,712\,000\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^4}-\frac{h\,\pi\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}}{1080\,\theta^2}\right)\Big/$$

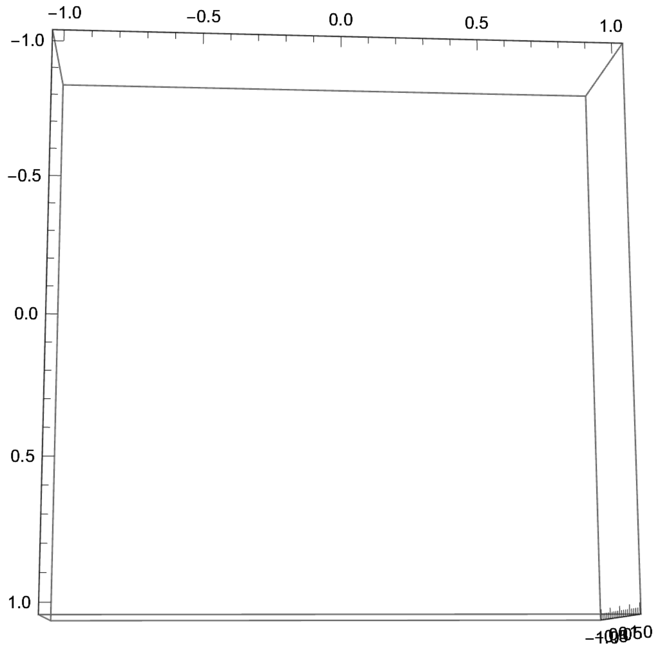
$$\left(-\frac{\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2\right)^{3/2}}+\right.$$

$$\left.\frac{-2\,r^2-\frac{\pi^5\,r^6}{340\,122\,240\,000\,c^4\,\left(1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}\right)^{3/2}\,\theta^5}-\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^3}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}\right)$$

$$\left(-\frac{\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2\right)^{3/2}}+\right.$$

$$\left.\frac{-2\,r^2-\frac{\pi^5\,r^6}{340\,122\,240\,000\,c^4\,\left(1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}\right)^{3/2}\,\theta^5}-\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^3}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}\right),$$

$$\{r,-1,1\},\{\theta,-14\,\pi,14\,\pi\}\Bigg]$$


−1.0
−0.5
0.0
0.5
1.0
−1.0
−0.5
0.0
0.5
1.0

$$\text{Solve}\Bigg[m\left(-\frac{\left(4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}+\frac{\pi^3 r^4}{291600\,c^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta^2}-2r^2\theta\right)^2}{8\pi\left(4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta-r^2\theta^2\right)^{3/2}}+\frac{-2r^2-\frac{\pi^5 r^6}{340122240000\,c^4\left(1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}\right)^{3/2}\theta^5}-\frac{\pi^3 r^4}{291600\,c^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta^3}}{4\pi\sqrt{4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta-r^2\theta^2}}\right)==$$

$$D\left[h\left(\left(1/((1080/\pi)\,\theta)\right)\left(\sqrt{1-(((r/((1080/\pi)\,\theta))\hat{}2)/(c\hat{}2))}\right)\right),\theta\right],m\Bigg]$$

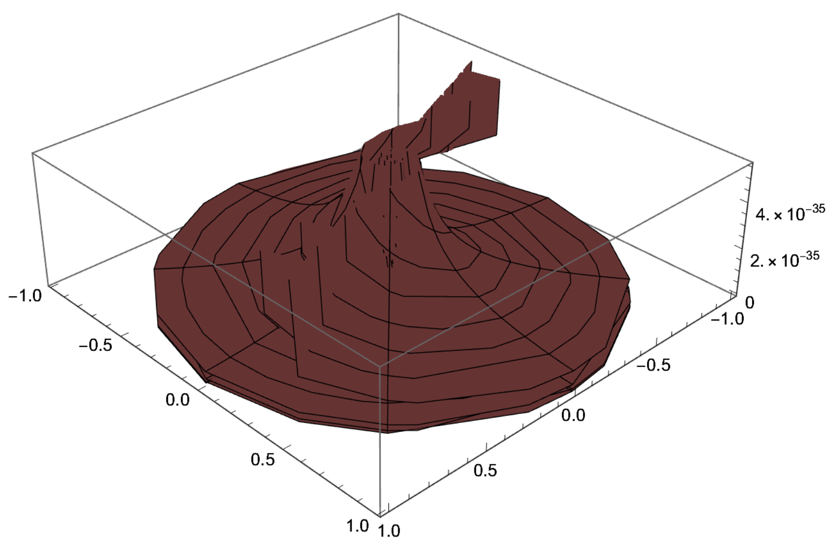
$$\left\{\left\{m\to\left(\frac{h\,\pi^3 r^2}{1259712000\,c^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta^4}-\frac{h\,\pi\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}}{1080\,\theta^2}\right)\Bigg/\left(-\frac{\left(4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}+\frac{\pi^3 r^4}{291600\,c^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta^2}-2r^2\theta\right)^2}{8\pi\left(4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta-r^2\theta^2\right)^{3/2}}+\frac{-2r^2-\frac{\pi^5 r^6}{340122240000\,c^4\left(1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}\right)^{3/2}\theta^5}-\frac{\pi^3 r^4}{291600\,c^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta^3}}{4\pi\sqrt{4\pi r^2\sqrt{1-\frac{\pi^2 r^2}{1166400\,c^2\,\theta^2}}\,\theta-r^2\theta^2}}\right)\right\}\right\}$$

```
c := (2.99792458 * 10 ^ 8)

h := (6.626068 * 10 ^ -34)
```

$$\text{RevolutionPlot3D}\Bigg[\left(\frac{h\,\pi^3\,r^2}{1\,259\,712\,000\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^4}-\frac{h\,\pi\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}}{1080\,\theta^2}\right)\Bigg/$$

$$\left(-\frac{\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)^2}{8\,\pi\,\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2\right)^{3/2}}+\right.$$

$$\left.\frac{-2\,r^2-\frac{\pi^5\,r^6}{340\,122\,240\,000\,c^4\,\left(1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}\right)^{3/2}\,\theta^5}-\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta^3}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2\,r^2}{1\,166\,400\,c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}\right),\ \{r,\,-1,\,1\},\ \{\theta,\,-4\,\pi,\,4\,\pi\}\Bigg]$$

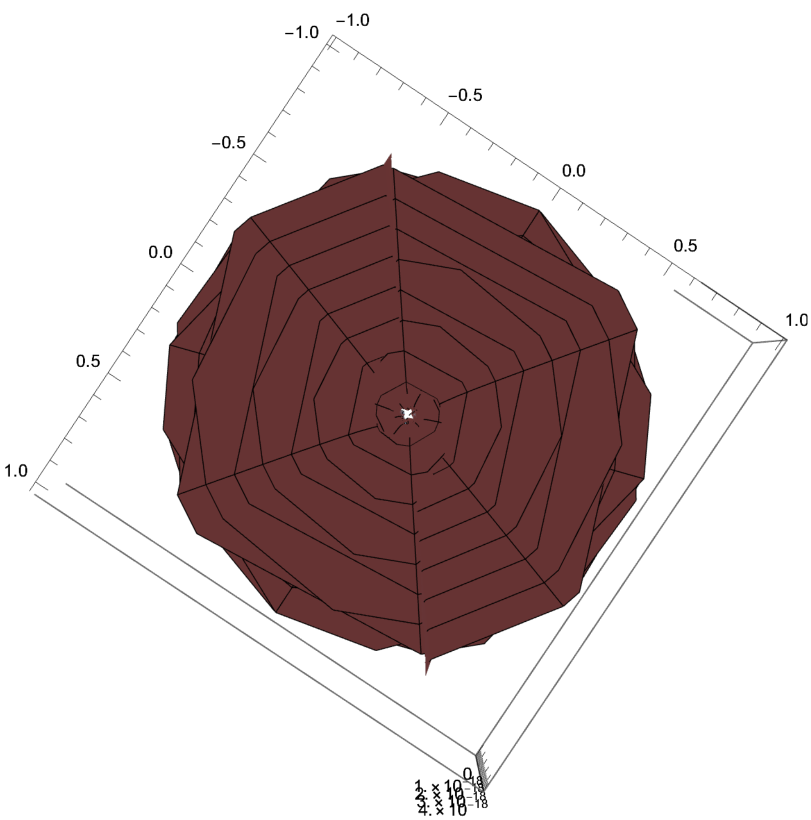


$$\text{RevolutionPlot3D}\left[\left(\frac{h\,\pi^3\,r^2}{1\,259\,712\,000\,c^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}\;\theta^4}-\frac{h\,\pi\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}}{1080\,\theta^2}\right)\Big/\right.$$

$$\left(-\frac{\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}+\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}\;\theta^2}-2\,r^2\,\theta\right)^2}{8\,\pi\left(4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}\;\theta-r^2\,\theta^2\right)^{3/2}}+\right.$$

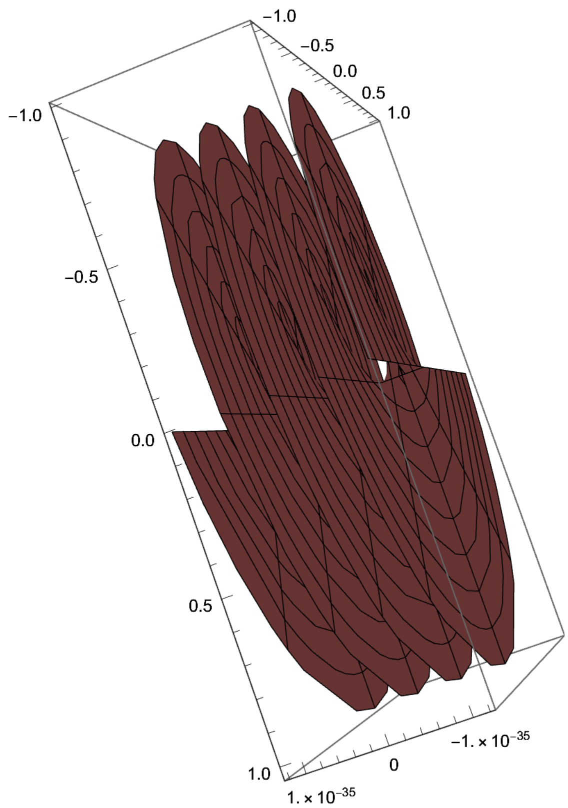
$$\left.\frac{-2\,r^2-\frac{\pi^5\,r^6}{340\,122\,240\,000\,c^4\left(1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}\right)^{3/2}\theta^5}-\frac{\pi^3\,r^4}{291\,600\,c^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}\;\theta^3}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{\pi^2 r^2}{1\,166\,400\,c^2\,\theta^2}}\;\theta-r^2\,\theta^2}}\right)$$

$$\left. c^{\wedge}2,\ \{r,-1,1\},\ \{\theta,-12\,\pi,12\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{h\,\pi^2\,\theta\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}{270\left(4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}+\frac{4\,\pi\,r^4}{c^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)}\right.$$

$$\left.\frac{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}+\frac{4\,\pi\,r^4}{c^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta-r^2\,\theta^2}},\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$

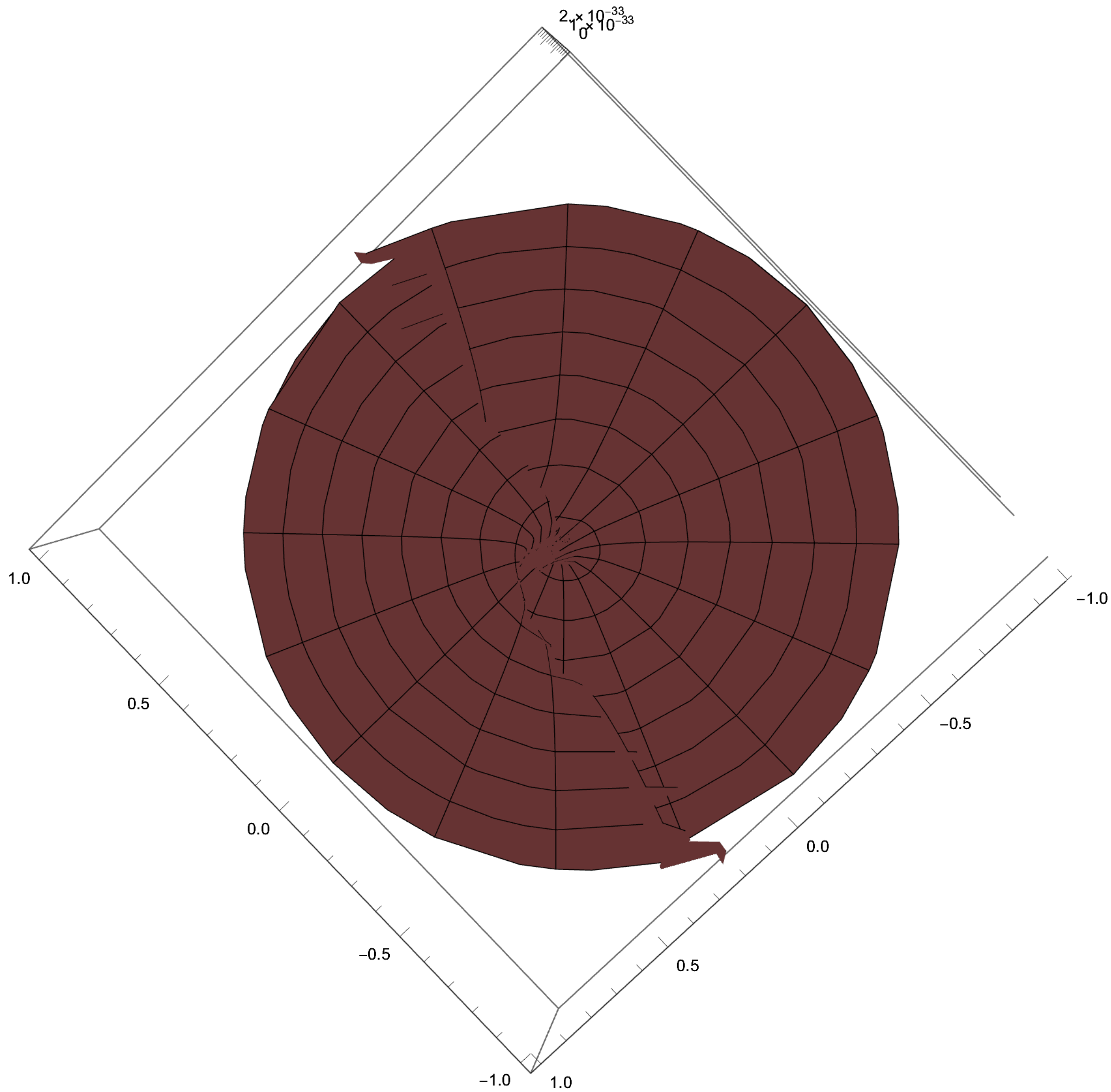



```
h := (6.626068 * 10 ^ -34)
```

$$\text{Solve}\left[\text{D}[\text{h}\,(1\,/\,((1080\,/\,\pi)\,/\,\theta))] == \text{m}\,\frac{4\,\pi\,\text{r}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}+\frac{4\,\pi\,\text{r}^4}{\text{c}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}\,\theta^2}-2\,\text{r}^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,\text{r}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}\,\theta-\text{r}^2\,\theta^2}},\,\text{m}\right]$$

$$\left\{\left\{\text{m}\to\frac{\text{h}\,\pi^2\,\theta\,\sqrt{4\,\pi\,\text{r}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}\,\theta-\text{r}^2\,\theta^2}}{270\,\left(4\,\pi\,\text{r}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}+\frac{4\,\pi\,\text{r}^4}{\text{c}^2\,\sqrt{1-\frac{\text{r}^2}{\text{c}^2\,\theta^2}}\,\theta^2}-2\,\text{r}^2\,\theta\right)}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{h\,\pi^2\,\theta\,\sqrt{4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta-r^2\,\theta^2}}{270\left(4\,\pi\,r^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}+\frac{4\,\pi\,r^4}{c^2\,\sqrt{1-\frac{r^2}{c^2\,\theta^2}}\,\theta^2}-2\,r^2\,\theta\right)},\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



c := (2.99792458 * 10 ^ 8)

η := rate * time = c * τ = height of cone (193)

τ := 6 $\left(\Theta_{\text{degrees}}\right)$ = 6 ((180 / π) Θ), because if theta were in radians to begin with,
we would have to convert that number of radians to degrees. This way,
both our thetas are in radians,
but our result accounts for the constant of the degrees involved in measuring time.

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

v = λ ν = r (1 / (1080 / π) θ) = ((1 / (1080 / π)) D[η, θ]) = 1 / (1080 / π))

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \theta\right] \tag{194}$$

The velocity of η is equal to the first derivative of η with respect to time. The constant (1/(1080/π)) is taken out of the equation in order to perform the derivative.

$$(1 / (1080 / \pi))\ D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \theta\right]$$

$$\frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

let ' s just say that velocity is constant

$$(1 / (1080 / \pi))\ D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\sqrt{1 - ((v)\,\hat{}\,2 / c\,\hat{}\,2)}\right),\ \theta\right]$$

$$\frac{\sqrt{1 - \frac{v^2}{c^2}}\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} = c$$

Since we are specifying that the velocity is constant equal to the speed of light.

c := (2.99792458 * 10 ^ 8)

$$\text{Solve}\left[\frac{\sqrt{1 - \frac{v^2}{c^2}}\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} == c,\ v\right]$$

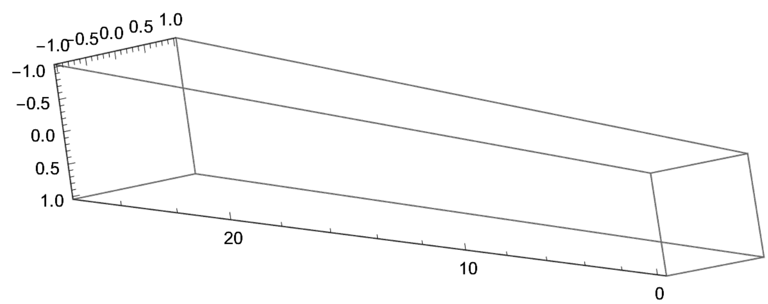
$$\left\{\left\{v \to -\frac{c\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{c\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right\}\right\}$$

```
Solve[c == (c Sqrt[4 π^2 - 4 π θ - (18662400 c^2 π θ)/r^2 + θ^2 + (4665600 c^2 θ^2)/r^2])/Sqrt[4 π^2 - 4 π θ + θ^2], θ]
```

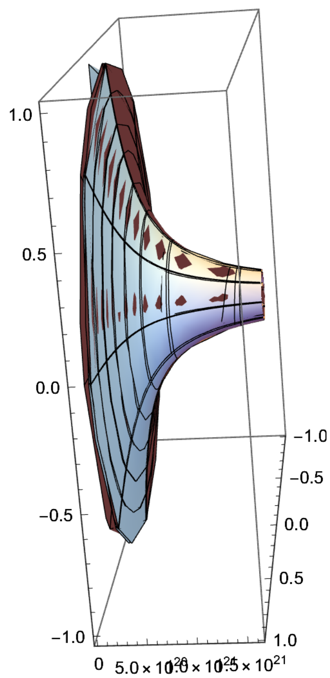
$$\left\{\left\{\theta \to 5.59005\times10^{-39}\left(1.12399\times10^{39} - 0.0667049\,r^2 - 0.0667049\sqrt{1.68503\times10^{40} - 1.2082\times10^{20}\,r + r^2}\,\sqrt{1.68503\times10^{40} + 1.2082\times10^{20}\,r + r^2}\right)\right\},\right.$$
$$\left.\left\{\theta \to 5.59005\times10^{-39}\left(1.12399\times10^{39} - 0.0667049\,r^2 + 0.0667049\sqrt{1.68503\times10^{40} - 1.2082\times10^{20}\,r + r^2}\,\sqrt{1.68503\times10^{40} + 1.2082\times10^{20}\,r + r^2}\right)\right\}\right\}$$

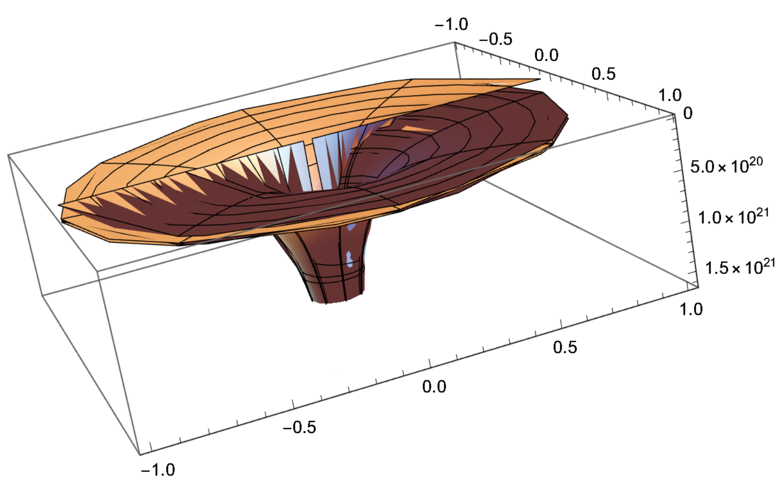
```
RevolutionPlot3D[
 {5.590049019195099`*^-39 (1.123994670816731`*^39 - 0.06670488143274204` r^2 -
      0.06670488143274204` Sqrt[1.6850261130439833`*^40 - 1.2081975425370875`*^20 r + r^2]
       Sqrt[1.6850261130439833`*^40 + 1.2081975425370875`*^20 r + r^2]),
  5.590049019195099`*^-39 (1.123994670816731`*^39 - 0.06670488143274204` r^2 +
      0.06670488143274204` Sqrt[1.6850261130439833`*^40 - 1.2081975425370875`*^20 r + r^2]
       Sqrt[1.6850261130439833`*^40 + 1.2081975425370875`*^20 r + r^2])}, {r, -10, 10}]
```



```
RevolutionPlot3D[
```

$$\frac{c\sqrt{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\pi^2 - 4\pi\theta + \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}]$$



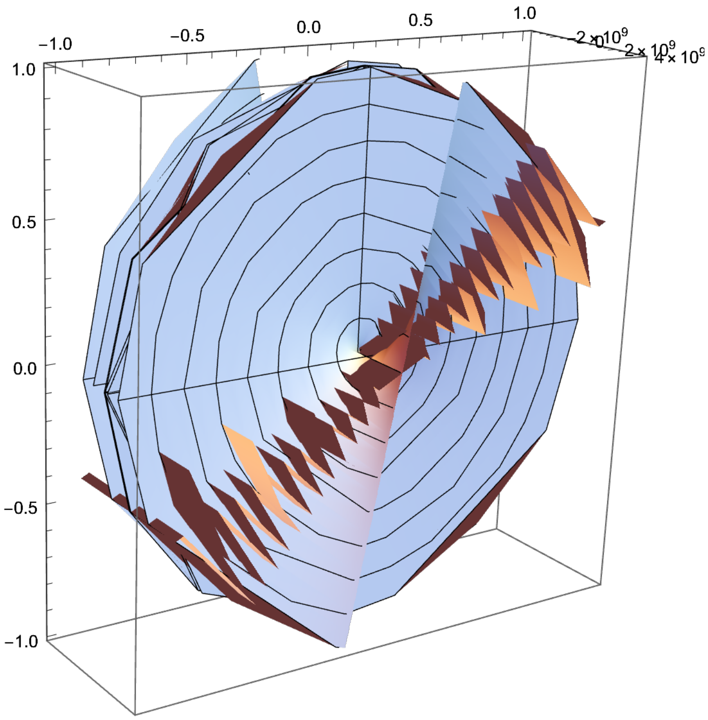


(1 / (1080 / π))

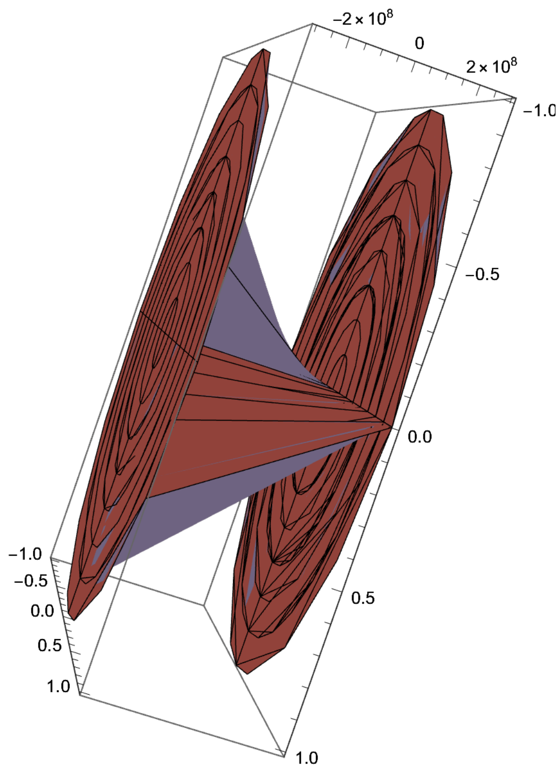
$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\left(\sqrt{1 - \left(\left(\frac{c\,\sqrt{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right)^{\wedge}2 \Big/ c^{\wedge}2\right)}\right), \theta\right]$$

$$\frac{1}{1080}\pi\left(\left(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\left(-\frac{-4\,\pi - \frac{18\,662\,400\,c^2\,\pi}{r^2} + 2\,\theta + \frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2} + \frac{(-4\,\pi + 2\,\theta)\left(4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2 - 4\,\pi\,\theta + \theta^2\right)^2}\right)\right) \Big/ \left(4\,\pi\,\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)$$

$$\texttt{RevolutionPlot3D}\Bigg[\frac{1}{1080}\pi\left(\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{-4\pi - \frac{18\,662\,400\,c^2\pi}{r^2} + 2\theta + \frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2} + \frac{(-4\pi + 2\theta)\left(4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2 - 4\pi\theta + \theta^2\right)^2}\right)\right)\Bigg/\left(4\pi\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}} + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)\right), \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\Bigg]$$

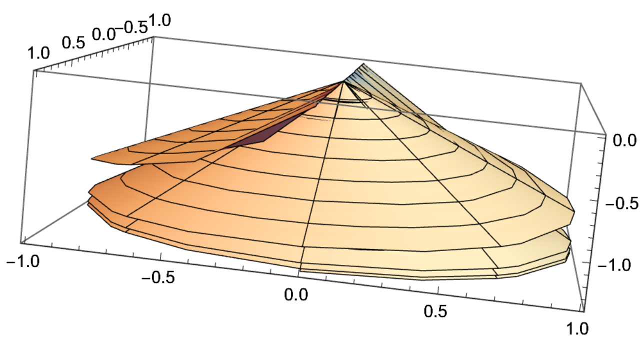


$$\text{RevolutionPlot3D}\left[\frac{\sqrt{1-\frac{\left(\frac{c\,\sqrt{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}}{\sqrt{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right)^2}{c^2}}\,\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\right]$$



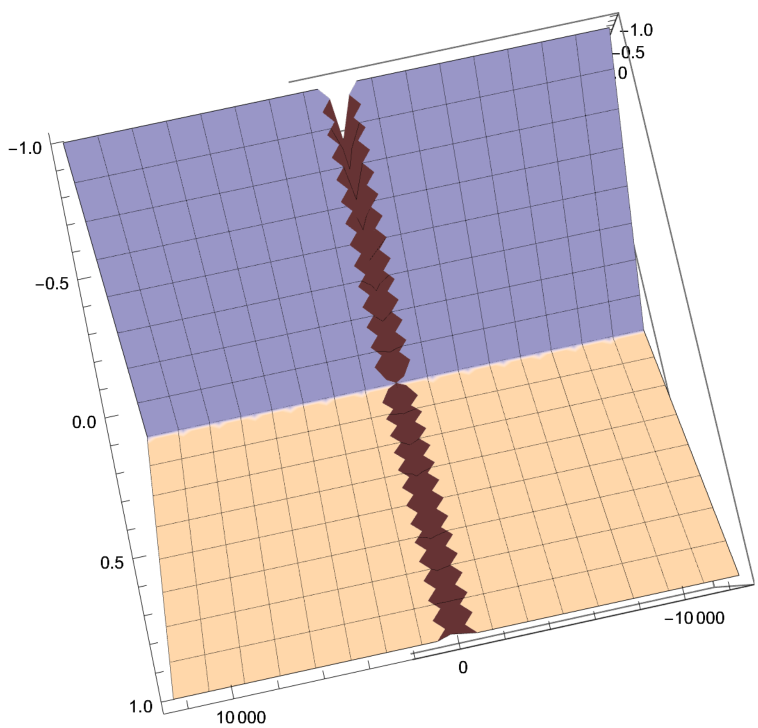
RevolutionPlot3D$\Bigg[$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\sqrt{\left(1-\left(\left(\frac{1}{1080}\,\pi\left(\left(\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\left(-\frac{-4\,\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\,\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}+\frac{(-4\,\pi+2\,\theta)\left(4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2-4\,\pi\,\theta+\theta^2\right)^2}\right)\right)\Bigg/\left(4\,\pi\,\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}+\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)\right)\text{^}2\right)\Big/\,c\text{^}2\right)},\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\}\Bigg]$$



Plot3D[

$$\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\sqrt{\left(1-\left(\left(\frac{1}{1080}\,\pi\left(\left(\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\left(-\frac{-4\,\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\,\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}+\frac{(-4\,\pi+2\,\theta)\left(4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2-4\,\pi\,\theta+\theta^2\right)^2}\right)\right)\right/\left(4\,\pi\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}\right)+\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}}{4\,\pi\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)\wedge 2\right)\Big/ c\wedge 2\right)}\text{, \{r, -1, 1\}, \{}\theta\text{, -4000}\,\pi\text{, 4000}\,\pi\text{\}}]$$



The relativistic velocity is equal to the radius over time.

$$\text{Solve}\left[\frac{1}{1080}\pi\left(\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{-4\pi - \frac{18\,662\,400\,c^2\pi}{r^2} + 2\theta + \frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2} + \frac{(-4\pi + 2\theta)\left(4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2 - 4\pi\theta + \theta^2\right)^2}\right)\right)\Bigg/\left(4\pi\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}} + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)\right) == r / ((1080/\pi)\,\theta),\ \theta\right]$$

$$\Bigg\{\Bigg\{\theta \to \frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\Big/\left(3240\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) - \frac{1}{3240\,c}\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\Bigg\},$$

$$\Bigg\{\theta \to \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right)\Big/\left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\Bigg\},$$

$$\Bigg\{\theta \to \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 - i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right)\Big/\left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 + i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 +\right.$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big\},$$

$$\Big\{\theta \to -\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} - \left(9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/$$

$$\Big(3240\ c\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big) +$$

$$\frac{1}{3240\ c}\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big\},$$

$$\Big\{\theta \to -\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} + \left(\left(1 + i\ \sqrt{3}\right)\ \left(9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2\right)\right) \Big/$$

$$\Big(6480\ c\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big) -$$

$$\frac{1}{6480\ c}\ \left(1 - i\ \sqrt{3}\right)\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big\},$$

$$\Big\{\theta \to -\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} + \left(\left(1 - i\ \sqrt{3}\right)\ \left(9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2\right)\right) \Big/$$

$$\Big(6480\ c\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big) -$$

$$\frac{1}{6480\ c}\ \left(1 + i\ \sqrt{3}\right)\ \pi\ \Big(-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ \Big)^{1/3}\Big\}\Big\}$$

c := (2.99792458 * 10^8)

$$\textbf{RevolutionPlot3D}\Big[\Big\{\Big\{\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big) -$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big\},$$

$$\Big\{\frac{4320\ c\ \pi + \pi\ r}{3240\ c} - \left(\left(1 + i\ \sqrt{3}\right)\ \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right)\right) \Big/$$

$$\Big(6480\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ )^{1/3}) +$$

$$\frac{1}{6480\ c}\ (1 - i\ \sqrt{3})\ \pi\ (100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ )^{1/3}\},$$

$$\{\frac{4320\ c\ \pi + \pi\ r}{3240\ c} - ((1 - i\ \sqrt{3})\ (9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2))\ /$$

$$(6480\ c\ \pi\ (100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ )^{1/3}) +$$

$$\frac{1}{6480\ c}\ (1 + i\ \sqrt{3})\ \pi\ (100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ )^{1/3}\},$$

$$\{-\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} - (9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2)\ /$$

$$(3240\ c\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}) +$$

$$\frac{1}{3240\ c}\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}\},$$

$$\{-\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} + ((1 + i\ \sqrt{3})\ (9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2))\ /$$

$$(6480\ c\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}) -$$

$$\frac{1}{6480\ c}\ (1 - i\ \sqrt{3})\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}\},$$

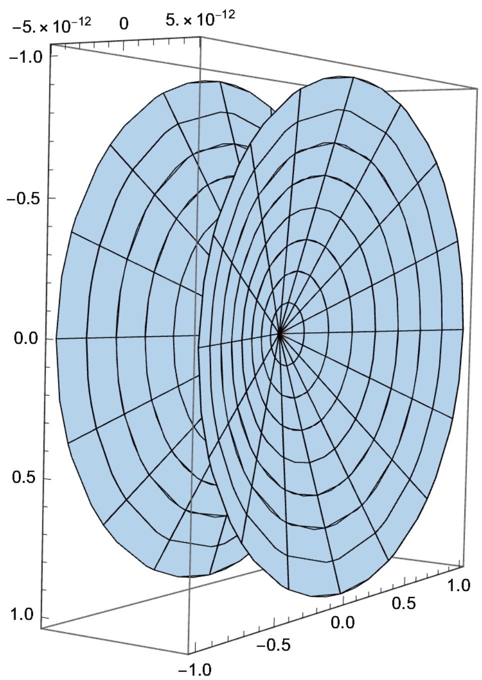
$$\{-\frac{-4320\ c\ \pi + \pi\ r}{3240\ c} + ((1 - i\ \sqrt{3})\ (9\,331\,200\ c^2\ \pi^2 - 4320\ c\ \pi^2\ r - \pi^2\ r^2))\ /$$

$$(6480\ c\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}) -$$

$$\frac{1}{6480\ c}\ (1 + i\ \sqrt{3})\ \pi\ (-100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r - 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 - 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 + c^3\ r^3}\ )^{1/3}\}\},\ \{r, -1, 1\}]$$



$$\text{Solve}\Bigg[\frac{1}{1080}\pi\left(\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-\frac{-4\pi-\frac{18\,662\,400\,c^2\pi}{r^2}+2\theta+\frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Big/\left(4\pi\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}+\frac{\left(4\pi r^2-2r^2\theta\right)\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)\right) == r\,/\,((1080\,/\,\pi)\,\theta),\ r\Bigg]$$

The Wavelength with Changing Value

When the experience is one of white, the perceptual system does not immediately distinguish between combinative or pigmented character to the white. The perceptual system perceives all the combinations of light in white. This means that there are multiple wavelengths undistinguished and all invariant. Thus, the wavelength of light is interpreted to be changing during transition when we take all of the information in from white, additive color or pigment.

Sampling is the smallest point. We receive an pointilistic impression of the world called a .

$$\text{Solve}\Bigg[\frac{1}{1080}\pi\left(\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{-4\pi - \frac{18\,662\,400\,c^2\pi}{r^2} + 2\theta + \frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2} + \frac{(-4\pi + 2\theta)\left(4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2 - 4\pi\theta + \theta^2\right)^2}\right)\right)\Bigg/\left(4\pi\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}} + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right)\right)$$

$$((1080/\pi)\,\theta) == r\,(1/((1080/\pi)\,\theta)),\ \theta\Bigg]$$

$$\left\{\left\{\theta \to \pi - \frac{\pi \sqrt{4\,665\,600\, c - r}}{2160 \sqrt{c}} - \frac{\pi \sqrt{-9\,331\,200 + \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c - r}} - \frac{r}{c} - \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c - r}}}}{2160}\right\},\right.$$

$$\left\{\theta \to \pi - \frac{\pi \sqrt{4\,665\,600\, c - r}}{2160 \sqrt{c}} + \frac{\pi \sqrt{-9\,331\,200 + \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c - r}} - \frac{r}{c} - \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c - r}}}}{2160}\right\},$$

$$\left\{\theta \to \pi + \frac{\pi \sqrt{4\,665\,600\, c - r}}{2160 \sqrt{c}} - \frac{\pi \sqrt{-9\,331\,200 - \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c - r}} - \frac{r}{c} + \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c - r}}}}{2160}\right\},$$

$$\left\{\theta \to \pi + \frac{\pi \sqrt{4\,665\,600\, c - r}}{2160 \sqrt{c}} + \frac{\pi \sqrt{-9\,331\,200 - \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c - r}} - \frac{r}{c} + \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c - r}}}}{2160}\right\},$$

$$\left\{\theta \to \pi + \frac{\pi \sqrt{4\,665\,600\, c + r}}{2160 \sqrt{c}} - \frac{\pi \sqrt{-9\,331\,200 + \frac{r}{c} - \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c + r}} - \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c + r}}}}{2160}\right\},$$

$$\left\{\theta \to \pi + \frac{\pi \sqrt{4\,665\,600\, c + r}}{2160 \sqrt{c}} + \frac{\pi \sqrt{-9\,331\,200 + \frac{r}{c} - \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c + r}} - \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c + r}}}}{2160}\right\},$$

$$\left\{\theta \to \pi - \frac{\pi \sqrt{4\,665\,600\, c + r}}{2160 \sqrt{c}} - \frac{\pi \sqrt{-9\,331\,200 + \frac{r}{c} + \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c + r}} + \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c + r}}}}{2160}\right\},$$

$$\left.\left\{\theta \to \pi - \frac{\pi \sqrt{4\,665\,600\, c + r}}{2160 \sqrt{c}} + \frac{\pi \sqrt{-9\,331\,200 + \frac{r}{c} + \frac{20\,155\,392\,000 \sqrt{c}}{\sqrt{4\,665\,600\, c + r}} + \frac{4320\, r}{\sqrt{c} \sqrt{4\,665\,600\, c + r}}}}{2160}\right\}\right\}$$

RevolutionPlot3D[

$$\left\{\left\{\pi - \frac{\pi\sqrt{4\,665\,600\,c - r}}{2160\sqrt{c}} - \frac{\pi\sqrt{-9\,331\,200 + \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c-r}} - \frac{r}{c} - \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c-r}}}}{2160}\right\},\right.$$

$$\left\{\pi - \frac{\pi\sqrt{4\,665\,600\,c - r}}{2160\sqrt{c}} + \frac{\pi\sqrt{-9\,331\,200 + \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c-r}} - \frac{r}{c} - \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c-r}}}}{2160}\right\},$$

$$\left\{\pi + \frac{\pi\sqrt{4\,665\,600\,c - r}}{2160\sqrt{c}} - \frac{\pi\sqrt{-9\,331\,200 - \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c-r}} - \frac{r}{c} + \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c-r}}}}{2160}\right\},$$

$$\left\{\pi + \frac{\pi\sqrt{4\,665\,600\,c - r}}{2160\sqrt{c}} + \frac{\pi\sqrt{-9\,331\,200 - \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c-r}} - \frac{r}{c} + \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c-r}}}}{2160}\right\},$$

$$\left\{\pi + \frac{\pi\sqrt{4\,665\,600\,c + r}}{2160\sqrt{c}} - \frac{\pi\sqrt{-9\,331\,200 + \frac{r}{c} - \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c+r}} - \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c+r}}}}{2160}\right\},$$

$$\left\{\pi + \frac{\pi\sqrt{4\,665\,600\,c + r}}{2160\sqrt{c}} + \frac{\pi\sqrt{-9\,331\,200 + \frac{r}{c} - \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c+r}} - \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c+r}}}}{2160}\right\},$$

$$\left\{\pi - \frac{\pi\sqrt{4\,665\,600\,c + r}}{2160\sqrt{c}} - \frac{\pi\sqrt{-9\,331\,200 + \frac{r}{c} + \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c+r}} + \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c+r}}}}{2160}\right\},$$

$$\left.\left\{\pi - \frac{\pi\sqrt{4\,665\,600\,c + r}}{2160\sqrt{c}} + \frac{\pi\sqrt{-9\,331\,200 + \frac{r}{c} + \frac{20\,155\,392\,000\sqrt{c}}{\sqrt{4\,665\,600\,c+r}} + \frac{4320\,r}{\sqrt{c}\sqrt{4\,665\,600\,c+r}}}}{2160}\right\}\right\}, \{r, -1, 1\}]$$

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} =$$

$$v * t = \frac{1}{1080}\,\pi\left(\left(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\,\left(-\frac{-4\,\pi - \frac{18\,662\,400\,c^2\,\pi}{r^2} + 2\,\theta + \frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2} + \frac{(-4\,\pi + 2\,\theta)\,\left(4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2 - 4\,\pi\,\theta + \theta^2\right)^2}\right)\right) \Big/ \left(4\,\pi\,\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\,\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\right)((1080/\pi)\,\theta)$$

$$\frac{1}{1080}\pi\left(\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-\frac{-4\pi-\frac{18662400c^2\pi}{r^2}+2\theta+\frac{9331200c^2\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Bigg/\left(4\pi\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}\right)+\frac{\left(4\pi r^2-2r^2\theta\right)\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)((1080/\pi)\,\theta)$$

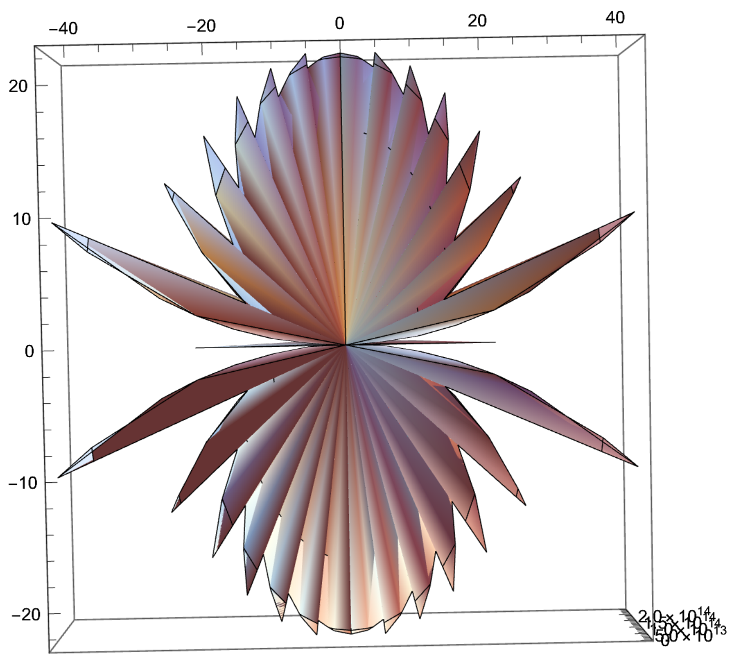
$$\theta\left(\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-\frac{-4\pi-\frac{18662400c^2\pi}{r^2}+2\theta+\frac{9331200c^2\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Bigg/\left(4\pi\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}\right)+\frac{\left(4\pi r^2-2r^2\theta\right)\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18662400c^2\pi\theta}{r^2}+\theta^2+\frac{4665600c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

$$\text{Solve}\left[\theta\left(\left(\sqrt{4\pi r^2\theta - r^2\theta^2}\left(-\frac{-4\pi - \frac{18\,662\,400\,c^2\pi}{r^2} + 2\theta + \frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2} + \frac{(-4\pi + 2\theta)\left(4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2 - 4\pi\theta + \theta^2\right)^2}\right)\right) \Big/ \left(4\pi\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}\right) + \frac{\left(4\pi r^2 - 2r^2\theta\right)\sqrt{1 - \frac{4\pi^2 - 4\pi\theta - \frac{18\,662\,400\,c^2\pi\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2 - 4\pi\theta + \theta^2}}}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}\right) == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi},\ r\right]$$

$$\left\{\left\{r \to -\left(\sqrt{\left(74\,649\,600\,c^2\pi^4 + \frac{1\,194\,393\,600\,c^2\pi^8}{(2\pi-\theta)^4} - \frac{1\,194\,393\,600\,c^2\pi^7}{(2\pi-\theta)^3} + \frac{597\,196\,800\,c^2\pi^6}{(2\pi-\theta)^2} - \frac{298\,598\,400\,c^2\pi^5}{2\pi-\theta} - 37\,324\,800\,c^2\pi^2\theta^2 + 18\,662\,400\,c^2\pi\theta^3 - 4\,665\,600\,c^2\theta^4\right)}\right)\Big/\left(\sqrt{16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}\right)\right\},\ \left\{r \to \left(\sqrt{\left(74\,649\,600\,c^2\pi^4 + \frac{1\,194\,393\,600\,c^2\pi^8}{(2\pi-\theta)^4} - \frac{1\,194\,393\,600\,c^2\pi^7}{(2\pi-\theta)^3} + \frac{597\,196\,800\,c^2\pi^6}{(2\pi-\theta)^2} - \frac{298\,598\,400\,c^2\pi^5}{2\pi-\theta} - 37\,324\,800\,c^2\pi^2\theta^2 + 18\,662\,400\,c^2\pi\theta^3 - 4\,665\,600\,c^2\theta^4\right)}\right)\Big/\left(\sqrt{16\pi^2\theta^2 - 8\pi\theta^3 + \theta^4}\right)\right\}\right\}$$

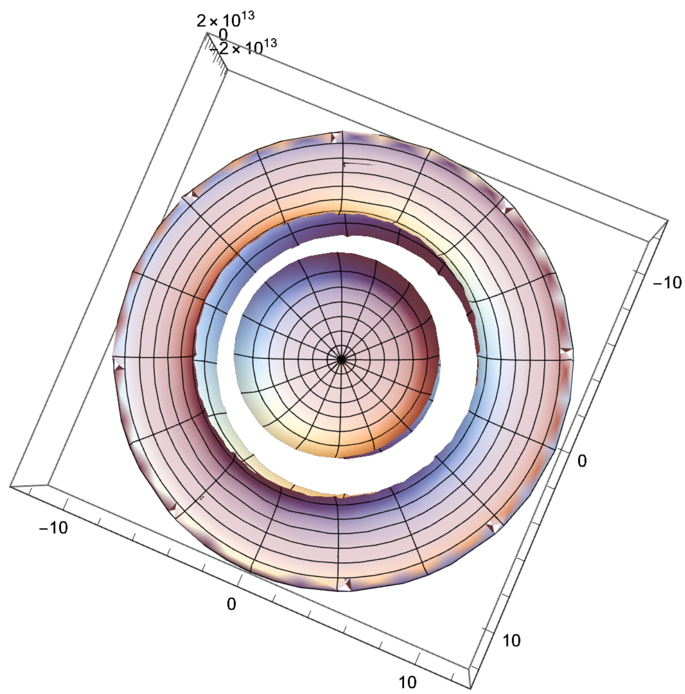
```
c := (2.99792458 * 10^8)
```

$$\text{RevolutionPlot3D}\Big[\left(\sqrt{\left(74\,649\,600\,c^2\,\pi^4 + \frac{1\,194\,393\,600\,c^2\,\pi^8}{(2\,\pi-\theta)^4} - \frac{1\,194\,393\,600\,c^2\,\pi^7}{(2\,\pi-\theta)^3} + \frac{597\,196\,800\,c^2\,\pi^6}{(2\,\pi-\theta)^2} - \frac{298\,598\,400\,c^2\,\pi^5}{2\,\pi-\theta} - 37\,324\,800\,c^2\,\pi^2\,\theta^2 + 18\,662\,400\,c^2\,\pi\,\theta^3 - 4\,665\,600\,c^2\,\theta^4\right)}\right) \Big/ \left(\sqrt{16\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}\right),\ \{\theta,\ -400\,000\,\pi,\ 400\,000\,\pi\}\Big]$$



```
RevolutionPlot3D[
```

$$\left\{\left\{-\left(\sqrt{\left(74\,649\,600\,c^2\,\pi^4+\frac{1\,194\,393\,600\,c^2\,\pi^8}{(2\,\pi-\theta)^4}-\frac{1\,194\,393\,600\,c^2\,\pi^7}{(2\,\pi-\theta)^3}+\frac{597\,196\,800\,c^2\,\pi^6}{(2\,\pi-\theta)^2}-\frac{298\,598\,400\,c^2\,\pi^5}{2\,\pi-\theta}-37\,324\,800\,c^2\,\pi^2\,\theta^2+18\,662\,400\,c^2\,\pi\,\theta^3-4\,665\,600\,c^2\,\theta^4\right)}\right)\Big/\left(\sqrt{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\right)\right\},\left\{\left(\sqrt{\left(74\,649\,600\,c^2\,\pi^4+\frac{1\,194\,393\,600\,c^2\,\pi^8}{(2\,\pi-\theta)^4}-\frac{1\,194\,393\,600\,c^2\,\pi^7}{(2\,\pi-\theta)^3}+\frac{597\,196\,800\,c^2\,\pi^6}{(2\,\pi-\theta)^2}-\frac{298\,598\,400\,c^2\,\pi^5}{2\,\pi-\theta}-37\,324\,800\,c^2\,\pi^2\,\theta^2+18\,662\,400\,c^2\,\pi\,\theta^3-4\,665\,600\,c^2\,\theta^4\right)}\right)\Big/\left(\sqrt{16\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\right)\right\}\right\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\Big]$$



$$\text{Solve}\left[\theta\left(\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-\frac{-4\pi-\frac{18\,662\,400\,c^2\pi}{r^2}+2\theta+\frac{9\,331\,200\,c^2\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Big/\left(4\pi\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}+\frac{\left(4\pi r^2-2r^2\theta\right)\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\pi\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\theta\right]$$

$$\{\{\theta\to\text{Root}[-64\pi^5 r^2+(298\,598\,400\,c^2\pi^4+144\pi^4 r^2)\,\sharp1+(-298\,598\,400\,c^2\pi^3-128\pi^3 r^2)\,\sharp1^2+(149\,299\,200\,c^2\pi^2+56\pi^2 r^2)\,\sharp1^3+(-37\,324\,800\,c^2\pi-12\pi r^2)\,\sharp1^4+(4\,665\,600\,c^2+r^2)\,\sharp1^5\,\&,1]\},$$

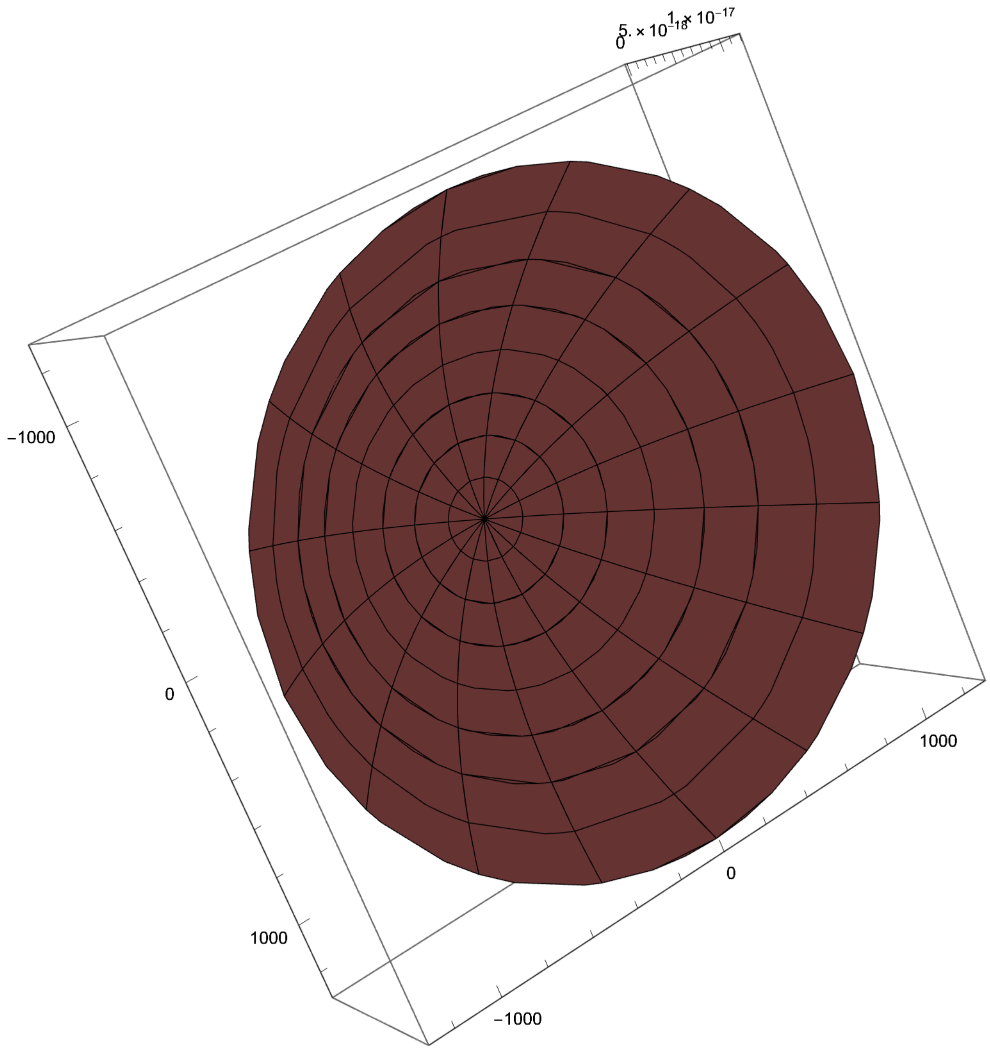
$$\{\theta\to\text{Root}[-64\pi^5 r^2+(298\,598\,400\,c^2\pi^4+144\pi^4 r^2)\,\sharp1+(-298\,598\,400\,c^2\pi^3-128\pi^3 r^2)\,\sharp1^2+(149\,299\,200\,c^2\pi^2+56\pi^2 r^2)\,\sharp1^3+(-37\,324\,800\,c^2\pi-12\pi r^2)\,\sharp1^4+(4\,665\,600\,c^2+r^2)\,\sharp1^5\,\&,2]\},$$

$$\{\theta\to\text{Root}[-64\pi^5 r^2+(298\,598\,400\,c^2\pi^4+144\pi^4 r^2)\,\sharp1+(-298\,598\,400\,c^2\pi^3-128\pi^3 r^2)\,\sharp1^2+(149\,299\,200\,c^2\pi^2+56\pi^2 r^2)\,\sharp1^3+(-37\,324\,800\,c^2\pi-12\pi r^2)\,\sharp1^4+(4\,665\,600\,c^2+r^2)\,\sharp1^5\,\&,3]\},$$

$$\{\theta\to\text{Root}[-64\pi^5 r^2+(298\,598\,400\,c^2\pi^4+144\pi^4 r^2)\,\sharp1+(-298\,598\,400\,c^2\pi^3-128\pi^3 r^2)\,\sharp1^2+(149\,299\,200\,c^2\pi^2+56\pi^2 r^2)\,\sharp1^3+(-37\,324\,800\,c^2\pi-12\pi r^2)\,\sharp1^4+(4\,665\,600\,c^2+r^2)\,\sharp1^5\,\&,4]\},$$

$$\{\theta\to\text{Root}[-64\pi^5 r^2+(298\,598\,400\,c^2\pi^4+144\pi^4 r^2)\,\sharp1+(-298\,598\,400\,c^2\pi^3-128\pi^3 r^2)\,\sharp1^2+(149\,299\,200\,c^2\pi^2+56\pi^2 r^2)\,\sharp1^3+(-37\,324\,800\,c^2\pi-12\pi r^2)\,\sharp1^4+(4\,665\,600\,c^2+r^2)\,\sharp1^5\,\&,5]\}\}$$

```
RevolutionPlot3D[
 {{Root[-64 π^5 r^2 + (298 598 400 c^2 π^4 + 144 π^4 r^2) #1 + (-298 598 400 c^2 π^3 - 128 π^3 r^2) #1^2 +
      (149 299 200 c^2 π^2 + 56 π^2 r^2) #1^3 +
      (-37 324 800 c^2 π - 12 π r^2) #1^4 + (4 665 600 c^2 + r^2) #1^5 &, 1]},
  {Root[-64 π^5 r^2 + (298 598 400 c^2 π^4 + 144 π^4 r^2) #1 + (-298 598 400 c^2 π^3 - 128 π^3 r^2) #1^2 +
      (149 299 200 c^2 π^2 + 56 π^2 r^2) #1^3 + (-37 324 800 c^2 π - 12 π r^2) #1^4 +
      (4 665 600 c^2 + r^2) #1^5 &, 2]},
  {Root[-64 π^5 r^2 + (298 598 400 c^2 π^4 + 144 π^4 r^2) #1 + (-298 598 400 c^2 π^3 - 128 π^3 r^2) #1^2 +
      (149 299 200 c^2 π^2 + 56 π^2 r^2) #1^3 +
      (-37 324 800 c^2 π - 12 π r^2) #1^4 + (4 665 600 c^2 + r^2) #1^5 &, 3]},
  {Root[-64 π^5 r^2 + (298 598 400 c^2 π^4 + 144 π^4 r^2) #1 + (-298 598 400 c^2 π^3 - 128 π^3 r^2) #1^2 +
      (149 299 200 c^2 π^2 + 56 π^2 r^2) #1^3 +
      (-37 324 800 c^2 π - 12 π r^2) #1^4 + (4 665 600 c^2 + r^2) #1^5 &, 4]},
  {Root[-64 π^5 r^2 + (298 598 400 c^2 π^4 + 144 π^4 r^2) #1 + (-298 598 400 c^2 π^3 - 128 π^3 r^2) #1^2 +
      (149 299 200 c^2 π^2 + 56 π^2 r^2) #1^3 + (-37 324 800 c^2 π - 12 π r^2) #1^4 +
      (4 665 600 c^2 + r^2) #1^5 &, 5]}}, {r, -400 π, 400 π}]
```



We can use this model to describe the free energy bowl if it' s properly applied. "The line of optical flow is a metaphor that describes the expansion of the visual field when moving through it." Tom.

{{r → 0}}

$$\texttt{Solve}\left[\frac{540\,\theta\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{\pi^2}==\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\left\{\{\theta\to 0\},\,\left\{\theta\to\frac{\pi}{1080}\right\},\,\{\theta\to 4\,\pi\}\right\}$$

$$\frac{1}{1080}\,\pi\left(\left(\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}\left(-\frac{-4\,\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\,\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}+\frac{(-4\,\pi+2\,\theta)\left(4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2-4\,\pi\,\theta+\theta^2\right)^2}\right)\right)\Bigg/\left(4\,\pi\,\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}+\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\right)$$

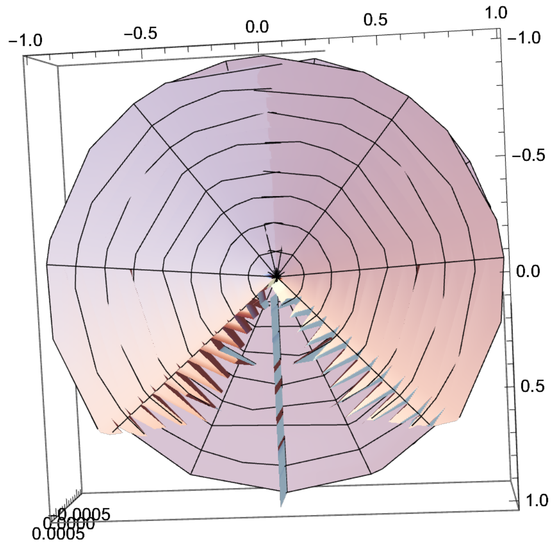
$$\texttt{Solve}\left[\frac{\sqrt{1-\frac{v^2}{c^2}}\left(4\,\pi\,r^2-2\,r^2\,\theta\right)}{4320\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==v,\,v\right]$$

$$\left\{\left\{v\to-\frac{c\,r\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{\sqrt{-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2}}\right\},\right.$$
$$\left.\left\{v\to\frac{c\,r\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{\sqrt{-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2}}\right\}\right\}$$

RevolutionPlot3D[

$$\frac{c\, r\, \sqrt{-4\,\pi^2 + 4\,\pi\,\theta - \theta^2}}{\sqrt{-4\,\pi^2\, r^2 - 18\,662\,400\, c^2\,\pi\,\theta + 4\,\pi\, r^2\,\theta + 4\,665\,600\, c^2\,\theta^2 - r^2\,\theta^2}}$$

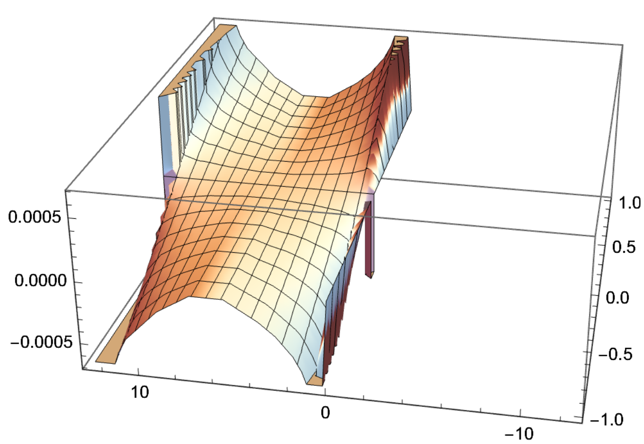
, {r, -1, 1}, {θ, -4 π, 4 π}]



Plot3D[

$$\frac{c\, r\, \sqrt{-4\,\pi^2 + 4\,\pi\,\theta - \theta^2}}{\sqrt{-4\,\pi^2\, r^2 - 18\,662\,400\, c^2\,\pi\,\theta + 4\,\pi\, r^2\,\theta + 4\,665\,600\, c^2\,\theta^2 - r^2\,\theta^2}}$$

,
{r, -1, 1}, {θ, -4 π, 4 π}]



c := (2.99792458 * 10 ^ 8)

$$\text{D}\left[\frac{c\,r\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{\sqrt{-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2}},\,r,\,\theta\right]$$

$$\left(3\,c\,r\,\left(-18\,662\,400\,c^2\,\pi+4\,\pi\,r^2+9\,331\,200\,c^2\,\theta-2\,r^2\,\theta\right)\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\left(-8\,\pi^2\,r+8\,\pi\,r\,\theta-2\,r\,\theta^2\right)\right)\Big/\left(4\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{5/2}\right)-$$

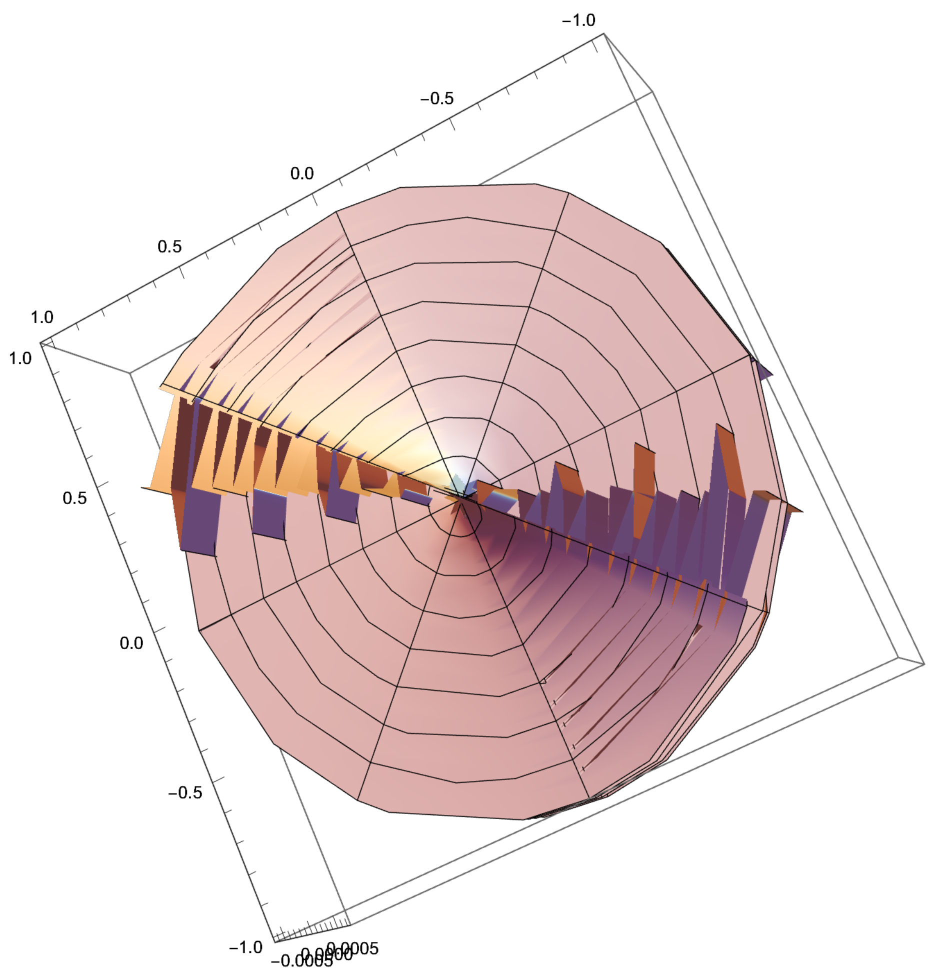
$$\frac{c\,r\,(8\,\pi\,r-4\,r\,\theta)\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{2\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}}-$$

$$\frac{c\,\left(-18\,662\,400\,c^2\,\pi+4\,\pi\,r^2+9\,331\,200\,c^2\,\theta-2\,r^2\,\theta\right)\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{2\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}}-$$

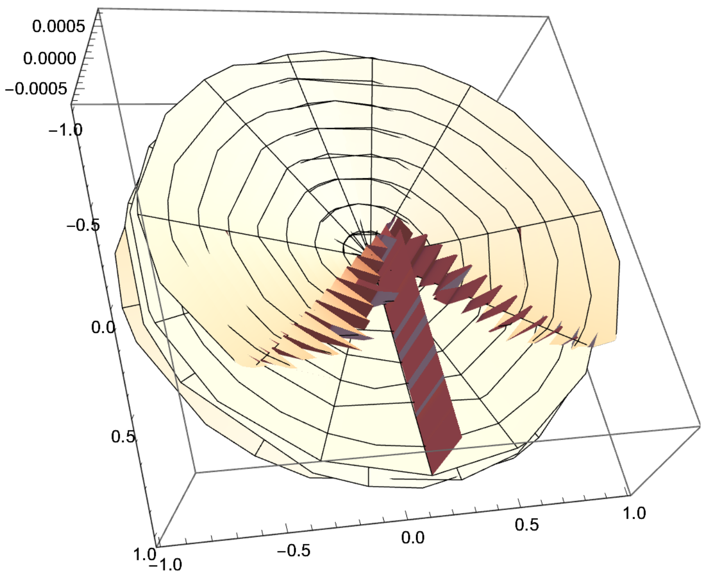
$$\left(c\,r\,(4\,\pi-2\,\theta)\,\left(-8\,\pi^2\,r+8\,\pi\,r\,\theta-2\,r\,\theta^2\right)\right)\Big/\left(4\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}\right)+$$

$$(c\,(4\,\pi-2\,\theta))\Big/\left(2\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\sqrt{-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2}\right)$$

$$\text{RevolutionPlot3D}\Big[\Big(3\,c\,r\,\left(-18\,662\,400\,c^2\,\pi+4\,\pi\,r^2+9\,331\,200\,c^2\,\theta-2\,r^2\,\theta\right)\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\left(-8\,\pi^2\,r+8\,\pi\,r\,\theta-2\,r\,\theta^2\right)\Big)\Big/\Big(4\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{5/2}\Big)-\frac{c\,r\,(8\,\pi\,r-4\,r\,\theta)\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{2\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}}-\frac{c\,\left(-18\,662\,400\,c^2\,\pi+4\,\pi\,r^2+9\,331\,200\,c^2\,\theta-2\,r^2\,\theta\right)\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}}{2\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}}-\Big(c\,r\,(4\,\pi-2\,\theta)\,\left(-8\,\pi^2\,r+8\,\pi\,r\,\theta-2\,r\,\theta^2\right)\Big)\Big/\Big(4\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\left(-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2\right)^{3/2}\Big)+(c\,(4\,\pi-2\,\theta))\Big/\Big(2\,\sqrt{-4\,\pi^2+4\,\pi\,\theta-\theta^2}\,\sqrt{-4\,\pi^2\,r^2-18\,662\,400\,c^2\,\pi\,\theta+4\,\pi\,r^2\,\theta+4\,665\,600\,c^2\,\theta^2-r^2\,\theta^2}\Big),\ \{r,-1,1\},\{\theta,-4\,\pi,4\,\pi\}\Big]$$



RevolutionPlot3D$\left[\frac{c\, r\, \sqrt{-4\pi^2+4\pi\theta-\theta^2}}{\sqrt{-4\pi^2 r^2-18\,662\,400\, c^2\pi\theta+4\pi r^2\theta+4\,665\,600\, c^2\theta^2-r^2\theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$



$$\frac{\pi^2\left(-\frac{540\, c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\, c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\, c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400}$$

Plot3D$\left[\frac{c\, r\, \sqrt{-4\pi^2+4\pi\theta-\theta^2}}{\sqrt{-4\pi^2 r^2-18\,662\,400\, c^2\pi\theta+4\pi r^2\theta+4\,665\,600\, c^2\theta^2-r^2\theta^2}}, \frac{\pi^2\left(-\frac{540\, c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\, c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\, c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$

RevolutionPlot3D$\left[\left\{\frac{c\, r\, \sqrt{-4\pi^2+4\pi\theta-\theta^2}}{\sqrt{-4\pi^2 r^2-18\,662\,400\, c^2\pi\theta+4\pi r^2\theta+4\,665\,600\, c^2\theta^2-r^2\theta^2}}, \frac{\pi^2\left(-\frac{540\, c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\, c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\, c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400}\right\}, \{r, -1\,000\,000, 1\,000\,000\}, \{\theta, -13, 13\}\right]$

E = hν = h n f = m c^2 = h n ((1 / (1080 / π)) θ)

$$\texttt{Force} = m\,(a) = m\,D\Bigg[\Bigg(\frac{1}{1080}\,\pi\,\Bigg(\Bigg(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\,\Bigg(-\frac{-4\,\pi - \frac{18\,662\,400\,c^2\,\pi}{r^2} + 2\,\theta + \frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2} + \frac{(-4\,\pi + 2\,\theta)\left(4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2 - 4\,\pi\,\theta + \theta^2\right)^2}\Bigg)\Bigg)\Bigg/\left(4\,\pi\,\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\Bigg)\Bigg),\ \theta\Bigg]$$

$$m\,D\Bigg[\Bigg(\frac{1}{1080}\,\pi\,\Bigg(\Bigg(\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}\,\Bigg(-\frac{-4\,\pi - \frac{18\,662\,400\,c^2\,\pi}{r^2} + 2\,\theta + \frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2} + \frac{(-4\,\pi + 2\,\theta)\left(4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\,\pi^2 - 4\,\pi\,\theta + \theta^2\right)^2}\Bigg)\Bigg)\Bigg/\left(4\,\pi\,\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}\right) + \frac{\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)\sqrt{1 - \frac{4\,\pi^2 - 4\,\pi\,\theta - \frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2} + \theta^2 + \frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2 - 4\,\pi\,\theta + \theta^2}}}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}\Bigg)\Bigg),\ \theta\Bigg]$$

$$
\begin{aligned}
&\frac{1}{1080}\, m\, \pi \Bigg(- \Bigg(\sqrt{4 \pi r^2 \theta - r^2 \theta^2} \left(- \frac{-4 \pi - \frac{18\,662\,400\, c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200\, c^2 \theta}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} + \right. \\
&\qquad \left. \frac{(-4 \pi + 2 \theta) \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right)^2 \Bigg) \Bigg/ \\
&\quad \left(8 \pi \left(1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} \right)^{3/2} \right) + \\
&\quad \Bigg(\sqrt{4 \pi r^2 \theta - r^2 \theta^2} \left(\frac{2\,(-4 \pi + 2 \theta) \left(-4 \pi - \frac{18\,662\,400\, c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200\, c^2 \theta}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} - \right. \\
&\qquad \frac{2 + \frac{9\,331\,200\, c^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} - \frac{2\,(-4 \pi + 2 \theta)^2 \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^3} + \\
&\qquad \left. \frac{2 \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right) \Bigg) \Bigg/ \\
&\quad \left(4 \pi \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}} \right) + \\
&\quad \Bigg(\left(4 \pi r^2 - 2 r^2 \theta\right) \left(- \frac{-4 \pi - \frac{18\,662\,400\, c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200\, c^2 \theta}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} + \right. \\
&\qquad \left. \frac{(-4 \pi + 2 \theta) \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right) \Bigg) \Bigg/ \\
&\quad \left(4 \pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2} \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}} \right) - \\
&\quad \frac{\left(4 \pi r^2 - 2 r^2 \theta\right)^2 \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}}}{8 \pi \left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} - \\
&\quad \frac{r^2 \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400\, c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600\, c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}}}{2 \pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} \Bigg)
\end{aligned}
$$

This is the force :

$$
\begin{aligned}
F = \frac{1}{1080} m \pi \Bigg(& - \left(\sqrt{4 \pi r^2 \theta - r^2 \theta^2} \left(- \frac{-4 \pi - \frac{18\,662\,400 c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200 c^2 \theta}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} + \right.\right. \\
& \left.\left. \frac{(-4 \pi + 2 \theta) \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right)^2 \right) \Bigg/ \\
& \left(8 \pi \left(1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} \right)^{3/2} \right) + \\
& \left(\sqrt{4 \pi r^2 \theta - r^2 \theta^2} \left(\frac{2 (-4 \pi + 2 \theta) \left(-4 \pi - \frac{18\,662\,400 c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200 c^2 \theta}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} - \right.\right. \\
& \frac{2 + \frac{9\,331\,200 c^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} - \frac{2 (-4 \pi + 2 \theta)^2 \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^3} + \\
& \left.\left. \frac{2 \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right) \right) \Bigg/ \\
& \left(4 \pi \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}} \right) + \\
& \left(\left(4 \pi r^2 - 2 r^2 \theta\right) \left(- \frac{-4 \pi - \frac{18\,662\,400 c^2 \pi}{r^2} + 2 \theta + \frac{9\,331\,200 c^2 \theta}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2} + \right.\right. \\
& \left.\left. \frac{(-4 \pi + 2 \theta) \left(4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}\right)}{\left(4 \pi^2 - 4 \pi \theta + \theta^2\right)^2} \right) \right) \Bigg/ \\
& \left(4 \pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2} \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}} \right) - \\
& \frac{\left(4 \pi r^2 - 2 r^2 \theta\right)^2 \sqrt{1 - \frac{4 \pi^2 - 4 \pi \theta - \frac{18\,662\,400 c^2 \pi \theta}{r^2} + \theta^2 + \frac{4\,665\,600 c^2 \theta^2}{r^2}}{4 \pi^2 - 4 \pi \theta + \theta^2}}}{8 \pi \left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} -
\end{aligned}
$$

$$\left.\frac{r^2\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}}{2\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)$$

$$E = (1080/\pi)\int m\,a\,d\theta$$

$$(1080/\pi)\int\frac{1}{1080}\,m\,\pi\left(-\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(-\frac{-4\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\right.\right.\right.$$

$$\left.\left.\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)^2\right)\Bigg/$$

$$\left(8\pi\left(1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}\right)^{3/2}\right)+$$

$$\left(\sqrt{4\pi r^2\theta-r^2\theta^2}\left(\frac{2\,(-4\pi+2\theta)\left(-4\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}-\right.\right.$$

$$\frac{2+\frac{9\,331\,200\,c^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}-\frac{2\,(-4\pi+2\theta)^2\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^3}+$$

$$\left.\left.\frac{2\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Bigg/$$

$$\left(4\pi\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}\right)+$$

$$\left(\left(4\pi r^2-2r^2\theta\right)\left(-\frac{-4\pi-\frac{18\,662\,400\,c^2\,\pi}{r^2}+2\theta+\frac{9\,331\,200\,c^2\,\theta}{r^2}}{4\pi^2-4\pi\theta+\theta^2}+\right.\right.$$

$$\left.\left.\frac{(-4\pi+2\theta)\left(4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}\right)}{\left(4\pi^2-4\pi\theta+\theta^2\right)^2}\right)\right)\Bigg/$$

$$\left(4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}\sqrt{1-\frac{4\pi^2-4\pi\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\pi^2-4\pi\theta+\theta^2}}\right)-$$

$$\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)^2\,\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-$$

$$\left.\frac{r^2\,\sqrt{1-\frac{4\,\pi^2-4\,\pi\,\theta-\frac{18\,662\,400\,c^2\,\pi\,\theta}{r^2}+\theta^2+\frac{4\,665\,600\,c^2\,\theta^2}{r^2}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}}}{2\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)\,d\theta$$

$$-\frac{4320\,c^2\,m\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{r^2\,\sqrt{\frac{c^2\,(4\,\pi-\theta)\,\theta}{r^2\,(-2\,\pi+\theta)^2}}\,(-2\,\pi+\theta)^3}$$

$$-\frac{4320\,c^2\,m\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{r^2\,\sqrt{\frac{c^2\,(4\,\pi-\theta)\,\theta}{r^2\,(-2\,\pi+\theta)^2}}\,(-2\,\pi+\theta)^3}=E=h\nu=h\,n\,f=m\,c\,\hat{}\,2=h\,n\,((1\,/\,(1080\,/\,\pi))\,\theta)$$

$$-\frac{4320\,c^2\,m\,\pi\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{r^2\,\sqrt{\frac{c^2\,(4\,\pi-\theta)\,\theta}{r^2\,(-2\,\pi+\theta)^2}}\,(-2\,\pi+\theta)^3}=h\,n\,((1\,/\,(1080\,/\,\pi))\,\theta)$$

$$\Big\{\Big\{\theta\to\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/$$
$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$
$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)-$$
$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$
$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big\},$$

$$\Big\{\theta\to\frac{4320\,c\,\pi+\pi\,r}{3240\,c}-\left(\left(1+i\,\sqrt{3}\right)\,\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\right)\Big/$$
$$\Big(6480\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$
$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)+$$
$$\frac{1}{6480\,c}\,\left(1-i\,\sqrt{3}\right)\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$
$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big\},$$

$$\Big\{\theta\to\frac{4320\,c\,\pi+\pi\,r}{3240\,c}-\left(\left(1-i\,\sqrt{3}\right)\,\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\right)\Big/$$
$$\Big(6480\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$
$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)+$$

$$\frac{1}{6480\,c}\left(1+i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\right)^{1/3}\Big\},$$

$$\Big\{\theta\to-\frac{-4320\,c\,\pi+\pi\,r}{3240\,c}-\left(9\,331\,200\,c^2\,\pi^2-4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/\left(3240\,c\,\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\right)+\frac{1}{3240\,c}\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\Big\},$$

$$\Big\{\theta\to-\frac{-4320\,c\,\pi+\pi\,r}{3240\,c}+\left(\left(1+i\sqrt{3}\right)\left(9\,331\,200\,c^2\,\pi^2-4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\right)\Big/\left(6480\,c\,\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\right)-\frac{1}{6480\,c}\left(1-i\sqrt{3}\right)\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\Big\},$$

$$\Big\{\theta\to-\frac{-4320\,c\,\pi+\pi\,r}{3240\,c}+\left(\left(1-i\sqrt{3}\right)\left(9\,331\,200\,c^2\,\pi^2-4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\right)\Big/\left(6480\,c\,\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\right)-\frac{1}{6480\,c}\left(1+i\sqrt{3}\right)\pi\left(-100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r-6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6-9\,331\,200\,c^5\,r+5940\,c^4\,r^2+c^3\,r^3}\right)^{1/3}\Big\}\Big\}$$

$$\theta=\left(\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/\left(3240\,c\,\pi\left(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\right)^{1/3}\right)-\frac{1}{3240\,c}\pi\left(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\right)^{1/3}\right)$$

Solve[

$$-\left(4320\,c^2\,m\,\pi\sqrt{\left(r^2\left(4\,\pi-\left(\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/\left(3240\,c\,\pi\right.\right.\right.\right.}\right.$$

$$\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.$$
$$\left.\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)}\right)^{1/3}\Big) -$$
$$\frac{1}{3240\,c}\,\pi\,\Big(\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\right.$$
$$\left.\sqrt{5}\,\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)}\right)^{1/3}\Big)\Big)$$
$$\left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right) \Big/ \Big(3240\,c\,\pi\right.$$
$$\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.$$
$$\left.\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)}\right)^{1/3}\Big) -$$
$$\frac{1}{3240\,c}\,\pi\,\Big(\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\right.$$
$$\left.\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\Big)\Big)\Big) \Big/$$
$$\Bigg(r^2\,\sqrt{\Bigg(\frac{1}{r^2\,(-2\,\pi + \theta)^2}\,c^2\,\Bigg(4\,\pi - \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right) \Big/\right.}$$
$$\Big(3240\,c\,\pi\,\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.$$
$$\left.\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)}\right)^{1/3}\Big) -$$
$$\frac{1}{3240\,c}\,\pi\,\Big(\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.$$
$$\left.233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\Big)\Big)$$
$$\left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right) \Big/\right.$$
$$\Big(3240\,c\,\pi\,\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.$$
$$\left.233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\Big) -$$
$$\frac{1}{3240\,c}\,\pi\,\Big(\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\right.$$
$$\left.\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\Big)\Big)$$
$$\Bigg(-2\,\pi + \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right) \Big/\right.$$
$$\Big(3240\,c\,\pi\,\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.$$
$$\left.\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)}\right)^{1/3}\Big) -$$
$$\frac{1}{3240\,c}\,\pi\,\Big(\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\right.$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)\Big)^3\Big) ==$$

$$h\,n\,\Big((1/(1080/\pi))\ \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \Big(\Big(1 - i\,\sqrt{3}\Big)\,\Big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\Big)\Big) \Big/ \Big(6480\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big) + \frac{1}{6480\,c}\Big(1 + i\,\sqrt{3}\Big)\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}, n\Big]$$

$$\Big\{\Big\{n \to -\Big(4\,665\,600\,c^2\,m\,\sqrt{\Big(r^2\,\Big(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \Big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\Big) \Big/ \Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{\Big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\Big)}\Big)^{1/3}\Big) - \frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)\Big(4\,\pi - \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \Big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\Big) \Big/ \Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{\Big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\Big)}\Big)^{1/3}\Big) + \frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)\Big)\Big)} \Big/$$

$$\Big(h\,r^2\,\Big(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \Big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\Big) \Big/ \Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big) - \frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)$$

$$\Big(-2\,\pi + \frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \Big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\Big) \Big/ \Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)^3$$

$$\sqrt{\Bigg(\frac{1}{r^2\,(-2\,\pi + \Theta)^2}\,c^2\,\Big(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\big)\Big/}$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}$$

$$\sqrt{\big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\big)}\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 +$$

$$233\,280\,\sqrt{5}\,\sqrt{\big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\big)}\Big)^{1/3}\Big)$$

$$\Big(4\,\pi - \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\big)\Big/$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}$$

$$\sqrt{\big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\big)}\Big)^{1/3}\Big) +$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280$$

$$\sqrt{5}\,\sqrt{\big(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\big)}\Big)^{1/3}\Big)\Big)\Big)\Big\}\Big\}$$

Plot3D[

$$\Big(-\Big(4\,665\,600\,c^2\,m\,\sqrt{\Big(r^2\,\Big(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\big)\Big/\Big(3240\,c\,\pi}$$

$$\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 +$$

$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280$$

$$\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big)$$

$$\Big(4\,\pi - \frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \big(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\big)\Big/$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 +$$

$$233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\Big)^{1/3}\Big) +$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)\Big)\Big)\Big/$$

$$\Bigg(h\,r^2\,\Bigg(\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280\ \sqrt{5}$$

$$\sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Bigg)$$

$$\Bigg(-2\,\pi+\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Bigg)^3$$

$$\sqrt{\Bigg(\frac{1}{r^2\,(-2\,\pi+\theta)^2}\,c^2\,\Bigg(\frac{4320\,c\,\pi+\pi\,r}{3240\,c}+\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/}$$

$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Bigg)$$

$$\Bigg(4\,\pi-\frac{4320\,c\,\pi+\pi\,r}{3240\,c}-\left(9\,331\,200\,c^2\,\pi^2+4320\,c\,\pi^2\,r-\pi^2\,r^2\right)\Big/$$

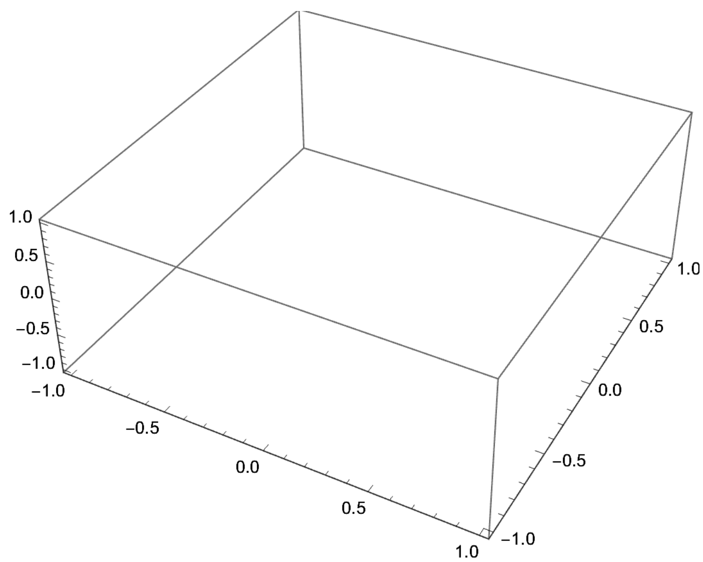
$$\Big(3240\,c\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)+$$

$$\frac{1}{3240\,c}\,\pi\,\Big(100\,776\,960\,000\,c^3+6\,998\,400\,c^2\,r+6480\,c\,r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\,c^6+9\,331\,200\,c^5\,r+5940\,c^4\,r^2-c^3\,r^3}\Big)^{1/3}\Big)\Bigg)\Bigg)\Bigg),$$

{r, -1, 1}, {m, -1, 1}]




```
c := (2.99792458 * 10 ^ 8)

h := (6.626068 * 10 ^ - 34)

Solve[
```

$$\Bigg(4320\ c^2\ m\ \pi \sqrt{\Bigg(r^2\ \Bigg(4\ \pi - \Bigg(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/ \Bigg(3240\ c\ \pi}$$

$$\Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280\ \sqrt{5}$$

$$\sqrt{}\left(40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3\right)\Big)^{1/3}\Bigg) -$$

$$\frac{1}{3240\ c}\ \pi\ \Bigg(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\Bigg)^{1/3}\Bigg)\Bigg)$$

$$\Bigg(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/ \Bigg(3240\ c\ \pi$$

$$\Bigg(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\Bigg)^{1/3}\Bigg) -$$

$$\frac{1}{3240\ c}\ \pi\ \Bigg(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\Bigg)^{1/3}\Bigg)\Bigg)\Bigg)\Bigg) \Big/$$

$$\Bigg(r^2 \sqrt{\Bigg(1 \Big/ \Bigg(r^2\ \Bigg(-2\ \pi + \Bigg(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/}$$

$$\Bigg(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280\ \sqrt{5}$$

$$\sqrt{}\left(40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3\right)\Big)^{1/3}\Bigg) -$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280\ \sqrt{5}$$

$$\sqrt{}\ \left(40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3\right)\Big)^{1/3}\Big)\Big)^2\Big)$$

$$c^2\ \Big(4\ \pi - \Big(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/ \Big(3240\ c$$

$$\pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280\ \sqrt{5}$$

$$\sqrt{}\ \left(40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3\right)\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big)\Big)\ \theta\Big)$$

$$\Big(-2\ \pi + \Big(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big) -$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big)\Big)^3\Big) ==$$

$$h\ n\ (1 / (1080 / \pi)),\ n\Big]$$

$$\Big\{\Big\{n \to \Big(4\,665\,600\ c^2\ m \Big/ \sqrt{}\ \Big(r^2\ \Big(\frac{4320\ c\ \pi + \pi\ r}{3240\ c} + \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big) -$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big)$$

$$\Big(4\ \pi - \frac{4320\ c\ \pi + \pi\ r}{3240\ c} - \left(9\,331\,200\ c^2\ \pi^2 + 4320\ c\ \pi^2\ r - \pi^2\ r^2\right) \Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big) +$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3 + 6\,998\,400\ c^2\ r + 6480\ c\ r^2 - r^3 + 233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6 + 9\,331\,200\ c^5\ r + 5940\ c^4\ r^2 - c^3\ r^3}\ \Big)^{1/3}\Big)\Big)\Big) \Big/$$

$$\Bigg(h\, r^2 \left(\frac{4320\, c\, \pi + \pi\, r}{3240\, c} + \left(9\,331\,200\, c^2\, \pi^2 + 4320\, c\, \pi^2\, r - \pi^2\, r^2\right) \Big/\right.$$

$$\Big(3240\, c\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280$$

$$\sqrt{5}\, \sqrt{40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3}\,\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\, c}\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280\, \sqrt{5}$$

$$\sqrt{40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3}\,\Big)^{1/3}\Big)$$

$$\Big(-2\, \pi + \frac{4320\, c\, \pi + \pi\, r}{3240\, c} + \left(9\,331\,200\, c^2\, \pi^2 + 4320\, c\, \pi^2\, r - \pi^2\, r^2\right) \Big/$$

$$\Big(3240\, c\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 +$$

$$233\,280\, \sqrt{5}\, \sqrt{40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3}\,\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\, c}\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280$$

$$\sqrt{5}\, \sqrt{40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3}\,\Big)^{1/3}\Big)^3$$

$$\sqrt{\Bigg(\Bigg(c^2 \Big(4\, \pi - \frac{4320\, c\, \pi + \pi\, r}{3240\, c} - \left(9\,331\,200\, c^2\, \pi^2 + 4320\, c\, \pi^2\, r - \pi^2\, r^2\right) \Big/}$$

$$\Big(3240\, c\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280\, \sqrt{5}$$

$$\sqrt{\left(40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3\right)}\,\Big)^{1/3}\Big) +$$

$$\frac{1}{3240\, c}\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280$$

$$\sqrt{5}\, \sqrt{\left(40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3\right)}\,\Big)^{1/3}\Big)\, \theta\Bigg) \Big/$$

$$\Big(r^2 \Big(-2\, \pi + \frac{4320\, c\, \pi + \pi\, r}{3240\, c} + \left(9\,331\,200\, c^2\, \pi^2 + 4320\, c\, \pi^2\, r - \pi^2\, r^2\right) \Big/$$

$$\Big(3240\, c\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280\, \sqrt{5}$$

$$\sqrt{\left(40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3\right)}\,\Big)^{1/3}\Big) -$$

$$\frac{1}{3240\, c}\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 + 233\,280\, \sqrt{5}$$

$$\sqrt{\left(40\,310\,784\,000\, c^6 + 9\,331\,200\, c^5\, r + 5940\, c^4\, r^2 - c^3\, r^3\right)}\,\Big)^{1/3}\Big)^2\Big)\Big)\Bigg)\Big\}\Big\}$$

RevolutionPlot3D[

$$\Big\{\Big\{\Bigg(4\,665\,600\, c^2\, m \sqrt{\Big(r^2 \Big(\frac{4320\, c\, \pi + \pi\, r}{3240\, c} + \left(9\,331\,200\, c^2\, \pi^2 + 4320\, c\, \pi^2\, r - \pi^2\, r^2\right) \Big/}$$

$$\Big(3240\, c\, \pi \Big(100\,776\,960\,000\, c^3 + 6\,998\,400\, c^2\, r + 6480\, c\, r^2 - r^3 +$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)$$

$$\Big(4\,\pi-\frac{4320\ c\ \pi+\pi\ r}{3240\ c}-\big(9\,331\,200\ c^2\ \pi^2+4320\ c\ \pi^2\ r-\pi^2\ r^2\big)\Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)+$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)\Big)\Big)\Big/$$

$$\Big(h\ r^2\ \Big(\frac{4320\ c\ \pi+\pi\ r}{3240\ c}+\big(9\,331\,200\ c^2\ \pi^2+4320\ c\ \pi^2\ r-\pi^2\ r^2\big)\Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280\ \sqrt{5}$$

$$\sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)$$

$$\Big(-2\,\pi+\frac{4320\ c\ \pi+\pi\ r}{3240\ c}+\big(9\,331\,200\ c^2\ \pi^2+4320\ c\ \pi^2\ r-\pi^2\ r^2\big)\Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+$$

$$233\,280\ \sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)-$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)^3$$

$$\sqrt{}\ \Big(\Big(\Big(c^2\ \Big(4\,\pi-\frac{4320\ c\ \pi+\pi\ r}{3240\ c}-\big(9\,331\,200\ c^2\ \pi^2+4320\ c\ \pi^2\ r-\pi^2\ r^2\big)\Big/$$

$$\Big(3240\ c\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280\ \sqrt{5}$$

$$\sqrt{}\ \big(40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3\big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3240\ c}\ \pi\ \Big(100\,776\,960\,000\ c^3+6\,998\,400\ c^2\ r+6480\ c\ r^2-r^3+233\,280$$

$$\sqrt{5}\ \sqrt{40\,310\,784\,000\ c^6+9\,331\,200\ c^5\ r+5940\ c^4\ r^2-c^3\ r^3}\Big)^{1/3}\Big)\ \theta\Big)\Big/$$

$$\left(r^2 \left(-2\pi + \frac{4320\,c\,\pi + \pi\,r}{3240\,c} + \left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right) \middle/ \right.\right.$$

$$\left(3240\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.\right.$$

$$\left.\left.\sqrt{}\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)\right)^{1/3}\right) -$$

$$\frac{1}{3240\,c}\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.$$

$$233\,280\,\sqrt{5}\,\sqrt{}\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - \right.$$

$$\left.\left.\left.\left.\left.c^3\,r^3\right)\right)^{1/3}\right)^2\right)\right)\right)\Big\}\Big\}, \{r, -1, , 1\}, \{m, -1, 1\}\Big]$$

Solve$\Big[$

$$-\left(4320\,c^2\,m\,\pi\sqrt{\left(r^2\left(4\pi - \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right)\right) \middle/ \right.\right.\right.}\right.$$

$$\left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.\right.$$

$$\left.\left.\sqrt{}\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)\right)^{1/3}\right) +$$

$$\frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.$$

$$\left.\left.\left.233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\right)\right)$$

$$\left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right)\right) \middle/ \right.$$

$$\left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.\right.$$

$$\left.\left.233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\right) +$$

$$\frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + \right.$$

$$\left.\left.\left.\left.233\,280\,\sqrt{5}\,\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3}\right)^{1/3}\right)\right)\right) \Big/$$

$$\left(r^2\sqrt{\left(1 \middle/ \left(r^2\left(-2\pi + \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\,\pi^2 + 4320\,c\,\pi^2\,r - \pi^2\,r^2\right)\right) \middle/ \right.\right.\right.\right.}\right.$$

$$\left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + 6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\right.\right.$$

$$\left.\left.\sqrt{}\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)\right)^{1/3}\right) +$$

$$\frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2\,r + \right.$$

$$6480\,c\,r^2 - r^3 + 233\,280\,\sqrt{5}\,\sqrt{}\left(40\,310\,784\,000\,c^6 + \right.$$

$$\left.\left.\left.\left.9\,331\,200\,c^5\,r + 5940\,c^4\,r^2 - c^3\,r^3\right)\right)^{1/3}\right)\right)^2\right)\,c^2$$

$$\left(4\pi - \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right) \Big/ \left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{\left(40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3\right)}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right)\right)$$

$$\left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right) \Big/ \left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right)$$

$$\left(-2\pi + \left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right) \Big/ \left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right)\right)^3\right) ==$$

$$h\,n\left((1/(1080/\pi))\left(\frac{4320\,c\,\pi + \pi\,r}{3240\,c} - \left(\left(1 + i\sqrt{3}\right)\left(9\,331\,200\,c^2\pi^2 + 4320\,c\,\pi^2 r - \pi^2 r^2\right)\right) \Big/ \left(6480\,c\,\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right) + \frac{1}{6480\,c}\left(1 - i\sqrt{3}\right)\pi\left(100\,776\,960\,000\,c^3 + 6\,998\,400\,c^2 r + 6480\,c\,r^2 - r^3 + 233\,280\sqrt{5}\sqrt{40\,310\,784\,000\,c^6 + 9\,331\,200\,c^5 r + 5940\,c^4 r^2 - c^3 r^3}\right)^{1/3}\right)\right), m]$$

$$\{\{m \to -\Big(4.73727 \times 10^{-49}\,n\,r^2$$

$$\Big(1.02952 \times 10^{-12}\left(4.06869 \times 10^{12} + 3.14159\,r\right) - \left(\left(1.63853 \times 10^{-13} + 2.83802 \times 10^{-13}\,i\right)\left(8.27711 \times 10^{24} + 1.27822 \times 10^{13}\,r - 9.8696\,r^2\right)\right) \Big/$$

$$\left(2.71533\times10^{36}+6.28985\times10^{23}\ r+1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times\right.}\right.$$
$$\left.\left.10^{61}+2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}+$$
$$\left(1.61716\times10^{-12}-2.80101\times10^{-12}\ \mathbb{i}\right)\ \left(2.71533\times10^{36}+6.28985\times10^{23}\ r+\right.$$
$$1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times10^{61}+\right.}$$
$$\left.\left.2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}\Big)$$
$$\Big(-6.28319+1.02952\times10^{-12}\ \left(4.06869\times10^{12}+\pi\ r\right)-\Big(\Big(1.63853\times10^{-13}+$$
$$2.83802\times10^{-13}\ \mathbb{i}\Big)\ \left(8.27711\times10^{24}+1.27822\times10^{13}\ r-9.8696\ r^{2}\right)\Big)\Big/$$
$$\Big(2.71533\times10^{36}+6.28985\times10^{23}\ r+1.94266\times10^{12}\ r^{2}-1.\ r^{3}+$$
$$521\,630.\ \sqrt{\left(2.92648\times10^{61}+2.25965\times10^{49}\ r+\right.}$$
$$\left.\left.4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}+$$
$$\left(1.61716\times10^{-12}-2.80101\times10^{-12}\ \mathbb{i}\right)\ \Big(2.71533\times10^{36}+6.28985\times10^{23}\ r+$$
$$1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times10^{61}+\right.}$$
$$\left.\left.2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}\Big)^{3}$$
$$\sqrt{\Big(\Big(\Big(12.5664-1.02952\times10^{-12}\ \left(4.06869\times10^{12}+\pi\ r\right)+\Big(\Big(1.63853\times10^{-13}+}$$
$$2.83802\times10^{-13}\ \mathbb{i}\Big)\ \left(8.27711\times10^{24}+1.27822\times10^{13}\ r-9.8696\ r^{2}\right)\Big)\Big/$$
$$\Big(2.71533\times10^{36}+6.28985\times10^{23}\ r+1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.$$
$$\sqrt{\left(2.92648\times10^{61}+2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\right.}$$
$$\left.\left.r^{3}\right)\right)^{1/3}-\left(1.61716\times10^{-12}-2.80101\times10^{-12}\ \mathbb{i}\right)\ \Big(2.71533\times10^{36}+$$
$$6.28985\times10^{23}\ r+1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times\right.}$$
$$\left.\left.10^{61}+2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}\Big)$$
$$\Big(1.02952\times10^{-12}\ \left(4.06869\times10^{12}+\pi\ r\right)-\Big(\left(1.63853\times10^{-13}+2.83802\times10^{-13}\ \mathbb{i}\right)$$
$$\left(8.27711\times10^{24}+1.27822\times10^{13}\ r-9.8696\ r^{2}\right)\Big)\Big/\ \Big(2.71533\times10^{36}+$$
$$6.28985\times10^{23}\ r+1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times10^{61}+\right.}$$
$$\left.\left.2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}+$$
$$\left(1.61716\times10^{-12}-2.80101\times10^{-12}\ \mathbb{i}\right)\ \Big(2.71533\times10^{36}+6.28985\times10^{23}\ r+$$
$$1.94266\times10^{12}\ r^{2}-1.\ r^{3}+521\,630.\ \sqrt{\left(2.92648\times10^{61}+\right.}$$
$$\left.\left.2.25965\times10^{49}\ r+4.7981\times10^{37}\ r^{2}-2.6944\times10^{25}\ r^{3}\right)\right)^{1/3}\Big)\Big)\Big/$$
$$\Big(r^{2}\ \Big(-6.28319+1.02952\times10^{-12}\ \left(4.06869\times10^{12}+\pi\ r\right)-\Big(\Big(1.63853\times10^{-13}+$$
$$2.83802\times10^{-13}\ \mathbb{i}\Big)\ \left(8.27711\times10^{24}+1.27822\times10^{13}\ r-9.8696\ r^{2}\right)\Big)\Big/$$

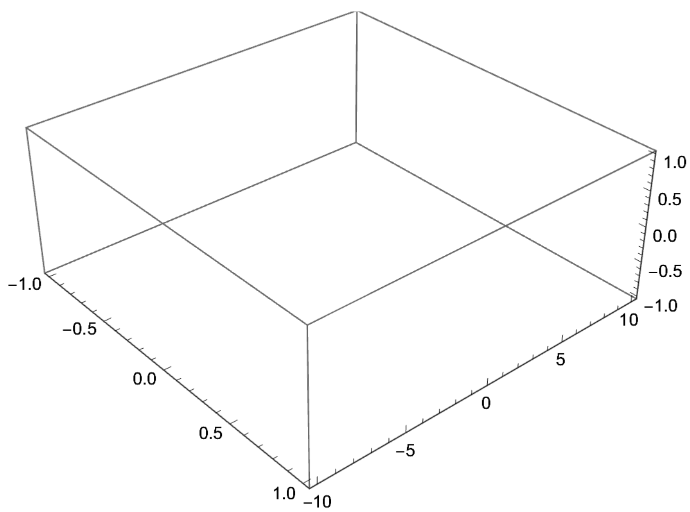
$$
\begin{aligned}
&(2.71533\times10^{36}+6.28985\times10^{23}\,r+1.94266\times10^{12}\,r^2-1.\,r^3+\\
&\quad 521\,630.\,\sqrt{(2.92648\times10^{61}+2.25965\times10^{49}\,r+4.7981\times10^{37}\,r^2-}\\
&\qquad 2.6944\times10^{25}\,r^3))^{1/3}+(1.61716\times10^{-12}-2.80101\times10^{-12}\,\mathrm{i})\\
&(2.71533\times10^{36}+6.28985\times10^{23}\,r+1.94266\times10^{12}\,r^2-1.\,r^3+\\
&\quad 521\,630.\,\sqrt{(2.92648\times10^{61}+2.25965\times10^{49}\,r+}\\
&\qquad 4.7981\times10^{37}\,r^2-2.6944\times10^{25}\,r^3))^{1/3})^2)))\Big/\\
&(\sqrt{(r^2\,(12.5664-1.02952\times10^{-12}\,(4.06869\times10^{12}+\pi\,r)+((1.63853\times10^{-13}+}\\
&\qquad 2.83802\times10^{-13}\,\mathrm{i})\,(8.27711\times10^{24}+1.27822\times10^{13}\,r-9.8696\,r^2))\Big/\\
&\quad(2.71533\times10^{36}+6.28985\times10^{23}\,r+1.94266\times10^{12}\,r^2-1.\,r^3+\\
&\quad 521\,630.\,\sqrt{(2.92648\times10^{61}+2.25965\times10^{49}\,r+}\\
&\qquad 4.7981\times10^{37}\,r^2-2.6944\times10^{25}\,r^3))^{1/3}-\\
&\quad(1.61716\times10^{-12}-2.80101\times10^{-12}\,\mathrm{i})\,(2.71533\times10^{36}+6.28985\times10^{23}\\
&\qquad r+1.94266\times10^{12}\,r^2-1.\,r^3+521\,630.\,\sqrt{(2.92648\times10^{61}+}\\
&\qquad\quad 2.25965\times10^{49}\,r+4.7981\times10^{37}\,r^2-2.6944\times10^{25}\,r^3))^{1/3})\\
&\quad(1.02952\times10^{-12}\,(4.06869\times10^{12}+\pi\,r)-((1.63853\times10^{-13}+2.83802\times10^{-13}\,\mathrm{i})\\
&\qquad(8.27711\times10^{24}+1.27822\times10^{13}\,r-9.8696\,r^2))\Big/\\
&\quad(2.71533\times10^{36}+6.28985\times10^{23}\,r+1.94266\times10^{12}\,r^2-1.\\
&\qquad r^3+521\,630.\,\sqrt{(2.92648\times10^{61}+2.25965\times10^{49}\,r+}\\
&\qquad\quad 4.7981\times10^{37}\,r^2-2.6944\times10^{25}\,r^3))^{1/3}+\\
&\quad(1.61716\times10^{-12}-2.80101\times10^{-12}\,\mathrm{i})\,(2.71533\times10^{36}+6.28985\times10^{23}\\
&\qquad r+1.94266\times10^{12}\,r^2-1.\,r^3+521\,630.\,\sqrt{(2.92648\times10^{61}+}\\
&\qquad\quad 2.25965\times10^{49}\,r+4.7981\times10^{37}\,r^2-2.6944\times10^{25}\,r^3))^{1/3}))))\}\}
\end{aligned}
$$

```
Plot3D[-(4.737265040169387`*^-49 n r^2
   (1.0295188123399754`*^-12 (4.068687385387123`*^12 + 3.141592653589793` r) -
     ((1.6385300799000448`*^-13 + 2.8380173481167695`*^-13 i)
        (8.277108520004151`*^24 + 1.2782158399685648`*^13 r -
          9.869604401089358` r^2)) / (2.715334653855602`*^36 +
        6.289848242871744`*^23 r + 1.94265512784`*^12 r^2 - 1.` r^3 +
        521629.937791151` √(2.926479339098588`*^61 + 2.2596491501446907`*^49
             r + 4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^1/3 +
     (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 i)
```

```
(2.715334653855602`*^36 + 6.289848242871744`*^23 r +
    1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
      √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
          4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3))
(-6.283185307179586` + 1.0295188123399754`*^-12 (4.068687385387123`*^12 + π r) -
    ((1.6385300799000448`*^-13 + 2.8380173481167695`*^-13 ⅈ)
       (8.277108520004151`*^24 + 1.2782158399685648`*^13 r -
          9.869604401089358` r^2)) /
     (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
         √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
             4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3) +
    (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 ⅈ)
     (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
         √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
             4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3))^3
√(((12.566370614359172` - 1.0295188123399754`*^-12
         (4.068687385387123`*^12 + π r) + ((1.6385300799000448`*^-13 +
             2.8380173481167695`*^-13 ⅈ) (8.277108520004151`*^24 +
             1.2782158399685648`*^13 r - 9.869604401089358` r^2)) /
         (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
            1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
             √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
                 4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3) -
        (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 ⅈ)
         (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
            1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
             √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
                 4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3))
      (1.0295188123399754`*^-12 (4.068687385387123`*^12 + π r) -
        ((1.6385300799000448`*^-13 + 2.8380173481167695`*^-13 ⅈ)
           (8.277108520004151`*^24 + 1.2782158399685648`*^13 r -
              9.869604401089358` r^2)) /
         (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
            1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
             √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
```

```
          4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3) +
    (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 i)
     (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
       1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
        √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
          4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3))) /
 (r^2 (-6.283185307179586` + 1.0295188123399754`*^-12
       (4.068687385387123`*^12 + π r) - ((1.6385300799000448`*^-13 +
          2.8380173481167695`*^-13 i) (8.277108520004151`*^24 +
          1.2782158399685648`*^13 r - 9.869604401089358` r^2)) /
      (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
         √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
           4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3) +
     (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 i)
      (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 +
        521629.937791151` √(2.926479339098588`*^61 +
           2.2596491501446907`*^49 r + 4.798099575559119`*^37 r^2 -
           2.694400241737399`*^25 r^3))^(1/3))^2)))) /
(√(r^2 (12.566370614359172` - 1.0295188123399754`*^-12
       (4.068687385387123`*^12 + π r) +
      ((1.6385300799000448`*^-13 + 2.8380173481167695`*^-13 i)
        (8.277108520004151`*^24 + 1.2782158399685648`*^13 r -
          9.869604401089358` r^2)) /
      (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
         √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
           4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3) -
     (1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 i)
      (2.715334653855602`*^36 + 6.289848242871744`*^23 r +
        1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151`
         √(2.926479339098588`*^61 + 2.2596491501446907`*^49 r +
           4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3))^(1/3))
    (1.0295188123399754`*^-12 (4.068687385387123`*^12 + π r) -
     ((1.6385300799000448`*^-13 + 2.8380173481167695`*^-13 i)
       (8.277108520004151`*^24 + 1.2782158399685648`*^13 r -
```

$$9.869604401089358` r^2))\Big/$$
$$(2.715334653855602`*^36 + 6.289848242871744`*^23 r + 1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151` \sqrt{(2.926479339098588`*^61 + 2.2596491501446907`*^49 r + 4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3)})^{1/3} +$$
$$(1.6171643687898778`*^-12 - 2.8010108509341217`*^-12 i)$$
$$(2.715334653855602`*^36 + 6.289848242871744`*^23 r + 1.94265512784`*^12 r^2 - 1.` r^3 + 521629.937791151` \sqrt{(2.926479339098588`*^61 + 2.2596491501446907`*^49 r + 4.798099575559119`*^37 r^2 - 2.694400241737399`*^25 r^3)})^{1/3}))), \{n, -1, 1\}, \{r, -10, 10\}]$$



This mass is invisible

$$r'\Big/\left((\theta\ (1080/\pi))\Big/\left(\sqrt{1-((v)^2/c^2)}\right)\right)$$

$$r'/\theta' = \left(r\left(\sqrt{1-((v)^2/c^2)}\right)\right)\Big/\left(\theta\Big/\left(\sqrt{1-((v)^2/c^2)}\right)\right) = \frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta} = c\ / \qquad (195)$$

$$t' = \left((\theta\ (1080/\pi))\Big/\left(\sqrt{1-((v)^2/c^2)}\right)\right)$$

If, $\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta} == r/\theta$, then $v \to 0$

$$\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta} = r'/\theta'$$

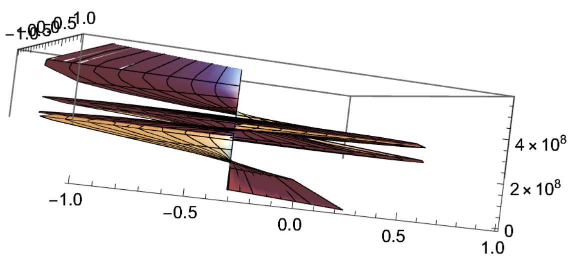
$$\text{Solve}\left[\frac{4\,\pi\,r^2-2\,r^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta},\,v\right]$$

$$\left\{\left\{v\to-\frac{c\,\sqrt{\theta}\,\sqrt{\frac{2}{\theta}-\frac{2\,r}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\frac{r\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}}\right\},\right.$$

$$\left.\left\{v\to\frac{c\,\sqrt{\theta}\,\sqrt{\frac{2}{\theta}-\frac{2\,r}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\frac{r\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}}\right\}\right\}$$

```
c := (2.99792458 * 10^8)
```

$$\text{RevolutionPlot3D}\left[\frac{c\,\sqrt{\theta}\,\sqrt{\frac{2}{\theta}-\frac{2\,r}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\frac{r\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}}}{\sqrt{2}},\,\{r,\,-1,\,1\},\,\{\theta,\,-4\,\pi,\,4\,\pi\}\right]$$



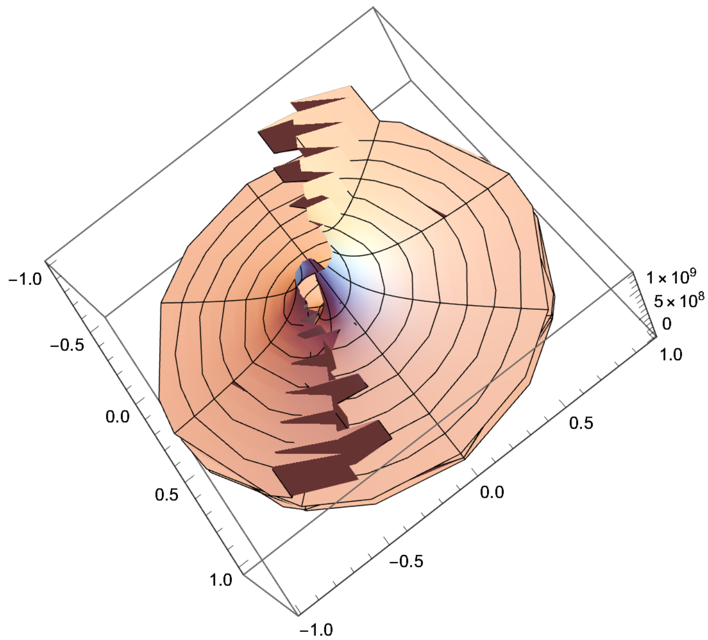
$$\text{Solve}\left[-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\,\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}==\frac{r\left(1-\frac{v^2}{c^2}\right)}{\theta},\,v\right]$$

$$\left\{\left\{v\to-\frac{1}{\sqrt{2}}\,c\,\sqrt{\theta}\,\sqrt{\left(\frac{2}{\theta}+\frac{8\,\pi\,r^2\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{6\,r^2\,\theta^2}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\,\theta^3}{\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{4}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}\right\},\right.$$

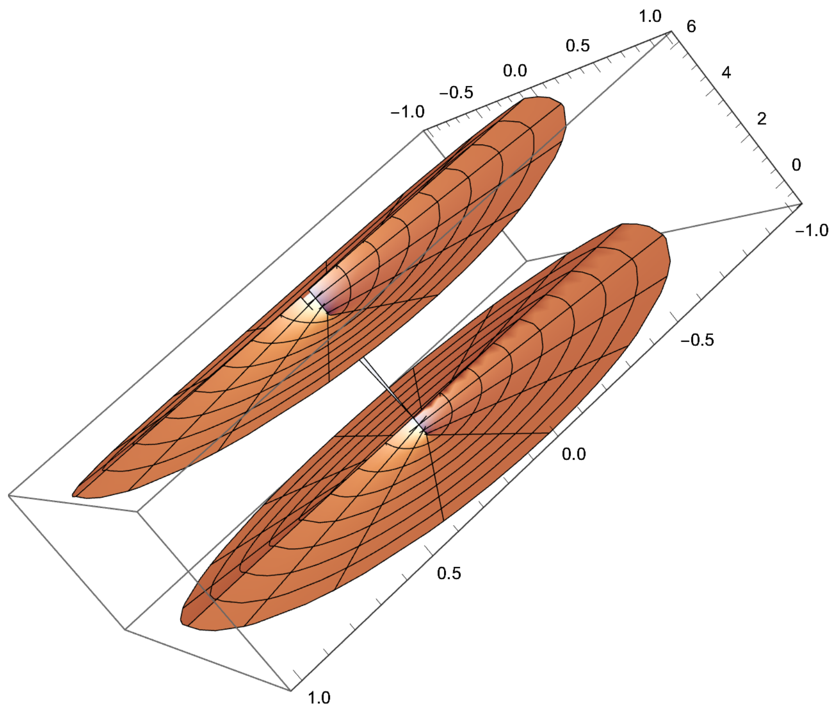
$$\left.\left\{v\to\frac{1}{\sqrt{2}}\,c\,\sqrt{\theta}\,\sqrt{\left(\frac{2}{\theta}+\frac{8\,\pi\,r^2\,\theta}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{6\,r^2\,\theta^2}{\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{r^2\,\theta^3}{\pi\,\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}-\frac{4}{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}+\frac{2\,\theta}{\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}\right\}\right\}$$

RevolutionPlot3D[

$$\frac{1}{\sqrt{2}} c \sqrt{\theta} \sqrt{\left(\frac{2}{\theta} + \frac{8 \pi r^2 \theta}{\left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} - \frac{6 r^2 \theta^2}{\left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} + \frac{r^2 \theta^3}{\pi \left(4 \pi r^2 \theta - r^2 \theta^2\right)^{3/2}} - \frac{4}{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}} + \frac{2 \theta}{\pi \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}\right)}, \{r, -1, 1\}, \{\theta, -4 \pi, 4 \pi\}]$$

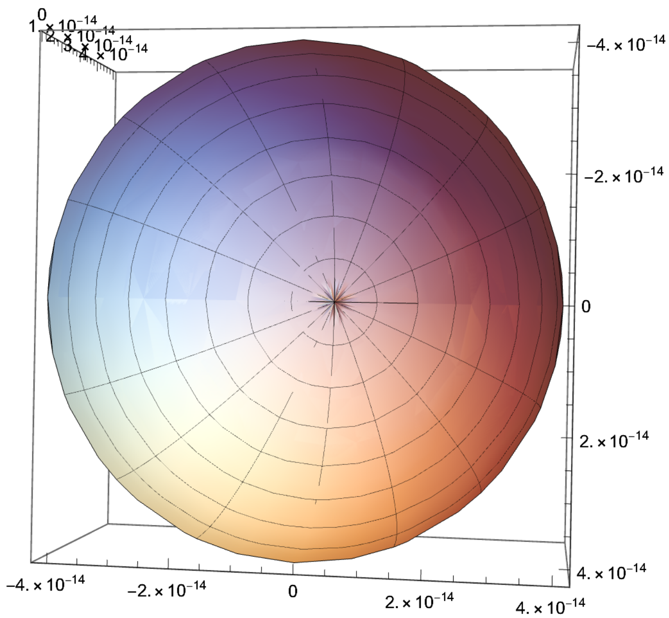


$$\texttt{RevolutionPlot3D}\left[\frac{\pi\, r + \sqrt{\pi^2\, r^2 - 2\,\pi\, r\, \sqrt{r^2\, \texttt{Sin}[\beta]^2}}}{r}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$

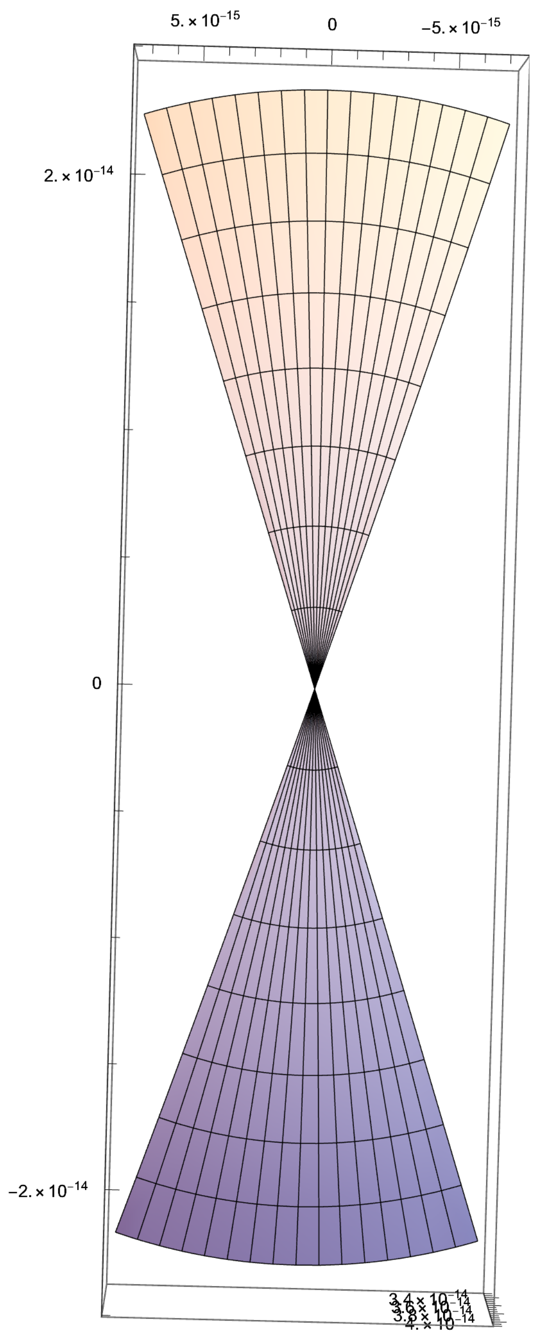


$$\texttt{RevolutionPlot3D}\left[\left\{\frac{\pi\, r + \sqrt{\pi^2\, r^2 - 2\,\pi\, r\, \sqrt{r^2\, \texttt{Sin}[\beta]^2}}}{r}, \frac{\pi\, r - \sqrt{\pi^2\, r^2 - 2\,\pi\, r\, \sqrt{r^2\, \texttt{Sin}[\beta]^2}}}{r}\right\}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$

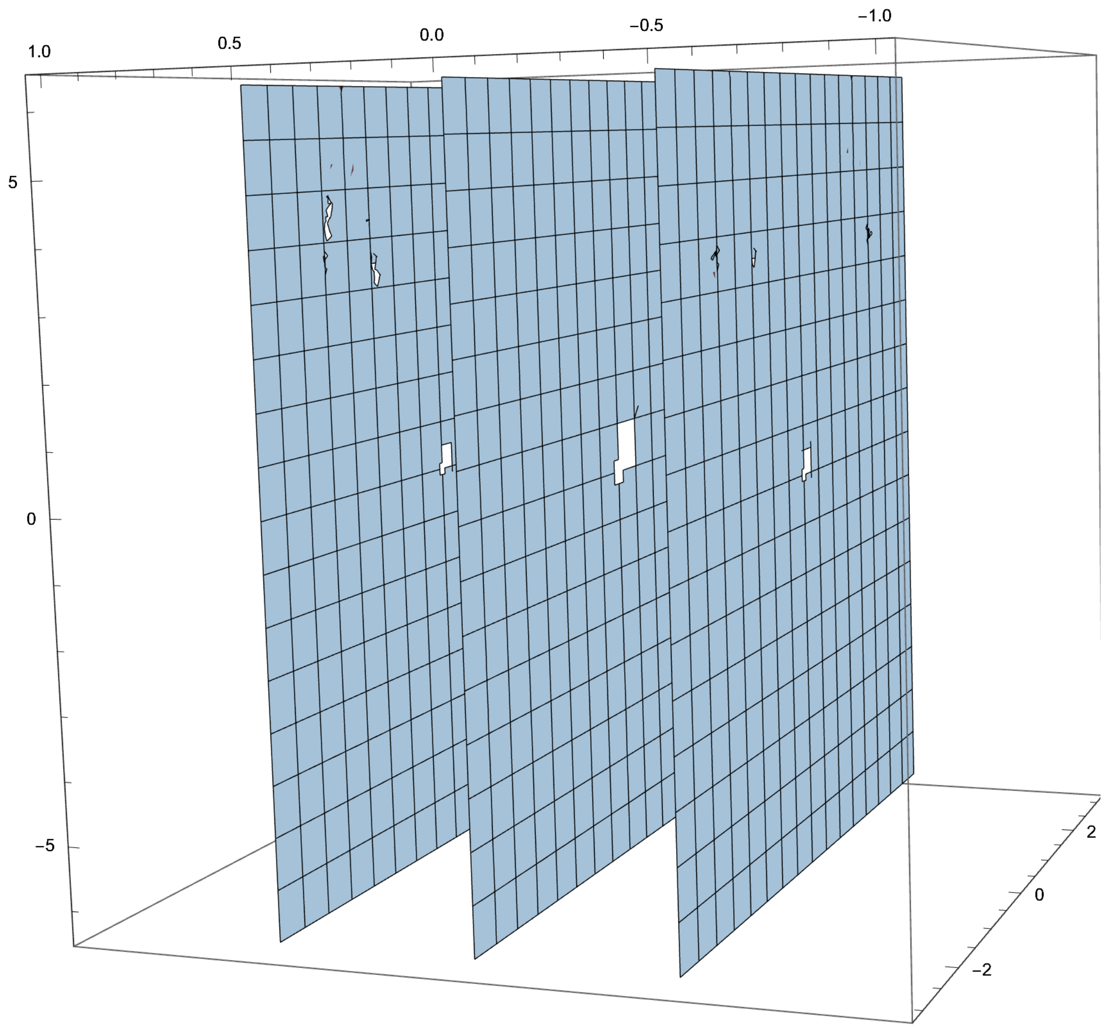
```
SphericalPlot3D[
 .5 (9.109382 * 10^-31) ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) ^
  2, {θ, -.5 π, .5 π}, {β, -1 π, 1 π}]
```



```
SphericalPlot3D[
 .5 (9.109382 * 10^-31) ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)) /
      (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) ^2,
 {θ, -.2 π, .2 π}, {β, -.1 π, .1 π}]
```

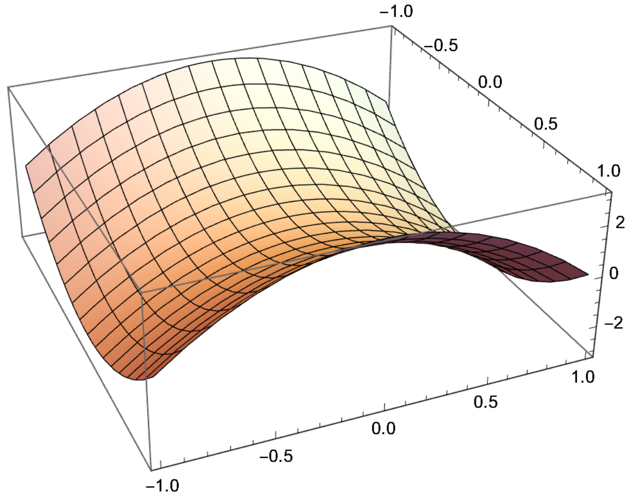


```
ContourPlot3D[.5 (m) ((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2,
  {m, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```

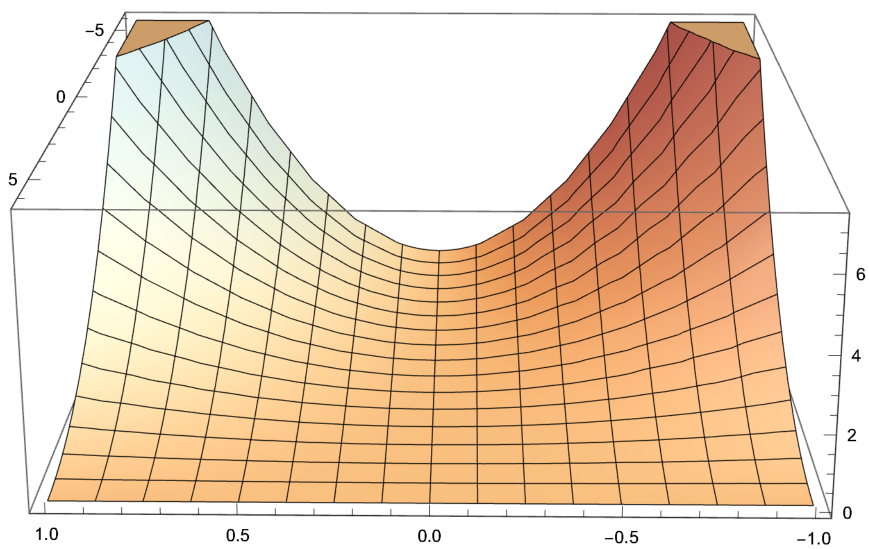



```
ContourPlot3D[.5 (m) ((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2,
  {m, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```

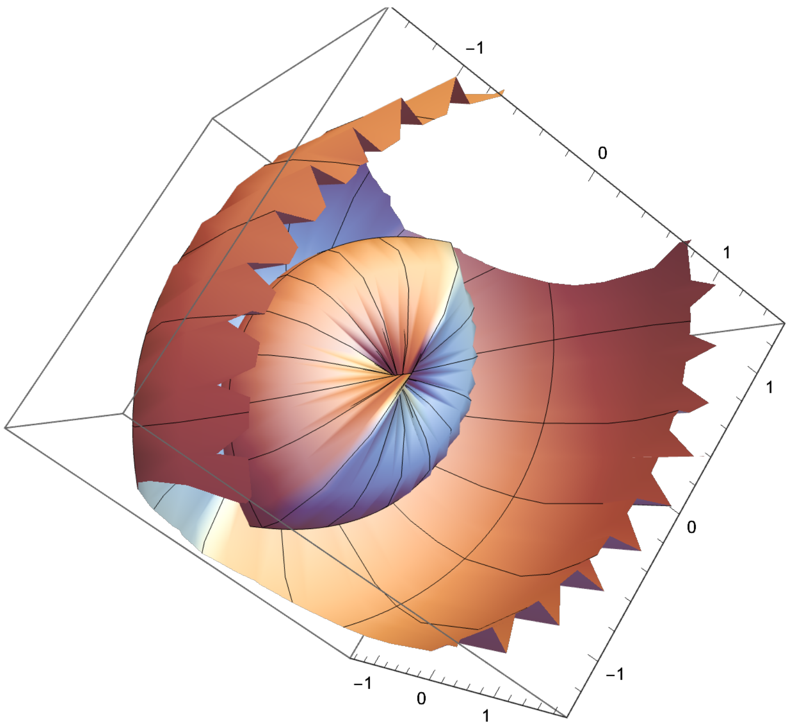
```
Plot3D[π r^2 - π x^2, {r, -1, 1}, {x, -1, 1}]
```



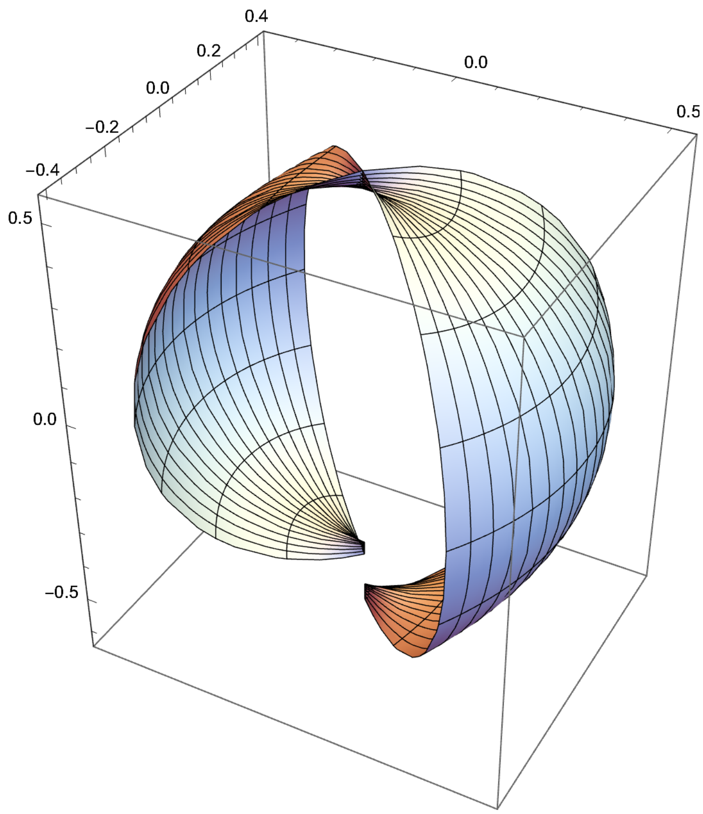
$$\text{Plot3D}\left[\pi\, r\,\text{^}\,2 - \pi\, \frac{\sqrt{4\,\pi\, r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\text{^}\,2,\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\ \{\theta,\ -4\,\pi,\ 4\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$

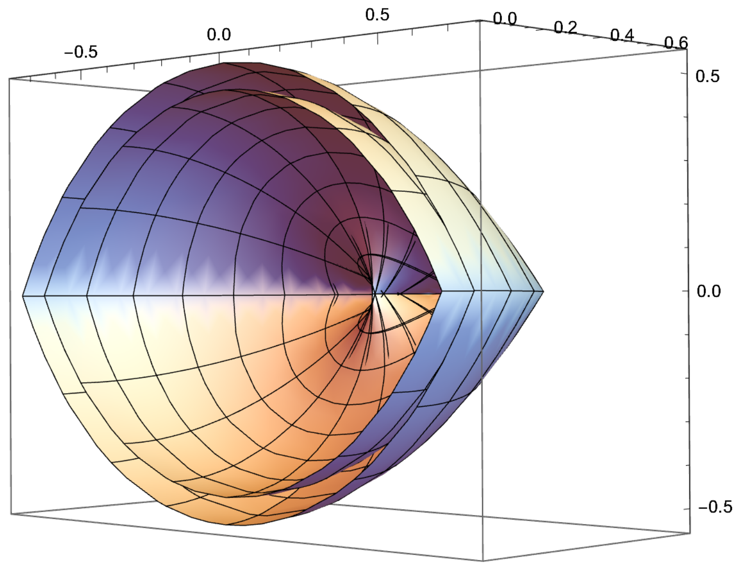


$$\texttt{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)},\ \{\theta,\,-\pi,\,\pi\},\ \{\beta,\,-\pi/4,\,\pi/4\}\right]$$

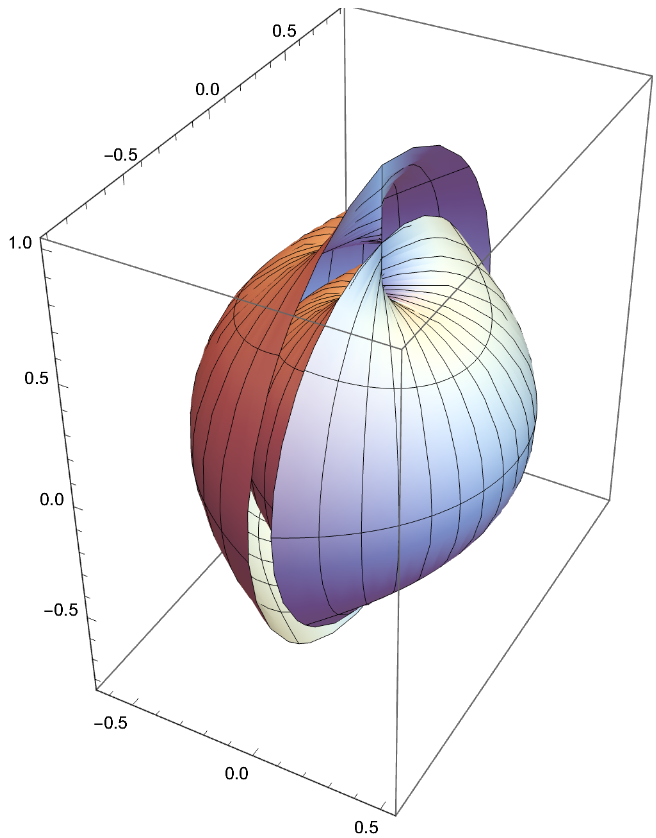


$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\right.$$

$$\left.\{\theta,\,-(1/2)\,\pi,\,(1/2)\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

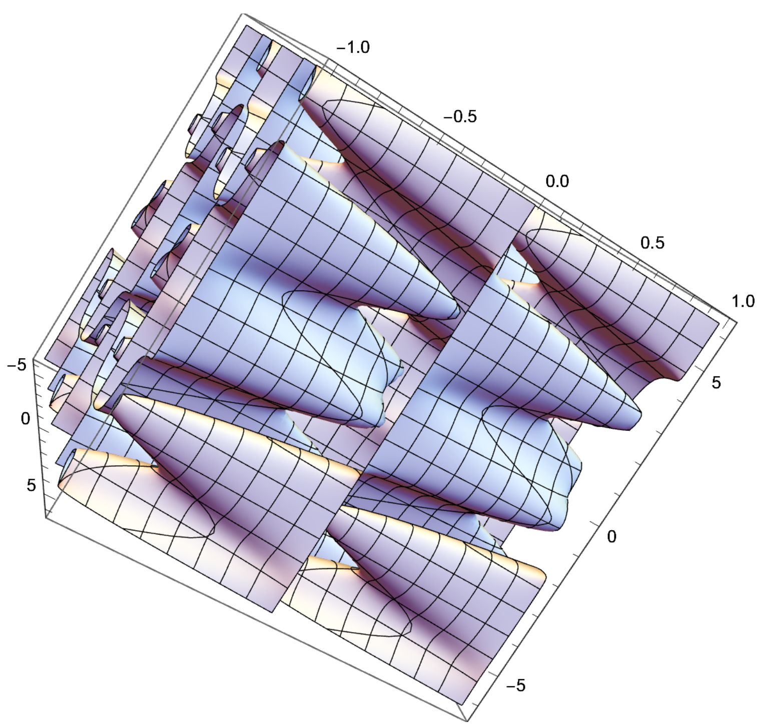
$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\;2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)},\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi,\pi\}\right]$$

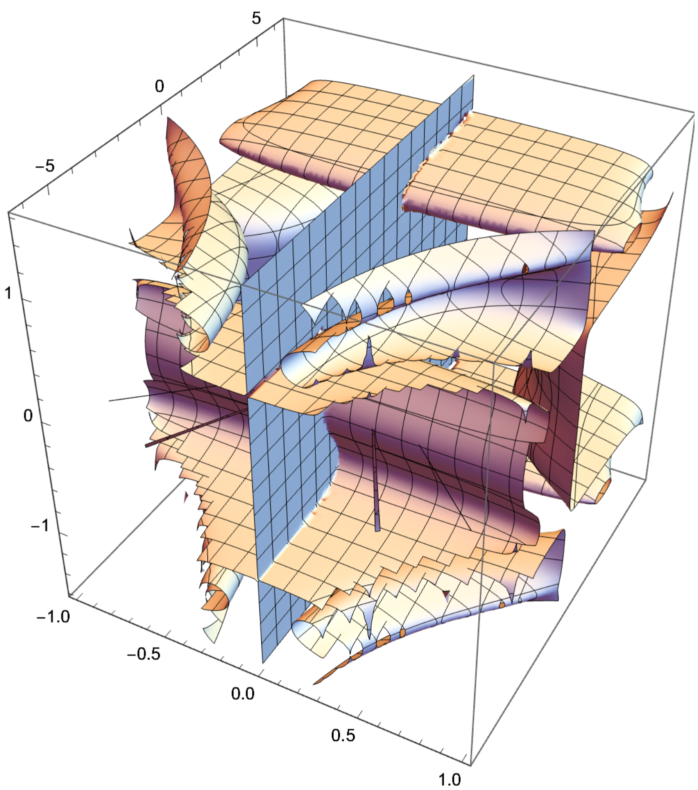
$$\text{ContourPlot3D}\left[\left(r+\text{Cos}\left[\frac{u}{2}\right]\text{Sin}[v]-\text{Sin}\left[\frac{u}{2}\right]\text{Sin}[2\,v]\,\text{Cos}[u]\right),\right.$$
$$\left.\{r,-1,1\},\{u,-2\,\pi,2\,\pi\},\{v,-2\,\pi,2\,\pi\}\right]$$



$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ \text{ArcSin}\left[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\right]$$

if $u = 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$ and $v = \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right] = \text{ArcSin}\left[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\right]$

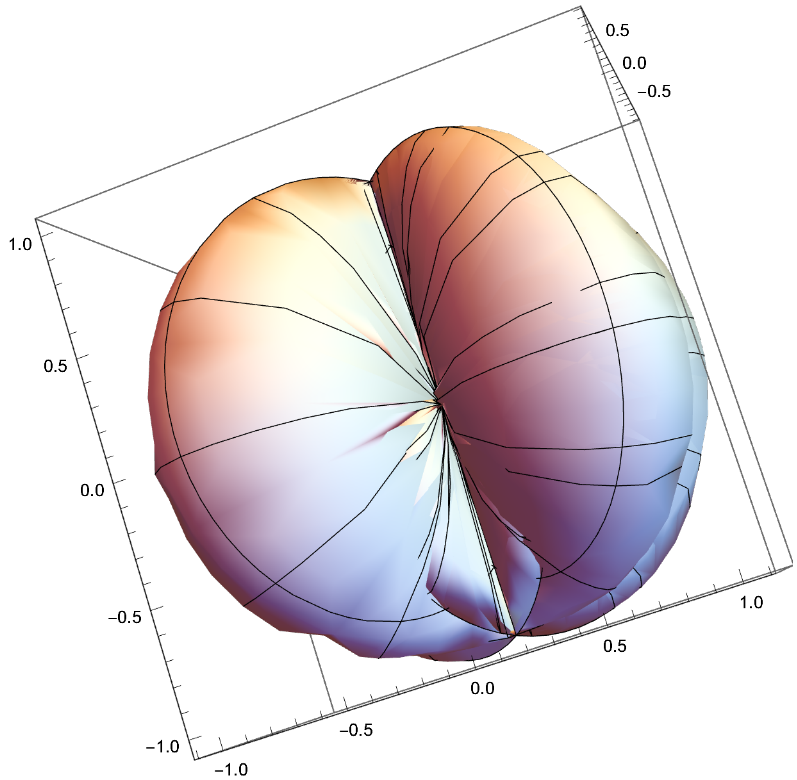
$$\text{ContourPlot3D}\Big[\Big(r+\text{Cos}\Big[\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2}\Big]\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\Big]\Big]-\text{Sin}\Big[\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2}\Big]\,\text{Sin}\Big[2\,\text{ArcSin}\Big[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\Big]\Big]\,\text{Cos}\Big[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big]\Big),\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



=

$$\text{ContourPlot3D}\Big[\Big(r+\text{Cos}\Big[\frac{u}{2}\Big]\,\text{Sin}[v]-\text{Sin}\Big[\frac{u}{2}\Big]\,\text{Sin}[2\,v]\,\text{Cos}[u]\Big),\{r,-1,1\},\{u,-2\,\pi,2\,\pi\},\{v,-2\,\pi,2\,\pi\}\Big]$$

$$\text{SphericalPlot3D}\left[\text{Sin}\left[\frac{u}{2}\right]\text{Sin}[v]+\text{Cos}\left[\frac{u}{2}\right]\text{Sin}[2\,v],\,\{u,-2,2\,\pi\},\,\{v,-2\,\pi,2\,\pi\}\right]$$

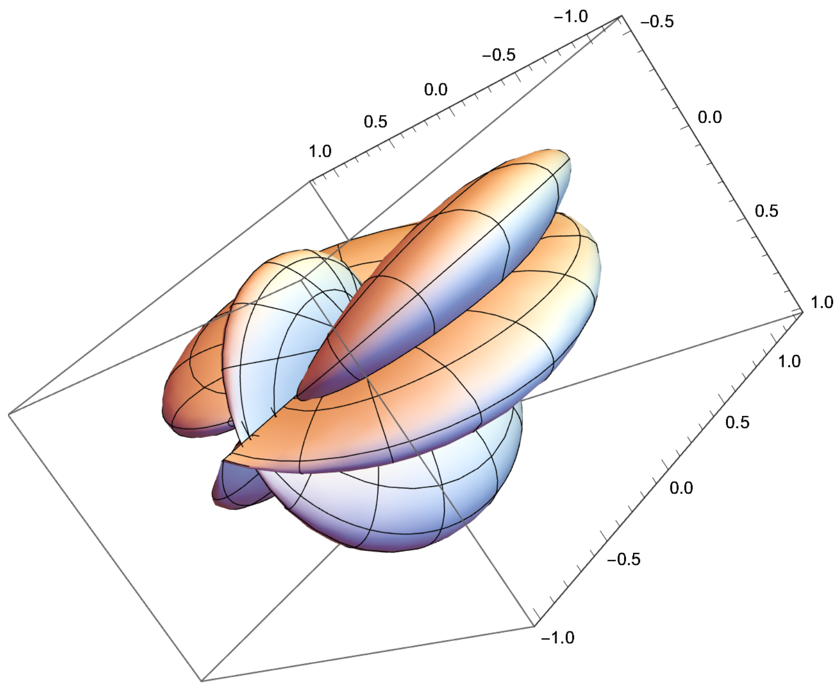


$$\text{SphericalPlot3D}\left[\text{Sin}\left[\frac{u}{2}\right]\text{Sin}[v]+\text{Cos}\left[\frac{u}{2}\right]\text{Sin}[2\,v],\,\{u,-2,2\,\pi\},\,\{v,-2\,\pi,2\,\pi\}\right]$$

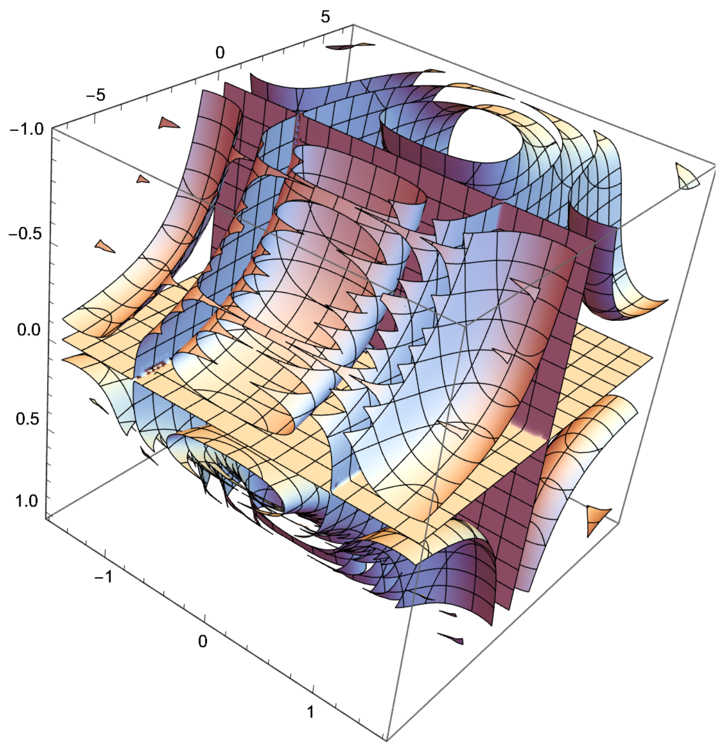
$$\beta \to \text{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right] = \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]$$

$$\left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}$$

```
SphericalPlot3D[Sin[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/2] Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]] +
  Cos[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/2] Sin[2 ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]],
  {θ, -2, 2 π}, {β, -π / 2, π / 2}]
```



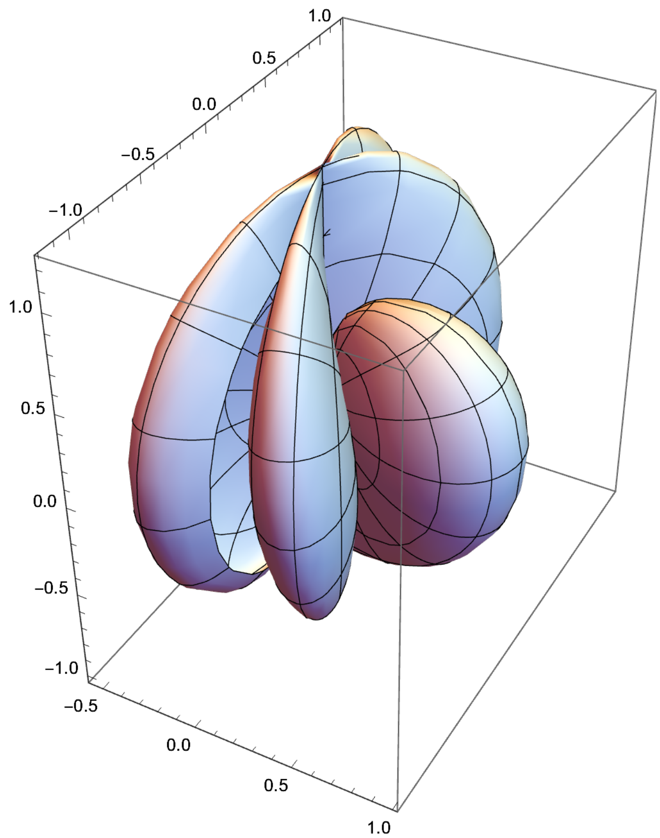
```
ContourPlot3D[Sin[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/2] Sin[ArcSin[(4 π r θ - r θ^2)/(4 π^2)]] +
  Cos[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))/2] Sin[2 ArcSin[(4 π r θ - r θ^2)/(4 π^2)]],
 {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



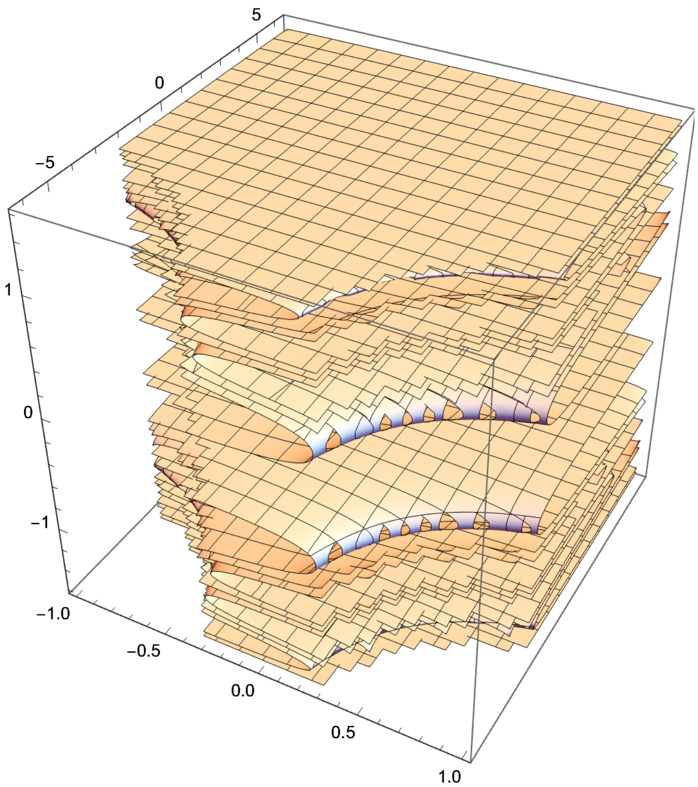
$$\text{SphericalPlot3D}\Big[\text{Sin}\Big[\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2}\Big]\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\Big]\Big]+$$

$$\text{Cos}\Big[\frac{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2}\Big]\,\text{Sin}\Big[2\,\text{ArcSin}\Big[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\Big]\Big],$$

$$\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



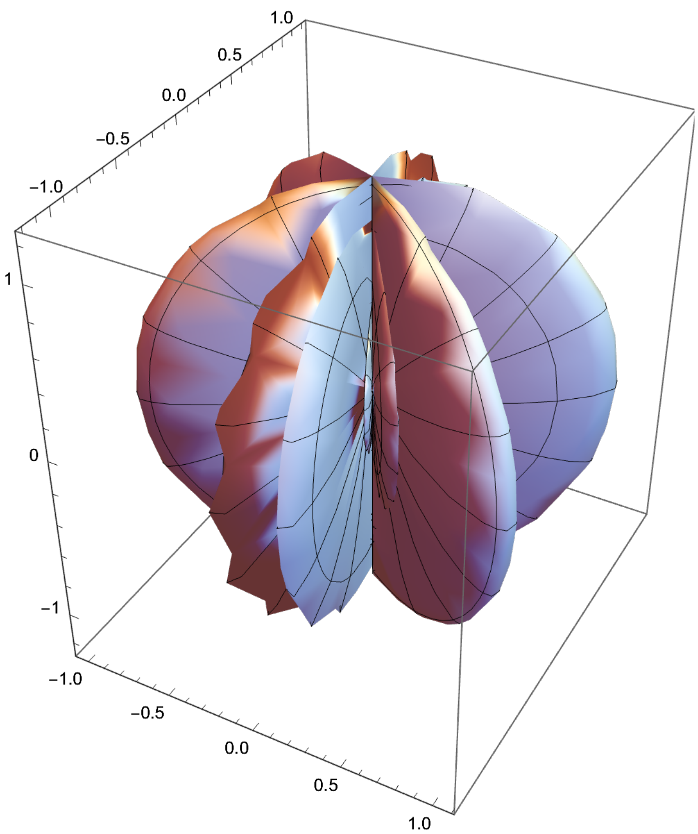
$$\text{ContourPlot3D}\left[\text{Sin}\left[\frac{\text{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right]}{2}\right]\,\text{Sin}\left[2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right] + \text{Cos}\left[\frac{\text{ArcSin}\left[\frac{4\,\pi\,r\,\theta - r\,\theta^2}{4\,\pi^2}\right]}{2}\right]\,\text{Sin}\left[2\times 2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right],\ \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\text{Sin}\left[\frac{\text{ArcSin}\left[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\right]}{2}\right]\,\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+\right.$$

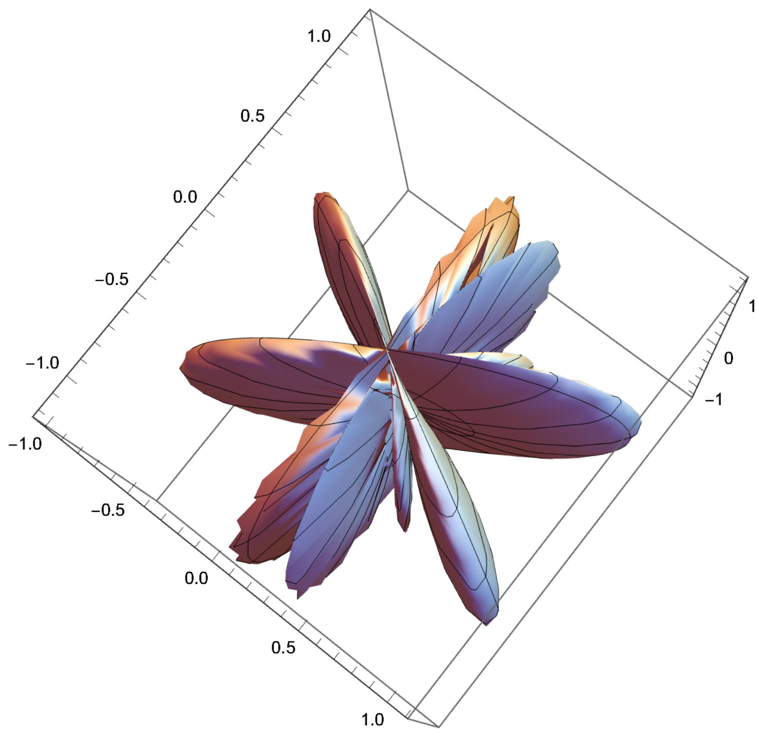
$$\text{Cos}\left[\frac{\text{ArcSin}\left[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\right]}{2}\right]\,\text{Sin}\left[2\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right],$$

$$\left.\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\right]$$



```
SphericalPlot3D[Sin[ArcSin[Sqrt[(4 π-θ) θ]/(2 π)]/2] Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] +
  Cos[ArcSin[Sqrt[(4 π-θ) θ]/(2 π)]/2] Sin[2 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])],
  {θ, -2, 2 π}, {β, -π / 2, π / 2}]
```

$$\texttt{SphericalPlot3D}\left[\texttt{Sin}\left[\frac{\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}{2}\right]\texttt{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right]+\texttt{Cos}\left[\frac{\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}{2}\right]\texttt{Sin}\left[2\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right],\{\theta,-2,2\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$

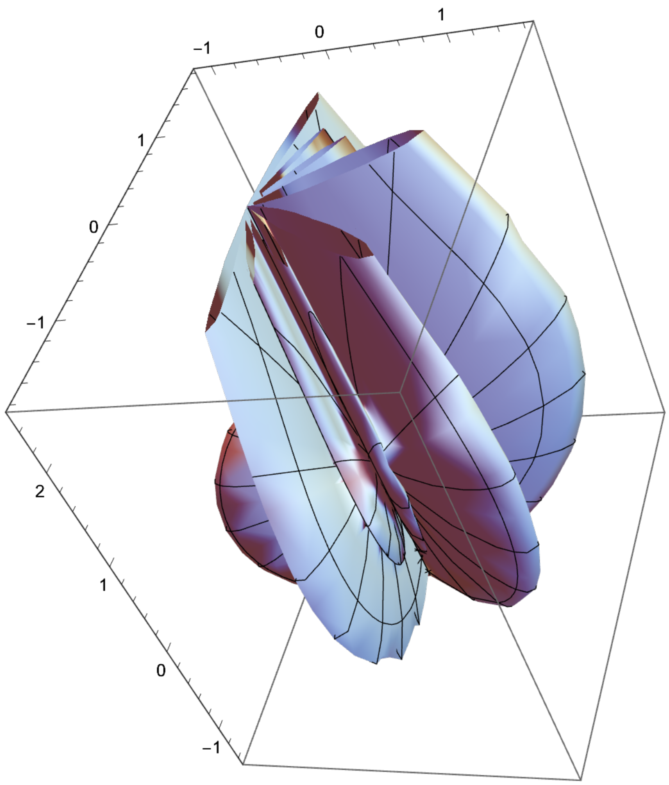


$$\text{Solve}\left[\text{Sin}\left[\frac{\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}{2}\right]\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+\text{Cos}\left[\frac{\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]}{2}\right]\text{Sin}\left[2\times 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]==\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi},\ r\right]$$

$$\Big\{\Big\{r\to -\frac{1}{\sqrt{\Theta}\ \sqrt{-4\pi+\Theta}}\,\pi\sqrt{\left(-4\,\text{Sin}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]^2\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2-8\,\text{Cos}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]\text{Sin}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\text{Sin}\left[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]-4\,\text{Cos}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]^2\text{Sin}\left[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2\right)}\Big\},$$

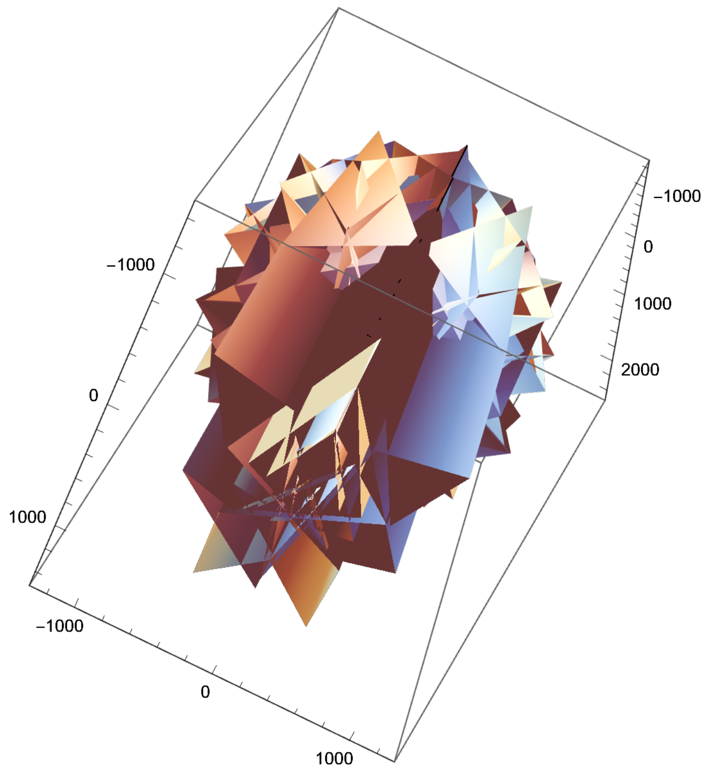
$$\Big\{r\to \frac{1}{\sqrt{\Theta}\ \sqrt{-4\pi+\Theta}}\,\pi\sqrt{\left(-4\,\text{Sin}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]^2\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2-8\,\text{Cos}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]\text{Sin}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]\text{Sin}\left[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]\text{Sin}\left[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]-4\,\text{Cos}\left[\frac{1}{2}\text{ArcSin}\left[\frac{\sqrt{(4\pi-\Theta)\,\Theta}}{2\pi}\right]\right]^2\text{Sin}\left[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]^2\right)}\Big\}\Big\}$$

$$\text{SphericalPlot3D}\Big[\frac{1}{\sqrt{\theta}\ \sqrt{-4\pi+\theta}}\pi\sqrt{\Bigg(-4\,\text{Sin}\Big[\frac{1}{2}\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2\,\text{Sin}\Big[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big]^2 - 8\,\text{Cos}\Big[\frac{1}{2}\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]\,\text{Sin}\Big[\frac{1}{2}\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]\,\text{Sin}\Big[2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big]\,\text{Sin}\Big[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big] - 4\,\text{Cos}\Big[\frac{1}{2}\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2\,\text{Sin}\Big[4\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big]^2\Bigg)},$$
$$\{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$

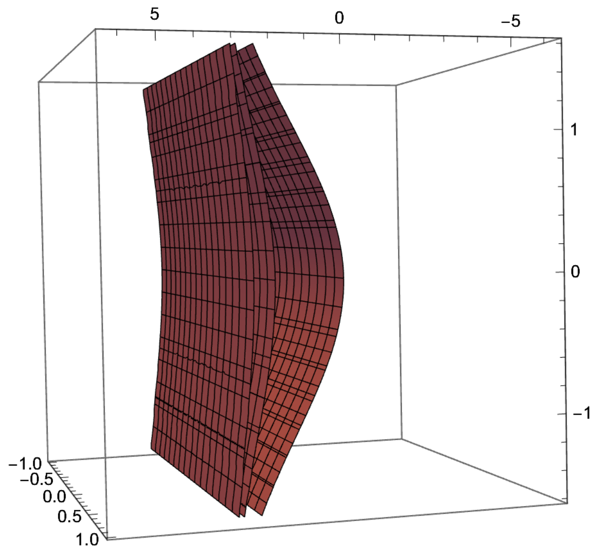


$$\text{SphericalPlot3D}\left[\frac{\frac{2\,\pi^{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}}{2\,\pi}\,\sqrt{4\,\pi-\theta_1}\,\sqrt{\theta_1}}{2\,\pi},\right.$$

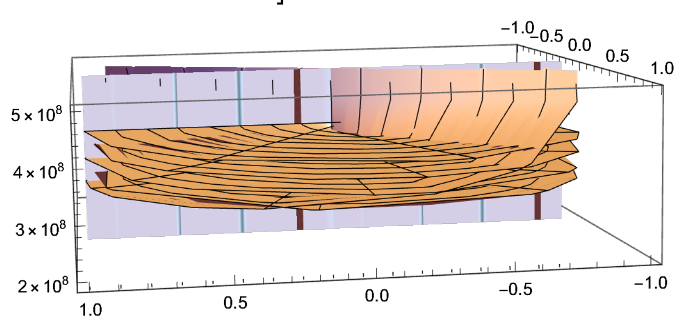
$$\left.\{\theta,\,-3000\,\pi,\,3000\,\pi\},\,\{\theta_1,\,-3000\,\pi,\,3000\,\pi\}\right]$$



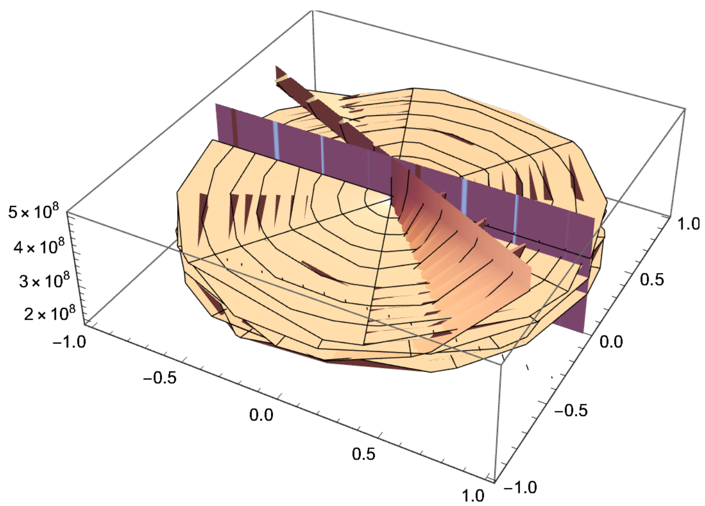
```
ContourPlot3D[(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2)) /
  (Sqrt[39.47841760435743` - 12.566370614359172` θ + ((4 π r^2)/(c^2 + r^2))^2]),
 {r, -1, 1}, {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```




```
h := 6.62606896 * 10^(-34)
c := 2.99792458 * (10^8)
RevolutionPlot3D[(√(3.5481432270250993`*^18 -
      (1.1294090667581471`*^18) (θ) + 8.987551787368176`*^16 (θ)^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + ((4 π r^2)/(c^2 + r^2))^2)), {r,
  -1, 1}, {θ, -4 π, 4 π}]
```



```
RevolutionPlot3D[(√(3.5481432270250993`*^18 -
    (1.1294090667581471`*^18) (θ) + 8.987551787368176`*^16 (θ)^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + ((4 π (Abs[z])^2)/(c^2 + Abs[z]^2))^2)),
 {z, -1, 1}, {θ, -4 π, 4 π}]
```



$$\text{ContourPlot3D}\Big[\Big(\sqrt{\Big(3.5481432270250993\grave{}*\hat{}18}$$

$$\left(\frac{1}{2\,\pi}\sqrt{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Abs}[x+\text{i}\,y]\right)^2-$$

$$1.129409066758147\grave{}*\hat{}18\,\text{Abs}[x+\text{i}\,y]^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.$$

$$\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$8.987551787368176\grave{}*\hat{}16\,\text{Abs}[x+\text{i}\,y]^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.$$

$$\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\right.$$

$$\left.\left.\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\Big)}\Big)\Big/$$

$$\Big(\sqrt{\Big(39.47841760435743\grave{}\left(\frac{1}{2\,\pi}\sqrt{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right.}$$

$$\left.\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\ \text{Abs}[x+\text{i}\,y]\right)^2-$$

$$12.566370614359172\grave{}\ \text{Abs}[x+\text{i}\,y]^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.$$

$$\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\text{Abs}[x+\text{i}\,y]^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+\right.\right.\right.$$

$$\left.\left.3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}$$

$$\left.\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\Big)}\Big),$$

$$\{y,-1,1\},\{x,-1,1\},\{\beta,-2\,\pi,2\,\pi\}\Big]$$

$$
\text{ContourPlot3D}\Bigg[\Bigg(\sqrt{\Bigg(3.54814\times10^{18}\left(\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\,\text{Abs}[x+\mathbb{i}\,y]\right)^2-}
$$

$$
1.12941\times10^{18}\,\text{Abs}[x+\mathbb{i}\,y]^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+
$$

$$
8.98755\times10^{16}\,\text{Abs}[x+\mathbb{i}\,y]^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\Bigg)\Bigg)\Bigg/
$$

$$
\Bigg(\sqrt{\Bigg(39.4784\left(\frac{1}{2\pi}\sqrt{4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\,\text{Abs}[x+\mathbb{i}\,y]\right)^2-}
$$

$$
12.5664\,\text{Abs}[x+\mathbb{i}\,y]^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+
$$

$$
\text{Abs}[x+\mathbb{i}\,y]^2\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\Bigg)\Bigg),
$$

$$
\{y,-1,1\},\{x,-1,1\},\{\theta,-2\pi,2\pi\}\Bigg]
$$

$$
\frac{\sqrt{4\pi-\theta}\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\,\text{Abs}[z]}{2\pi}
$$

$$
\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}
$$

$$h\,\nu = m\,c\,^\wedge 2$$

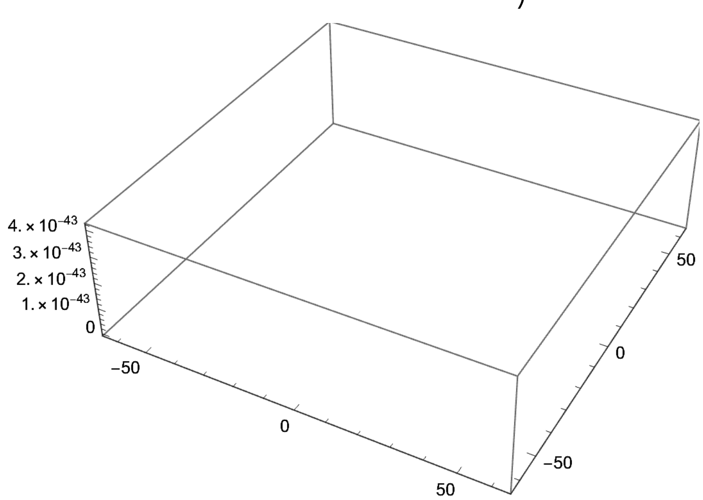
$$h\,\nu = h\,\left(\frac{1}{\theta}\right) = m\,c\,^\wedge 2$$

$$\text{Solve}\left[h\,\left(\frac{1}{\theta}\right) == m\,c\,^\wedge 2,\ m\right]$$

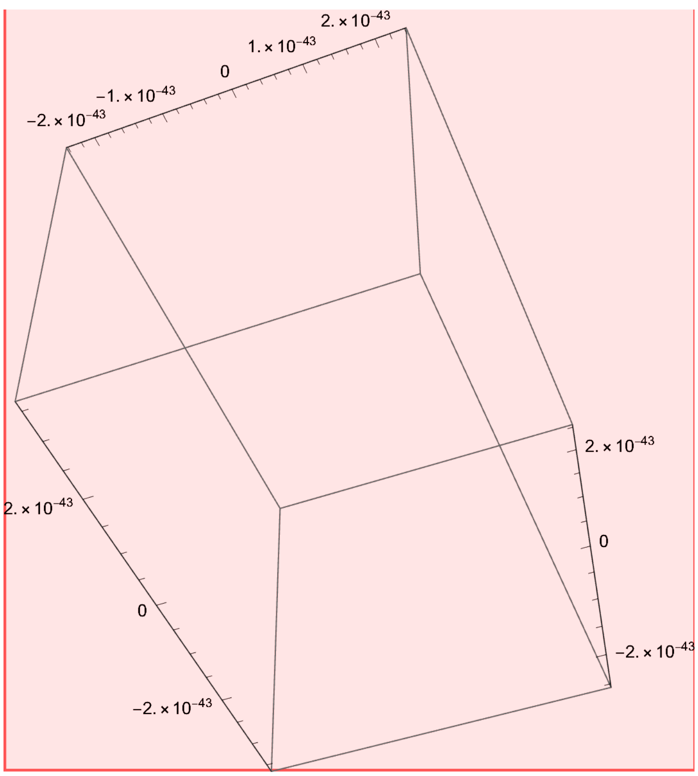
$$\left\{\left\{m \to \frac{h}{c^2\,\theta}\right\}\right\}$$

$$\left(\frac{4\,\pi}{3} + \frac{-4\,\pi^2\,r^4 + 12\,\pi^2\,r^2\,\eta^2}{6\,\pi\,r^2\,\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}} - \frac{2\,\pi\,\left(r^6 - 18\,r^4\,\eta^2 + 3\,\sqrt{3}\,\sqrt{-r^{10}\,\eta^2 + 11\,r^8\,\eta^4 + r^6\,\eta^6}\right)^{1/3}}{3\,r^2}\right)$$

$$\text{RevolutionPlot3D}\Big[\frac{6.62606896 * 10^{-34}}{(2.9979245 * 10\,^\wedge 8)^2\,2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}$$
$$\left(\sqrt{\left(-1.1294090667581471\grave{}*^\wedge 18 \times 2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + 8.987551787368176\grave{}*^\wedge 16\,\left(2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 3.5481432270250993\grave{}*^\wedge 18\,\text{Sin}[\beta]^2\right)}\right) \Big/$$
$$\left(\sqrt{\left(-12.566370614359172\grave{} \times 2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) + \left(2\,\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2\right)}\right),\ \{\beta,\ -20\,\pi,\ 20\,\pi\}\Big]$$

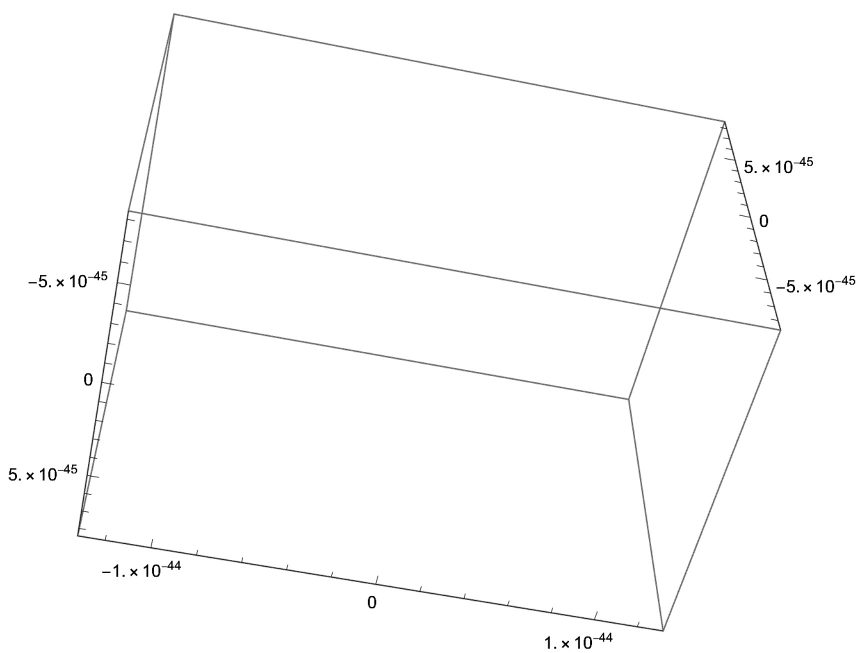


```
SphericalPlot3D[
 (6.62606896 * 10^-34) / ((2.9979245 * 10^8)^2 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
        (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
       2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √((-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 +
                π^6 Sin[ArcSin[√(-4 π^2 θ + 4 π θ^2 - θ^3) / (2 π √(-4 π + θ))]]^6)))^(1/3)))
  (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
         3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {β, -2 π, 2 π}, {θ, -4 π, 4 π}]
```



$$\left(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) == 2\left(\pi \pm \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) = 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right)$$

$$\text{SphericalPlot3D}\Big[\frac{6.62606896 * 10^{-34}}{(2.9979245 * 10\,^\wedge 8)^2\,\theta}\left(\sqrt{\left(-1.1294090667581471\grave{}*^\wedge 18\,\theta + 8.987551787368176\grave{}*^\wedge 16\,\theta^2 + 3.5481432270250993\grave{}*^\wedge 18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right), \{\beta, -200\pi, 200\pi\}, \{\theta, -400\pi, 400\pi\}\Big]$$

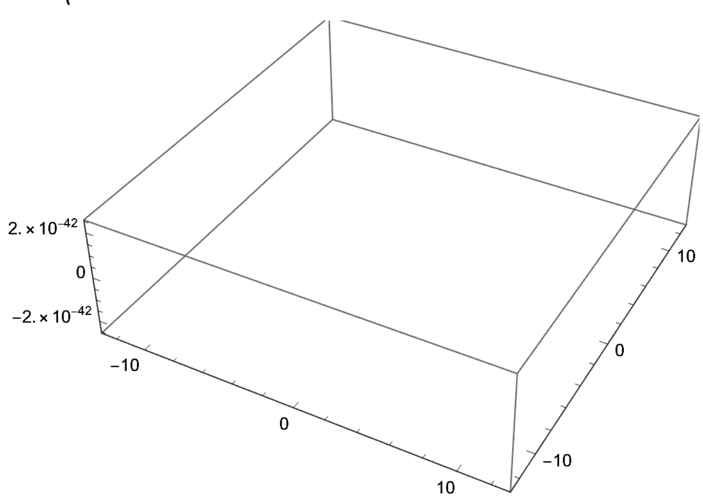


$$h = 6.62606896 * 10^{-34}$$

```
v =
 {{u → -0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22
        θ^2 + (0.` + 1.863986866980889`*^22 i) √(12.566370614359172` θ - 1.` θ^2)
        √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2))},
  {u → 0.000494236036686326` √(2.3423549790780066`*^23 θ - 1.863986866980889`*^22
        θ^2 + (0.` + 1.863986866980889`*^22 i) √(12.566370614359172` θ - 1.` θ^2)
        √(39.47841760435743` - 12.566370614359172` θ + 1.` θ^2))}} =

(√(3.5481432270250993`*^18 -
    1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
 (√(39.47841760435743` - 12.566370614359172` θ + θ^2))
```

$$\text{RevolutionPlot3D}\left[\frac{6.62606896 * 10^{-34}}{(2.9979245 * 10^{\wedge}8)^2\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}\right.$$

```
  (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2)) /
   (√(39.47841760435743` - 12.566370614359172` θ + θ^2)), {θ, -4 π, 4 π}]
```



$$\theta = \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2} = \left(\frac{4\pi}{3} + \frac{-4\pi^2 r^4 + 12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6 - 18 r^4\eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8\eta^4 + r^6\eta^6}\right)^{1/3}} - \frac{2\pi\left(r^6 - 18 r^4\eta^2 + 3\sqrt{3}\sqrt{-r^{10}\eta^2 + 11 r^8\eta^4 + r^6\eta^6}\right)^{1/3}}{3 r^2}\right)$$

$$\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta + 4\,\pi\,\theta^2 - \theta^3}}{2\,\pi\,\sqrt{-4\,\pi + \theta}}\right]$$

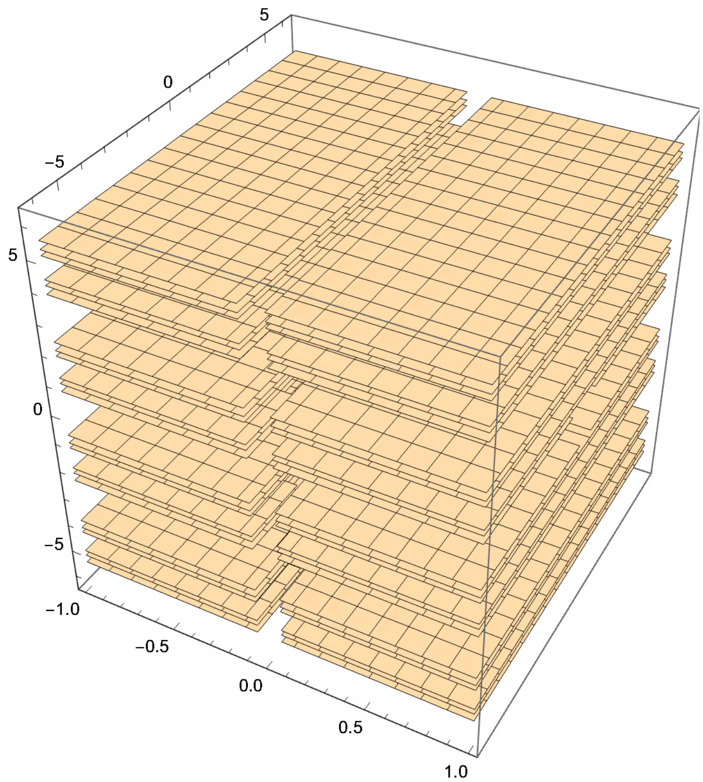
$$\text{ContourPlot3D}\Big[$$

$$\frac{6.62606896 * 10^{-34}}{(2.9979245 * 10\,\hat{}\,8)^2\;\frac{2\,\pi\,\left(r^2+\sqrt{r^4-r^2\,(r\,\text{Sin}[\beta])^2}\right)}{r^2}}\left(\sqrt{}\left(-1.1294090667581471\grave{}*\hat{}18\,\theta +\right.\right.$$

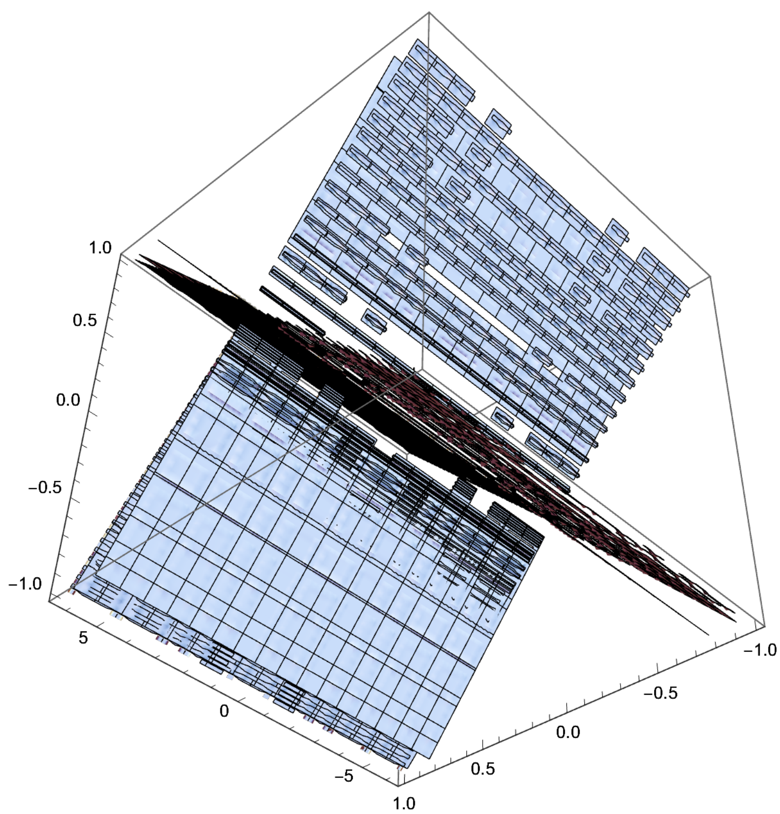
$$\left.\left.8.987551787368176\grave{}*\hat{}16\,(\theta)^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left(\sqrt{}\left(-12.566370614359172\grave{}\;\theta + (\theta)^2 + 39.47841760435743\grave{}\;\text{Sin}[\beta]^2\right)\right),$$

$$\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -2\,\pi, 2\,\pi\}\Big]$$



$$\text{ContourPlot3D}\Big[\frac{6.62606896 * 10^{-34}}{(2.9979245 * 10\text{^}8)^2\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}\left(\sqrt{\left(-1.1294090667581471\text{`*^}18\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}+8.987551787368176\text{`*^}16\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\text{`}\ \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}+\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)}\right),\ \{r,-1,1\},\ \{\eta,-1,1\},\ \{\beta,-2\pi,2\pi\}\Big]$$



A Notational Language for the Light-

Sensitive Psychophysics

by Parker Emmerson for Workshop with Tom Toleno

I. Light through the Arc and Height

Light travels through space, but within its travel is the information that the angular element, akin to time, conveys specific information about the location of contour in perceptual space through a geometric correlation that has the capability of mapping out contour in the visual perception directly by analogy of larger ecology to individual play of ambient light off of a contour. This is an interpretation of spectral energy within Gibson' s terminology of the false puzzle, "the amount of constancy obtained by an observer is pointless" (BRP 169), because the analogy is the conveyor of meaning to consciouss-ness. We will try to show this symbolically as well as directly.

There is information available in the stimulation, but there is also information communicated. A change in the environment, when measuring size, is the polar coordinate expression of the ambient optic array. The change is undergoing, because of a parameter of structure that is invariant, so the disruption in the array specifies the event. That event causes transition and transformation.

$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}\right\}\right\} \text{ is the height of a cone}$$

in terms of a difference of circumferences, invariant through r, because it is always the slant of the cone and also the value that the base of the cone cannot reach, because once it reaches that value, it is no longer a cone, but collapses to a circle. (196)

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} == \eta, r\right]$$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}\right\} \tag{197}$$

$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}} = r = \frac{2\pi * r * \text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} \tag{198}$$

Where η is a given height of a cone, and θ the amount of accumulated time of a perception, r*θ being the difference of the change in circumference between two circles that correlates to a height in the third dimension.

$$\text{Note that whatever r is equal to, the equation simplifies to } 1 = \frac{2\pi\ \text{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}} \tag{199}$$

The polar graph of this function represents the change in η of a radius through time.

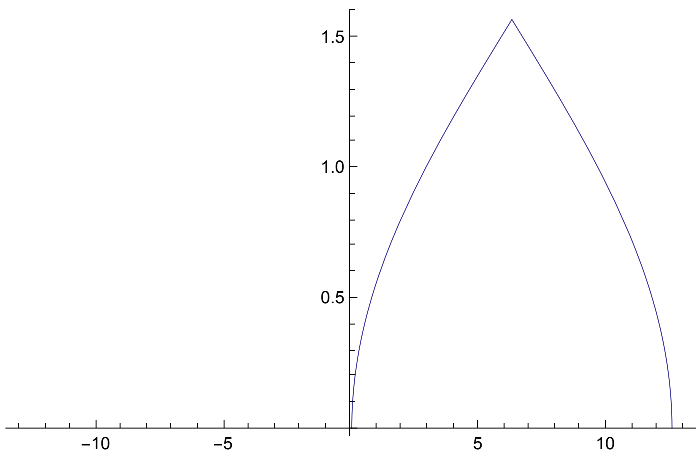
We can solve this equation for β, the angle made by the slant of the cone and the base of the cone,

in terms of theta (the amount of angle involved in folding the circle up into the third dimension when the slant is always equal to the radius.

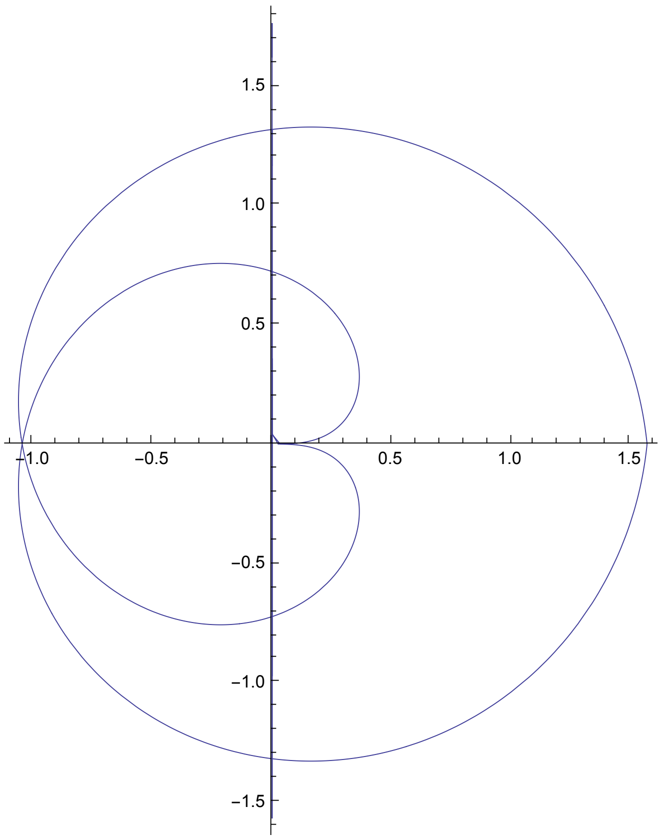
$$\text{Solve}\left[1 == \frac{2\,\pi\ \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \beta\right]$$

$$\left\{\left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\ \theta}}{2\,\pi}\right]\right\}\right\} \tag{200}$$

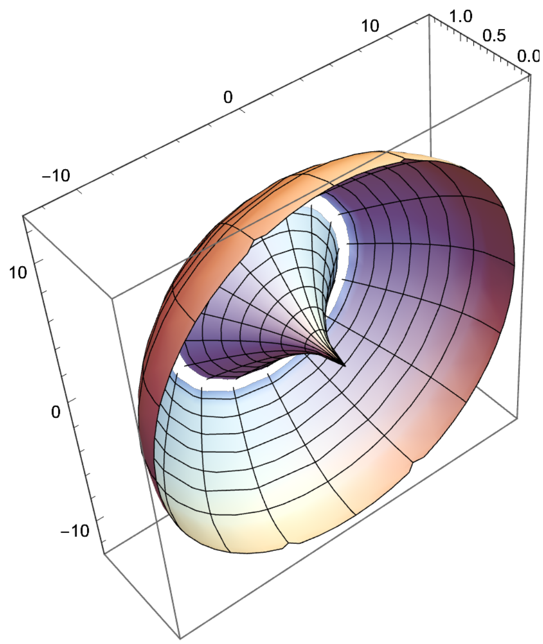
$$\text{Plot}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\ \theta}}{2\,\pi}\right],\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ \{\theta,\ -13,\ 13\}\right]$$



```
RevolutionPlot3D[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)], {θ, -13, 13}]
```



The field of optical flow, light traveling through the ambient array, I propose, is represented by the polar coordinate graph of a change in radius over time through transformation to being the height of the cone. A revolution deliver information to the perceiver given the intensity, hue, etc. of light. A single revolution of the systme is equivalent to the flow of combined light in the ambient array at the station point of perception.

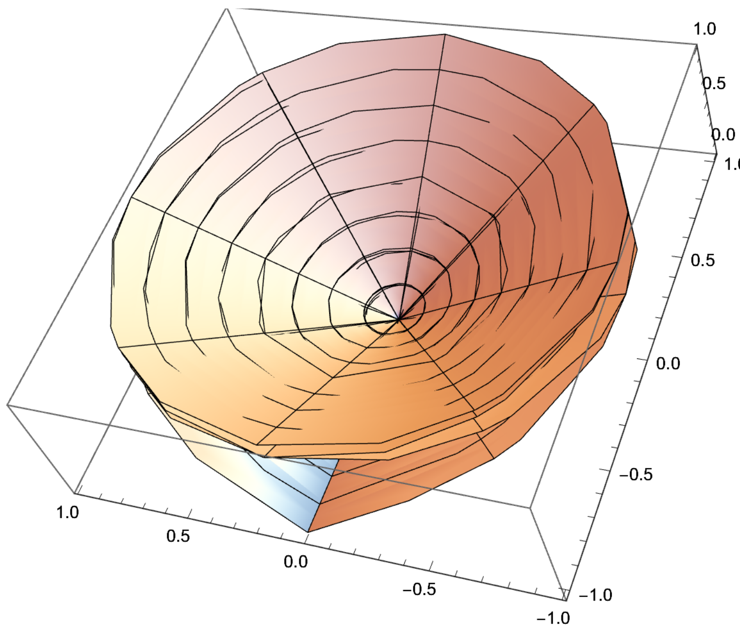
There are ways of solving for the radius in terms of purely the angle, θ. We will examine these nested sets of ways of understanding the point of view. By nested, we mean that depending on how in depth one goes into observing the world or extrapolating a function of light in the array, one will see different visual representations of the structuring of that information that are more or less informationally dense. This will lead to a series of functions that give us introspection into the structuring of light in terms of a cyclic perspective on time. For the system, it is important to realize that in the normal course of parameterizing the motion in the case at hand, θ does not go beyond 4π (i.e. that it sends the height of the cone up to its maximum value and back down over the course of two revolutions of a circle), and that β would not be able to be easily thought of beyond π or 2π (it has a value of π at the maximum height of the transition, and a value of 2π once the cone comes back down from the height).

```
Solve[1 == 2 π Sin[β]/Sqrt[4 π θ - θ^2], θ]
```

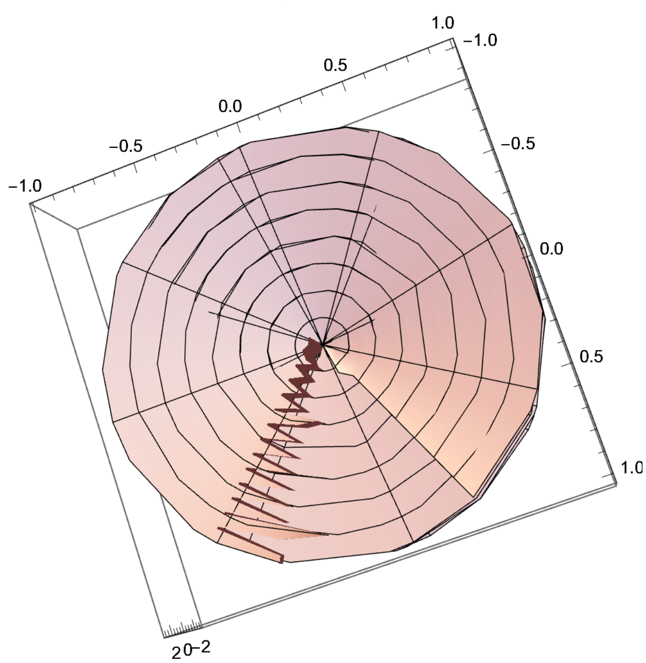
$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2 \mathrm{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2 \mathrm{Sin}[\beta]^2}\right)\right\}\right\} \quad (201)$$

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

```
RevolutionPlot3D[Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π), {r, -1, 1}, {θ, -4 π, 4 π}]
```




```
RevolutionPlot3D[(2 π η)/Sqrt[4 π θ - θ^2], {η, -1, 1}, {θ, -4 π, 4 π}]
```



The Analogy of a Change in Position Relating to a Change in Contour during the

Pickup of Invariants

Gibson has said that, "The theory of information pickup requires perceptual systems, not senses" (BRP 77). Gibson also he subtlety of the perceptual system to learning and time. He thinks that we continue learning to perceive in more detail as time goes on. This will be an important idea when discussing the extrapolation of functions relating to the information in the array over time.

The wavelength of the light we are discussing is the initial radius of the circle. Its path is to the subjective perceiver and a single wavelength.The parameters of the velocity of its travel, or the travel of any substance, are frequency and wavelength.

$$\text{We state that : } v = \lambda f, \text{ where } v \text{ is velocity, } \lambda = r \text{ is wavelength, and } 1 / \text{time} = f = \text{frequency.} \tag{202}$$

$$\text{Time} = 6 \left(\theta_{\text{degrees}}\right) = 6\ (180 / \pi)\ \theta = (1080 / \pi)\ \theta \tag{203}$$

The velocity being discussed is the first derivative of the distance, which is the height of the cone, *η*. A tiny piece of the ambient array would contain within it information regarding information of the surface off of which the light flowing through the array is reflecting. H contains information about the time and initial distance of a wavelength of light.

Information of variable contour is transferred to the perceiver by the flux of information in ambient light through each point in the optic array, represented by item number four. The rate of this variance is analogous to velocity in a rotational system, like the structuring of light through space - time. This is what is meant by information in the light.

Helmholtz proposes that phenomena regarding the visual system can be described by the use of analogy when things begin to look paradoxical. He takes into consideration the psychic faculties and suggests that the processing of the environment and its perceptual phenomena may occur through an unconscious working of analogy in the mind. I find this to be interesting and agreeable. It provides a humanist account through the recognition of biological factors regarding perceptual systems.

The Wavelength with Constant Value

$$v =$$

$$\lambda f = r\ (1 / (1080 / \pi)\ \theta) = (1 / (1080 / \pi))\ D\left[\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, \theta\right] = \frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}$$

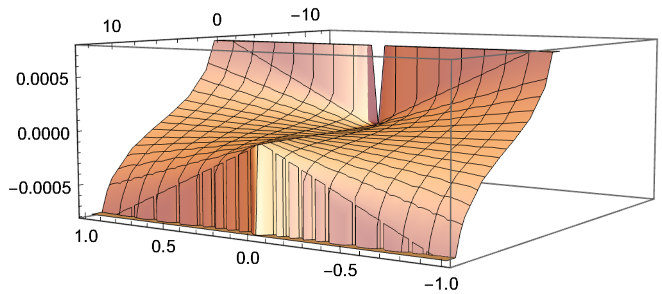
We will try to build up as many functions as possible without resorting to designating something to be having a velocity of light or non - light. It is simply a velocity for the time being. This way, we will have access to a realm of general functions of correlated variables.

$$(1 / (1080 / \pi))\ D\left[\frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}, \theta\right]$$

$$\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}$$

Velocity when r is constant $= \dfrac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}$

$$\text{Plot3D}\left[\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



We also have access to the equation,

$$\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} == r\ (1 / (1080 / \pi)\ \theta), \tag{204}$$

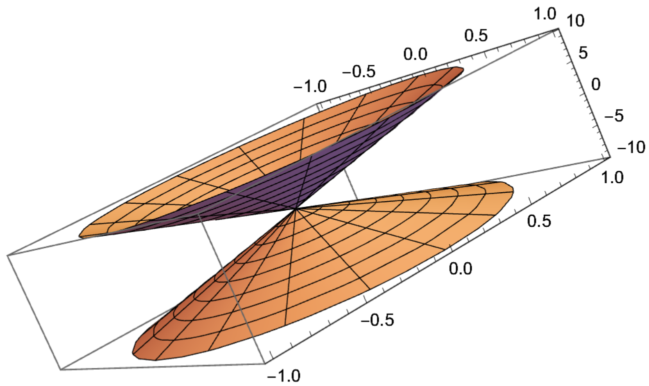
which winds up having the r variable cancel out,
and delivers three exact solutions for theta.

$$\text{Solve}\left[\frac{4 \pi r^2 - 2 r^2 \theta}{4320 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} == r\ (1 / ((1080 / \pi)\ \theta)), \theta\right]$$

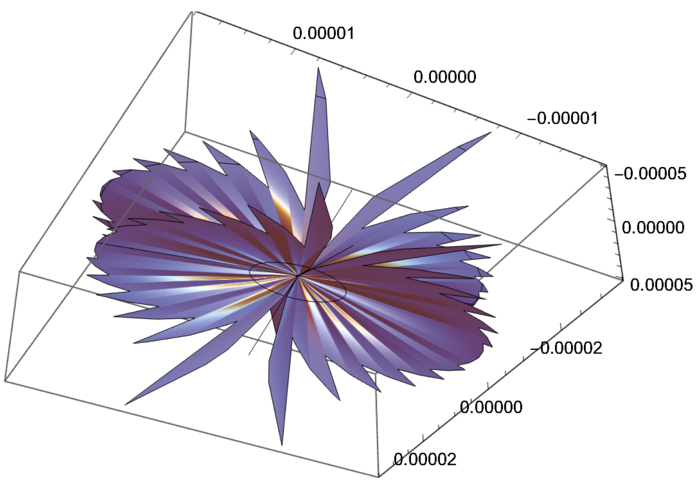
$$\left\{\left\{\theta \to \frac{2}{3}\left(2 \pi - \frac{2 \pi}{\left(17 + 3 \sqrt{33}\right)^{1/3}} + \left(17 + 3 \sqrt{33}\right)^{1/3} \pi\right)\right\},\right.$$
$$\left\{\theta \to \frac{4 \pi}{3} + \frac{2\left(1 + i \sqrt{3}\right) \pi}{3\left(17 + 3 \sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 - i \sqrt{3}\right)\left(17 + 3 \sqrt{33}\right)^{1/3} \pi\right\}, \tag{205}$$
$$\left.\left\{\theta \to \frac{4 \pi}{3} + \frac{2\left(1 - i \sqrt{3}\right) \pi}{3\left(17 + 3 \sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i \sqrt{3}\right)\left(17 + 3 \sqrt{33}\right)^{1/3} \pi\right\}\right\}$$

We will note that an arc length is equal to r**θ*. Thus, we will be able to see what the arc length is, because it represents the change in circumference of two circles. In this case, as the circle, viewed from head on, recedes from the perceiver into the distance, it gets smaller. This is a change in amount of surface area taken up on the retinal image, but also a way of visualizing the imaginary solutions the time element of waves traveling in space.

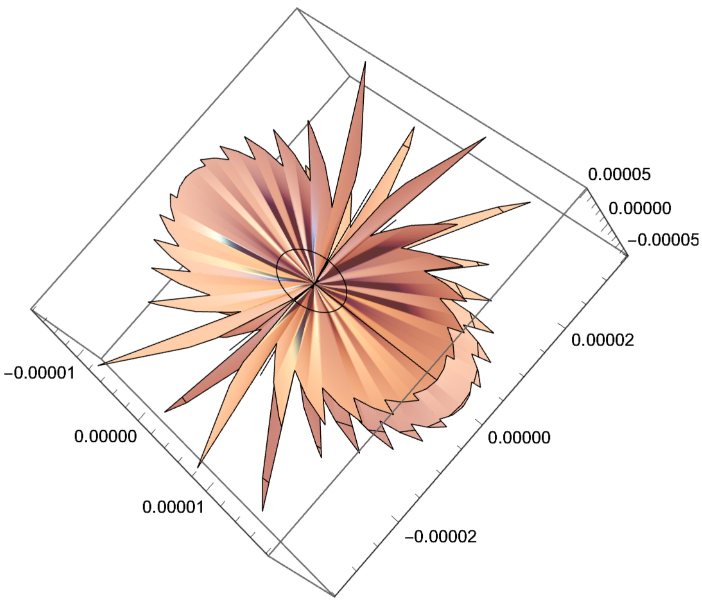
$$\texttt{RevolutionPlot3D}\left[\texttt{r}\,\frac{2}{3}\left(2\,\pi-\frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}}+\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right),\,\{\texttt{r},\,-1,\,1\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\texttt{r}\left(\frac{4\,\pi}{3}+\frac{2\left(1+\mathbb{i}\,\sqrt{3}\right)\pi}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathbb{i}\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right),\,\{\texttt{r},\,-1,\,1\}\right]$$



```
RevolutionPlot3D[r (4π/3 + (2 (1 - i √3) π)/(3 (17 + 3 √33)^(1/3)) - 1/3 (1 + i √3) (17 + 3 √33)^(1/3) π), {r, -1, 1}]
```



When combined, the three imaginary solutions form a cone, but seperately, they exist primarily in the complex plane. It requires all three solutions to deliver information of depth to the perceiver through light in terms of the real. In Gibson' s theory, depth is intimately connected with contour. Contour is delivered by the pickup of the invariant, r, in the ambient array, changing context in a different way from point to point. Thus, understanding of two truths in the real world like information given to the perceiver of an object by an edge, for instance is enabled.

Mach begins by verifying a belief in the space - sense, an area of parameterized space relating the sense of an individual to the stimulus in the world. The space - sense provides a workspace for the individual senses like sense of sight and touch to enable a perceptual experience.“ The perception of Depth depends on extra - occular experiences” (BRP 118) is an idea that makes a great deal of sense to me, because when we experience or perceive truth, we use multiple faculties to make sense of a phenomenon.

The Wavelength with Changing Value during a Transition

The initial radius changes contexts, but can it be said to actually change? The wavelength, r, could be said to be changing if we consider that $\Delta r = r - r_1$. Although it is invariant in the context of always being the slant of the cone, it changes when understood to be the base of a cone. The height of the cone starts at zero and goes toward the locus of perception, which is the subjective perceiver. In the ambient array, many different wavelengths are present. It is reasonable, then to think that a wavelength could change during the course of traveling a single wavelength. When the circle is infinitely far away, it has a perceived radius of 0. It is important to discuss the ecological context of the meaning of the array. The initial radius could be thought of being analogous to the monocular field of vision.

$$v = \lambda f = r\,(1/(1080/\pi)\,\theta) = (1/(1080/\pi))\, D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, r, \theta\right] \tag{206}$$

$$(1/(1080/\pi))\, D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, r, \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} = \text{velocity during a transition} \tag{206}$$

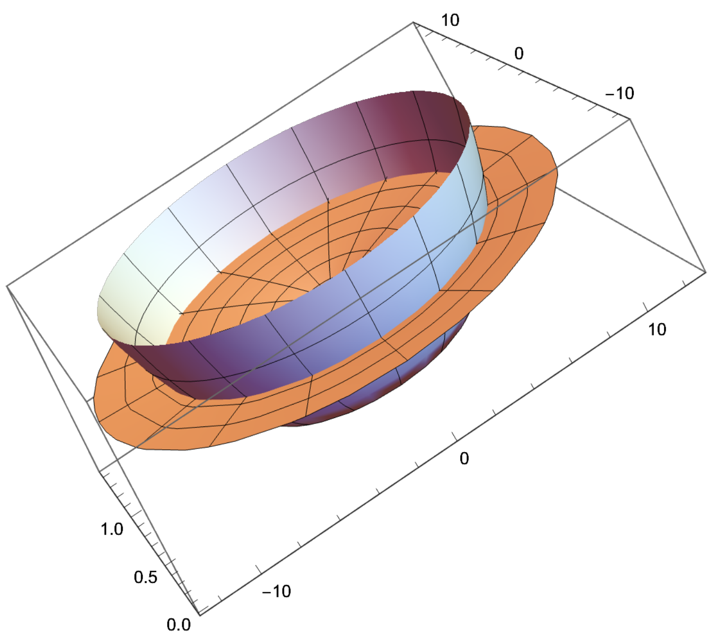
$$(1080/\pi)\,\theta = \text{time} \tag{207}$$

$$\frac{2\pi v t}{\sqrt{4\pi\theta - \theta^2}} = \frac{2\pi v\,(1080/\pi)\,\theta}{\sqrt{4\pi\theta - \theta^2}} = \frac{2\pi \frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080} (1080/\pi)\,\theta}{\sqrt{4\pi\theta - \theta^2}} \tag{208}$$

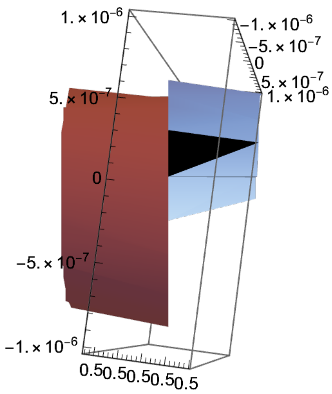
$$\text{Solve}\left[r == \frac{2 * \left(\frac{\pi\left(-\frac{(4\pi r^2 - 2 r^2 \theta)(8\pi r \theta - 2 r \theta^2)}{8\pi (4\pi r^2 \theta - r^2 \theta^2)^{3/2}} + \frac{8\pi r - 4 r \theta}{4\pi \sqrt{4\pi r^2 \theta - r^2 \theta^2}}\right)}{1080}\right) * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}, r\right]$$

$$\left\{\left\{r \to -\sqrt{1 + \frac{4\pi^2}{(4\pi - \theta)^2} - \frac{4\pi}{4\pi - \theta}}\right\}, \left\{r \to \sqrt{1 + \frac{4\pi^2}{(4\pi - \theta)^2} - \frac{4\pi}{4\pi - \theta}}\right\}\right\}$$

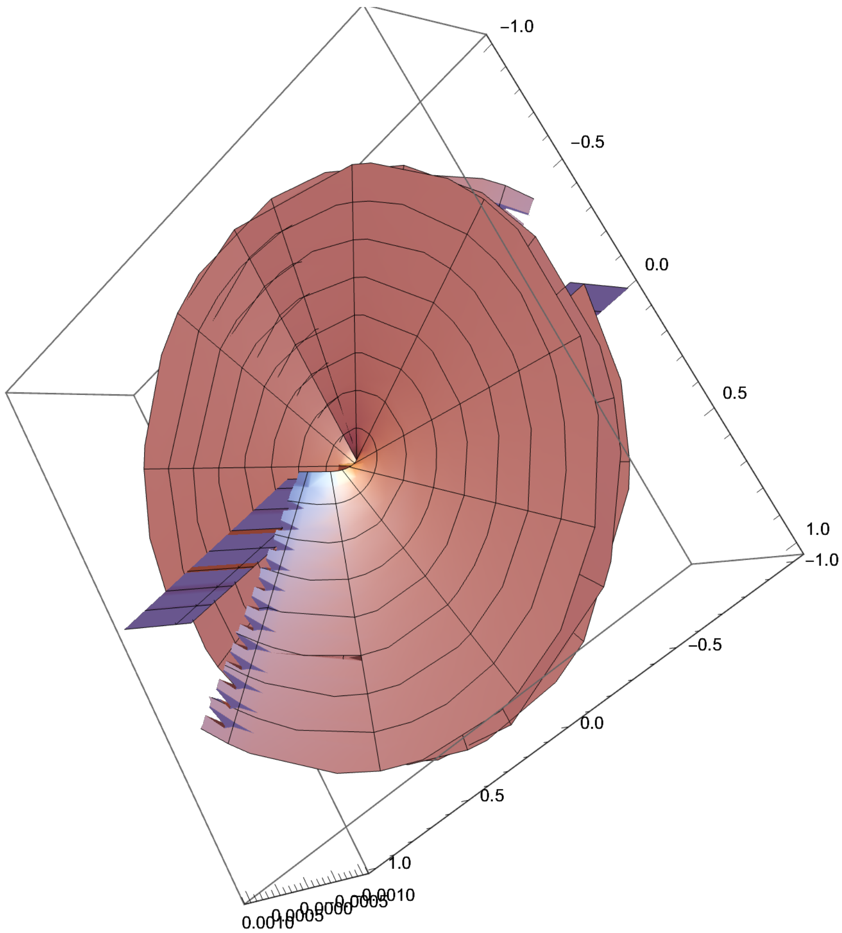
$$\text{RevolutionPlot3D}\left[\sqrt{1 + \frac{4\pi^2}{(4\pi - \theta)^2} - \frac{4\pi}{4\pi - \theta}}, \{\theta, -4\pi, 4\pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -.000001,\ .0000001\}\right]$$



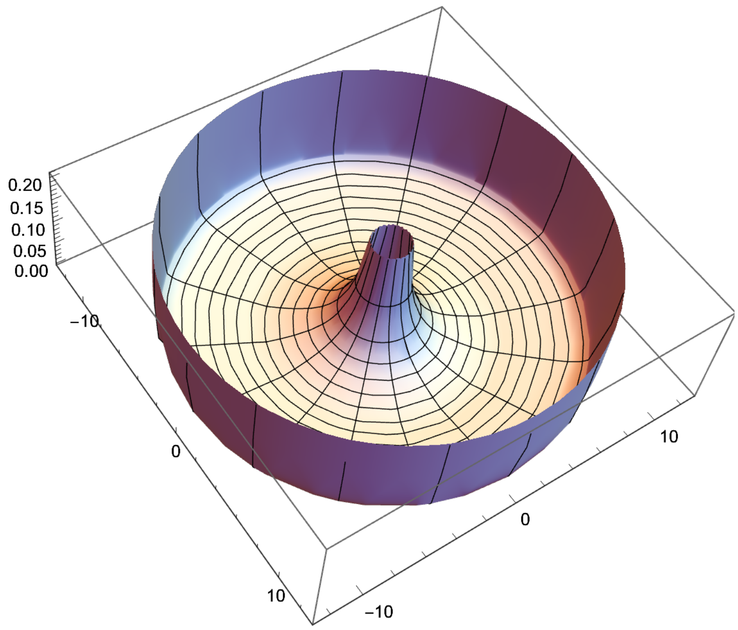
$$\text{RevolutionPlot3D}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080},\{r,-1,1\},\{\theta,-3\pi,3\pi\}\right]$$



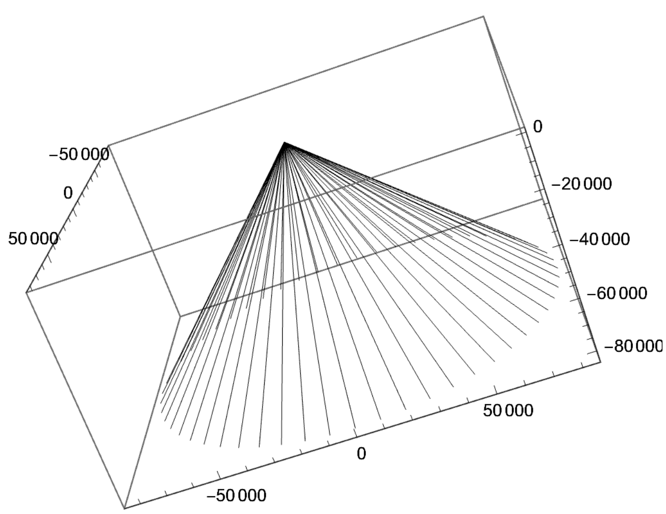
$$\text{Solve}\left[\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==r\,(1/(1080/\pi)\,\theta),r\right]$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\},\left\{r\to\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^{2}}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^{2}}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}},\ -\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^{2}}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



This shows us that the parametric structure of our system still holds when the consideration that the wavelength of light, r, changes during transition. This leads to some evidence for Gibson's idea of an invariant in the structure of light.

$$\text{Solve}\left[\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==r\,(1/(1080/\pi)\,\theta),\,\theta\right]$$

$$\text{RevolutionPlot3D}\Big[$$

$$\Bigg\{\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\Bigg\},$$

$$\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\Bigg(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/}$$

$$\Bigg(4\sqrt{\Bigg(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+}$$

$$\left.\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\right\},$$

$$\left\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\right\},$$

$$\left\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

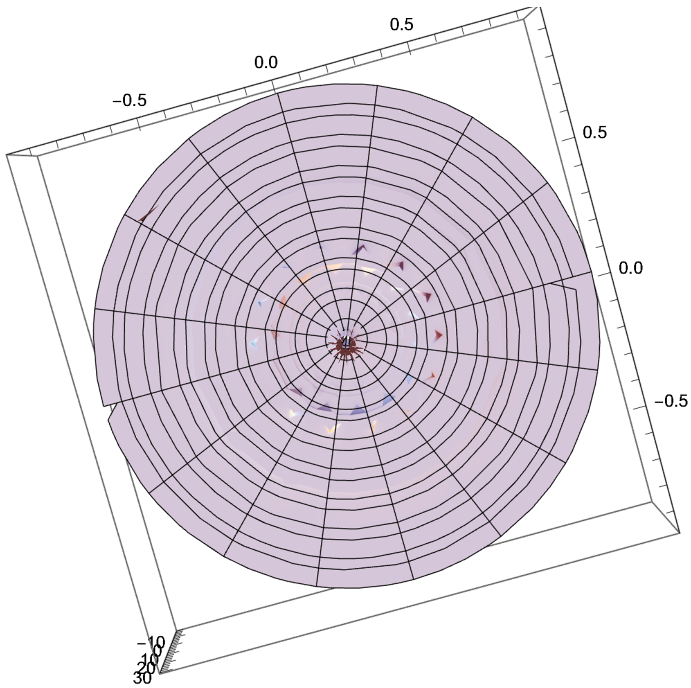
$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\frac{\left(1+13824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)\Bigg)\Bigg)\Bigg\}\Bigg\}\text{, \{r, -1, 1\}}\Bigg]$$



In this wheel, when viewing it from head on, we see the entire rainbow of colors in terms of contour of a surface.

We recently found out that these are all valid statements for r, even when it is considered to be changing during a transition.

$$r = \pm\frac{2\,\pi * r * \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} = \pm\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}} = \pm\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}$$

We can find out what η, the height of the cone is in terms of theta alone from this relation when r is changing.

$$\text{Solve}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}} == \frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}},\,\eta\right]$$

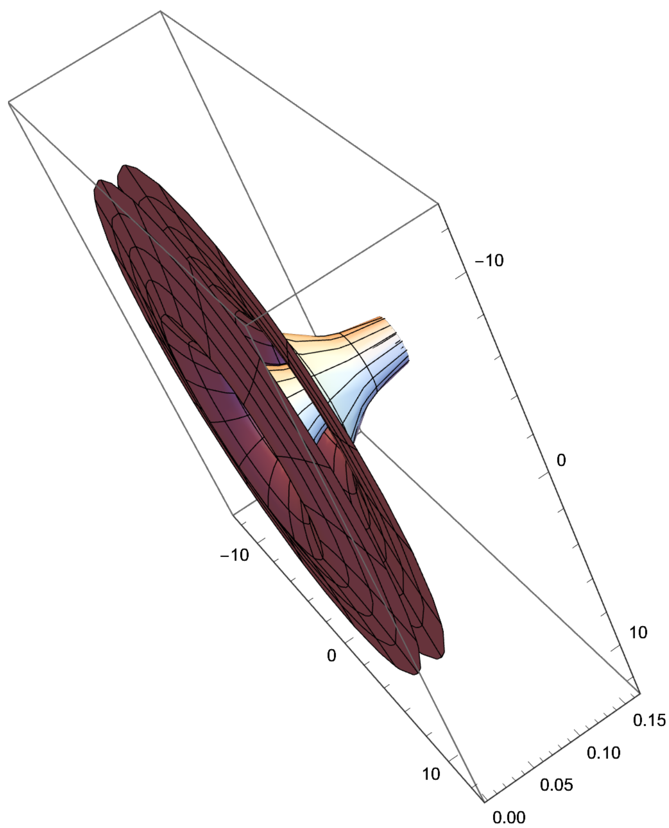
$$\left\{\left\{\eta\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right\}\right\}$$

When r = η, the circle will have gone around 2 π degrees. If the relations for a changing r hold, then we should arive at that answer.

$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}} == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}, \theta\right]$$

$$\{\{\theta \to 2\pi\}\}$$

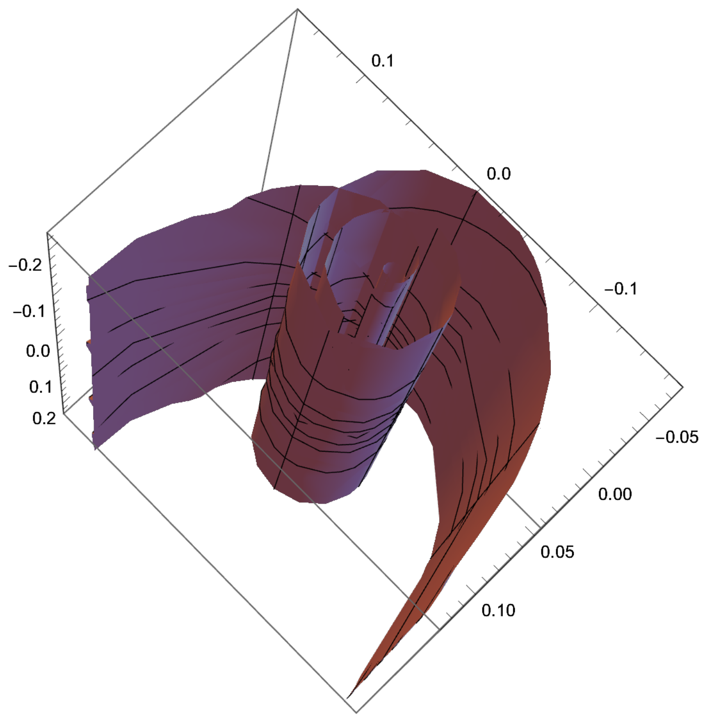
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}, \{\theta, -4\pi, 4\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi * r * \text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}, r\right]$$

$$\left\{\left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}}, \{\beta,-\pi,\pi\}, \{\theta,-4\pi,4\pi\}\right]$$



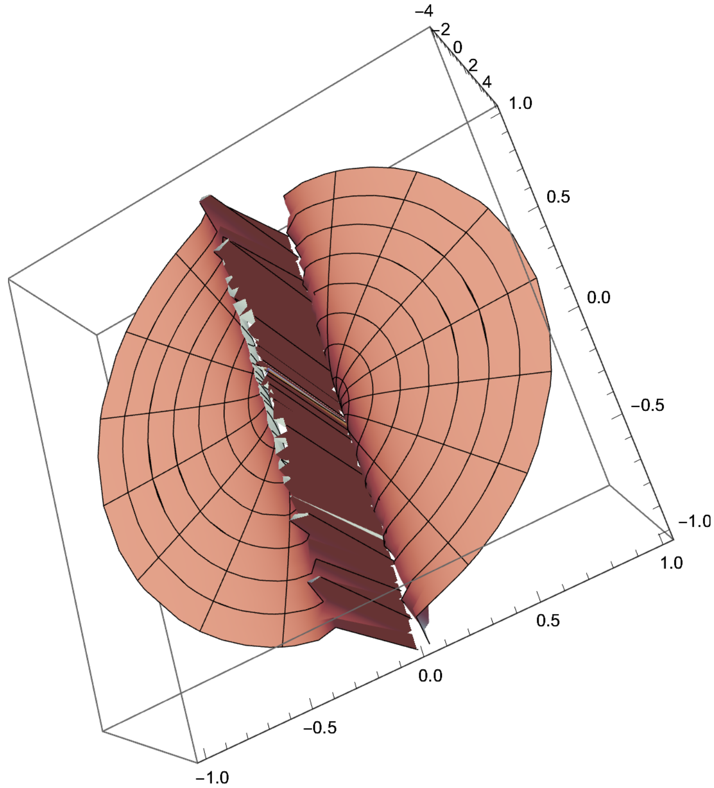
$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}} == r, \beta\right]$$

$$\left\{\left\{\beta\to\text{ArcCsc}\left[\frac{4\pi^2\ r\ \sqrt{\frac{(2\pi-\theta)^2}{(4\pi-\theta)\ \theta^2}}\ \theta^{3/2}\ \sqrt{(4\pi-\theta)\ \theta}}{4\pi^2-4\pi\theta+\theta^2}\right]\right\}\right\}$$

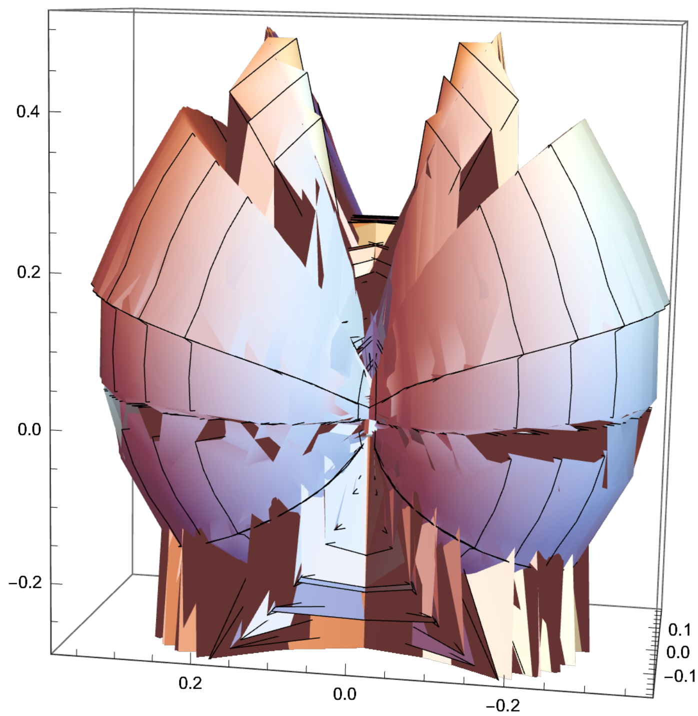
$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}} == r, \theta\right]$$

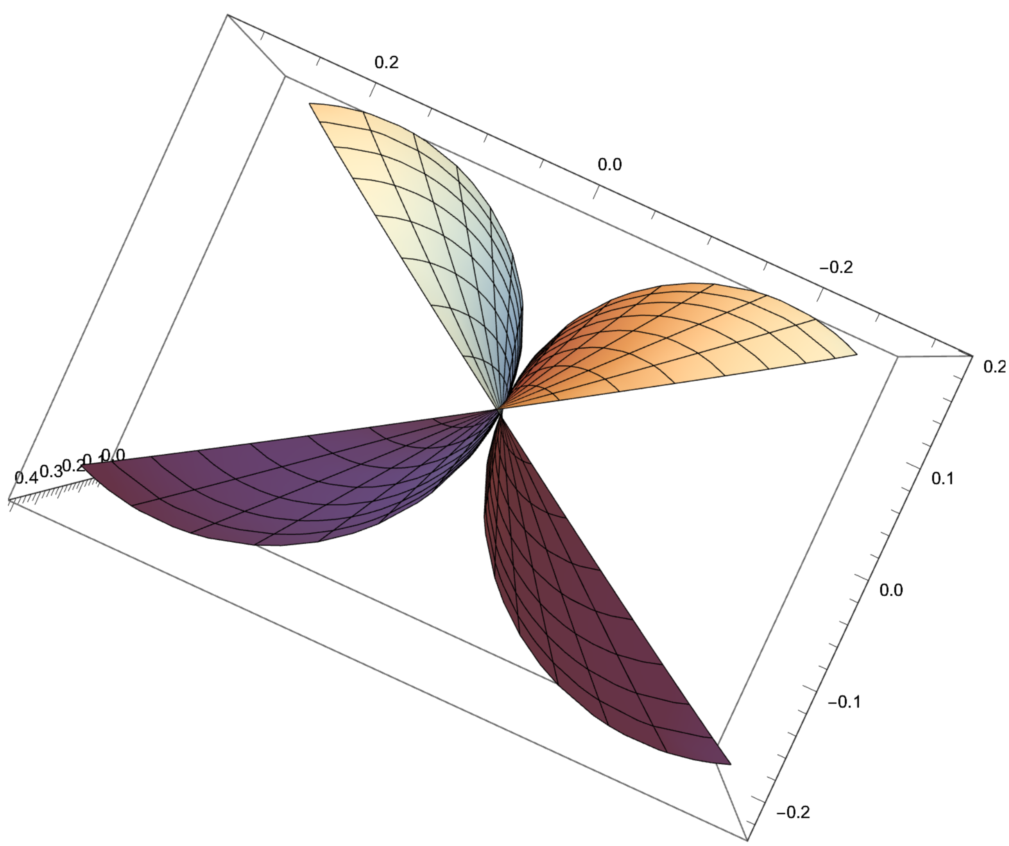
$$\left\{\left\{\theta\to-\frac{2\pi}{-1+4\pi^2\ r\ \text{Sin}[\beta]}\right\}, \left\{\theta\to\frac{2\pi}{1+4\pi^2\ r\ \text{Sin}[\beta]}\right\}\right\}$$

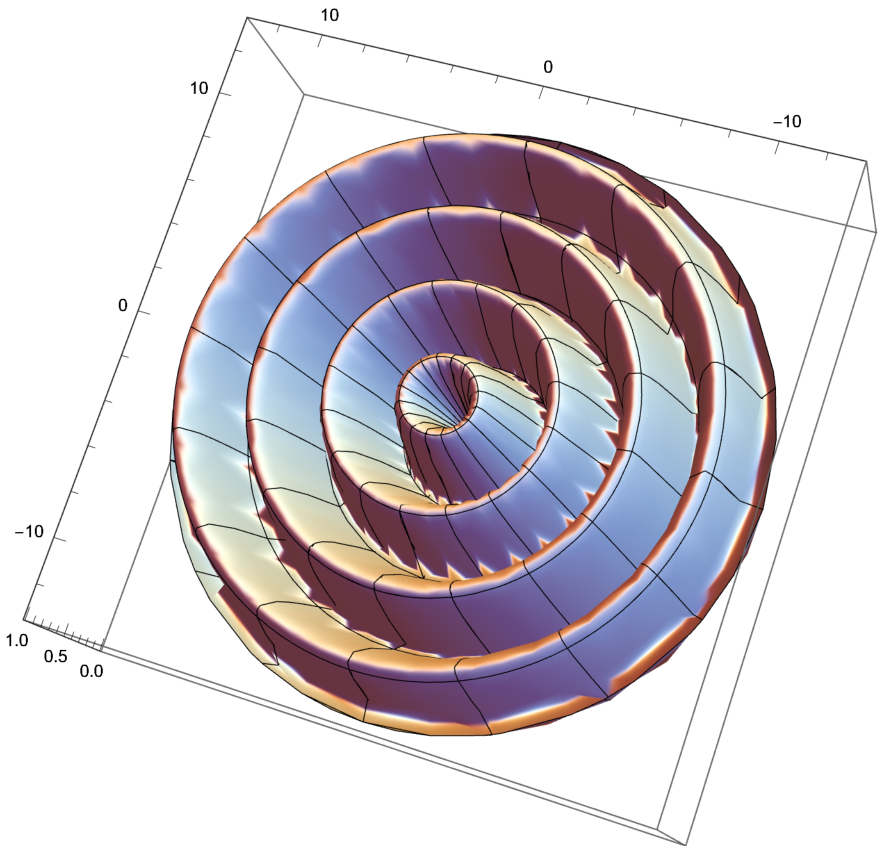
$$\texttt{RevolutionPlot3D}\left[\frac{2\pi}{1+4\pi^2\, r\, \texttt{Sin}[\beta]}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



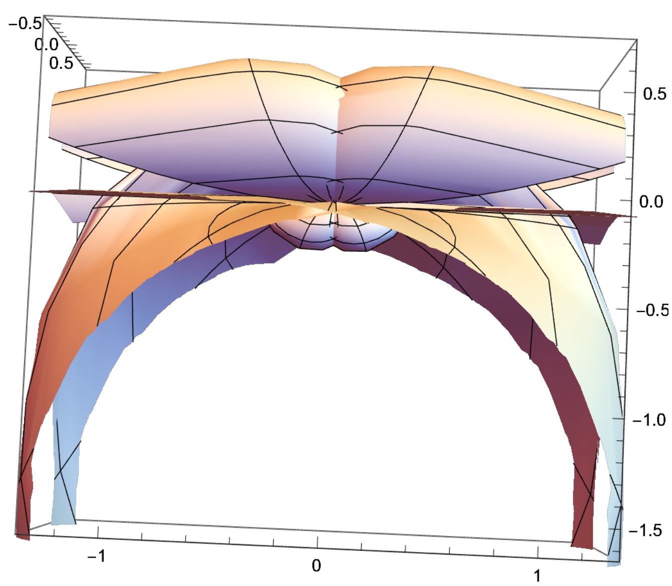
$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{4\pi\left(\frac{2\pi\left(\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta-\left(\frac{2\pi\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)\texttt{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)^2\theta^2}}{2\pi},\right.$$
$$\left.\{\theta, -360, 360\}, \{\beta, -360, 360\}\right]$$


0.4
0.2
0.0
−0.2
0.2
0.0
−0.2
0.1
0.0
−0.1

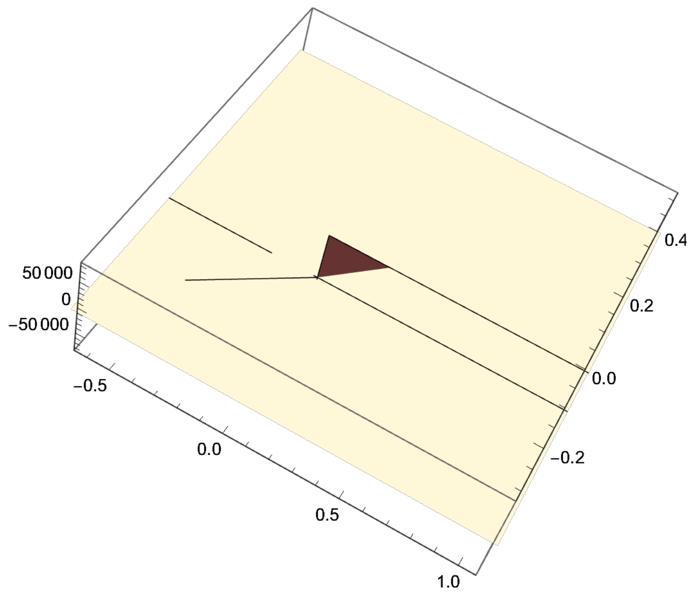

0.2
0.0
−0.2
0.2
0.1
0.0
−0.1
−0.2



$$\texttt{SphericalPlot3D}\left[\frac{2\,\pi\,\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\ \texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{\theta,\ -4\,\pi,\ 4\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\right]$$

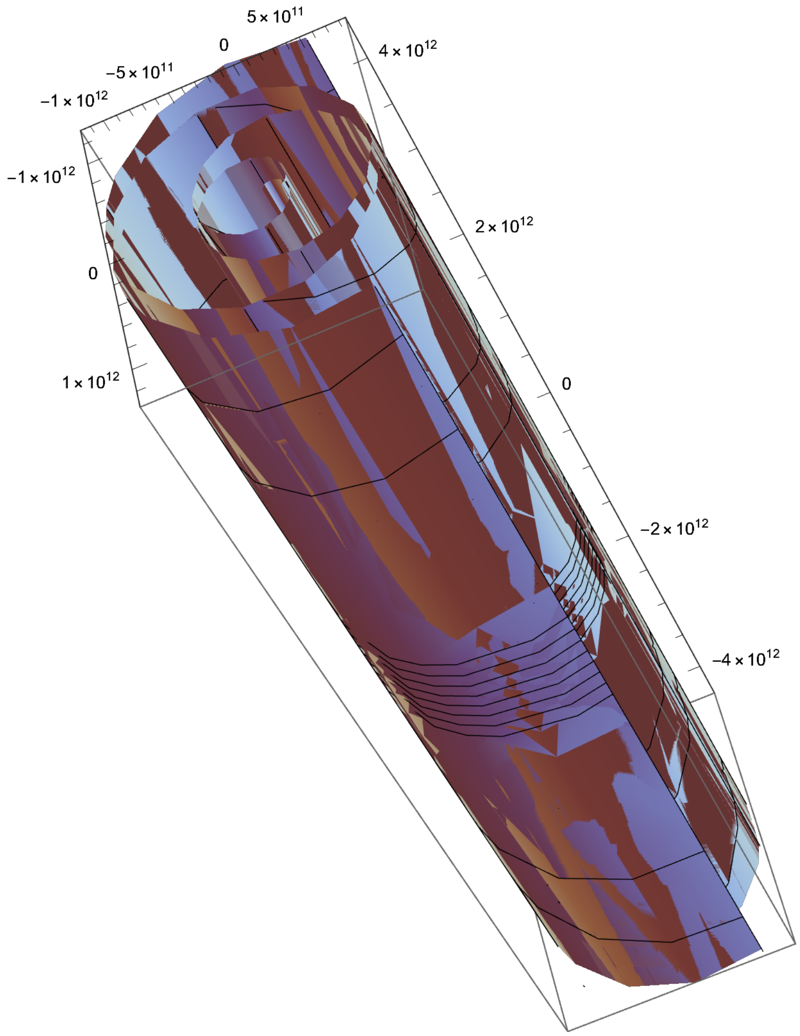


$$\text{RevolutionPlot3D}\left[\frac{r\,(2\,\pi-\theta)}{2\,\pi\,\theta\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{r,\ -13,\ 13\},\ \{\theta,\ -13,\ 13\}\right]$$

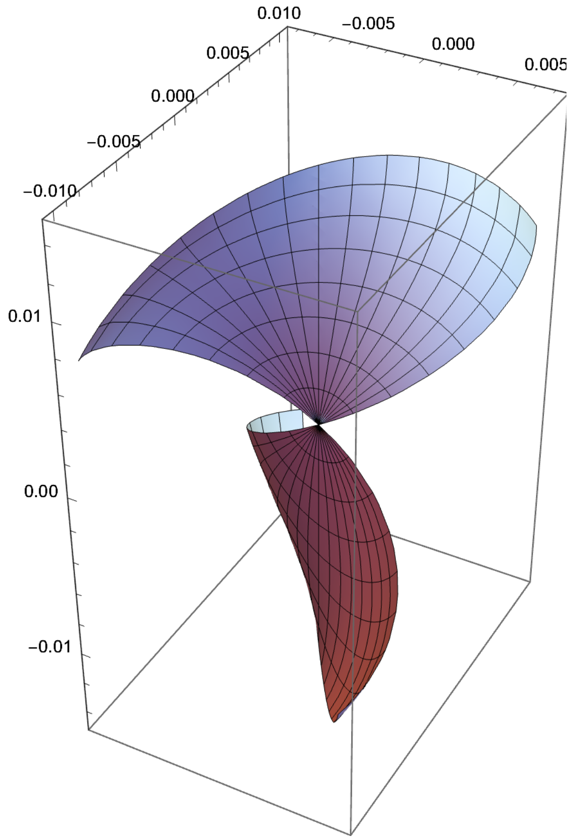


```
SphericalPlot3D[1080 c √θ √((4 π - θ) θ) Csc[β] / (π √(4 π - θ)), {β, -13, 13}, {θ, -13, 13}]
```

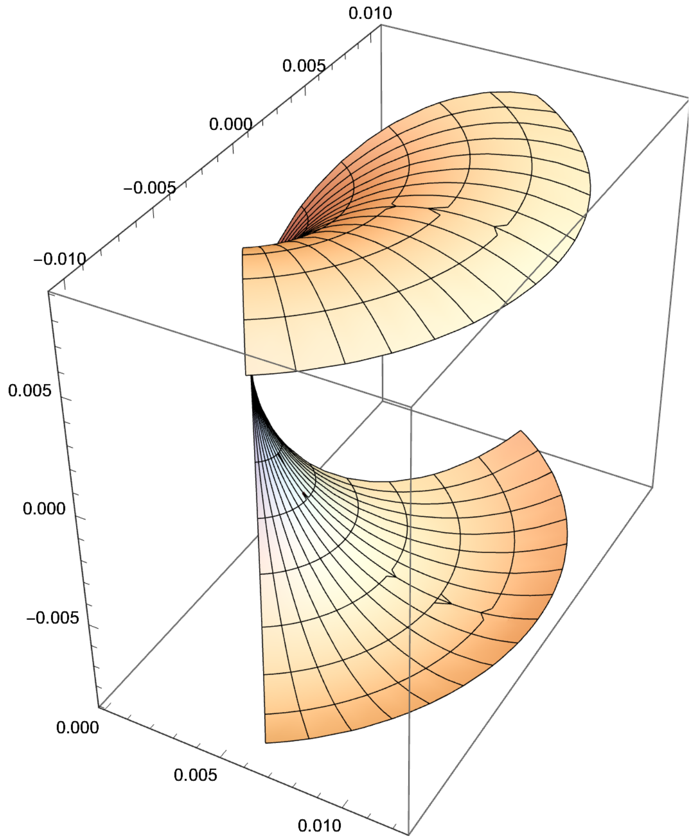
$$\text{SphericalPlot3D}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\beta]}{\pi\,\sqrt{4\pi-\theta}},\ \{\beta,-13,13\},\ \{\theta,-13,13\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\ \pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\beta]}{180\ \sqrt{(4\ \pi-\theta)\ \theta}}, \{\theta, -1, 1\}, \{\beta, -1, 1\}\right]$$

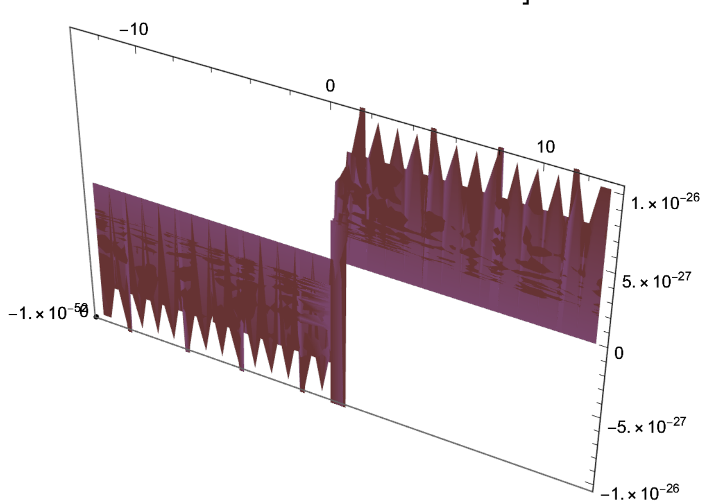


$$\texttt{SphericalPlot3D}\left[\frac{\pi\ \sqrt{4\,\pi-\theta}\ \sqrt{\theta}\ \texttt{Sin}[\beta]}{180\ \sqrt{(4\,\pi-\theta)\ \theta}},\ \{\beta,\ -1,\ 1\},\ \{\theta,\ -1,\ 1\}\right]$$

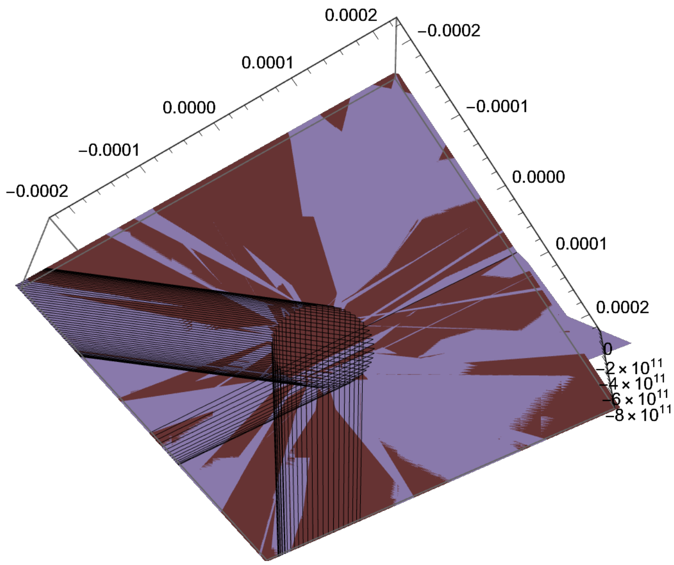


$$\texttt{RevolutionPlot3D}\left[2.144571844054625\grave{}*\hat{}-53\ \theta\ \frac{r\ (2\,\pi-\theta)}{2\,\pi\,\theta\ \sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\right.$$

$$\left.\{r,\ -13,\ 13\},\ \{\theta,\ -10\hat{}-53,\ 10\hat{}-53\}\right]$$



$$\texttt{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,-\pi,\pi\}\right]$$




```
We will also introduce the idea of a platform into which we can place
 different objects. These objects will interact with the platform,
which is also another kind of object.
```

A Notational Language for the Light-Sensitive Psychophysics

I. Light through the Arc and Height

Light travels through space, but within its travel is the information that the angular element, akin to time, conveys specific information about the location of contour in perceptual space through a geometric correlation that has the capability of mapping out contour in the visual perception directly by analogy of larger ecology to individual play of ambient light off of a contour. This is an interpretation of spectral energy within Gibson' s terminology of the false puzzle, "the amount of constancy obtained by an observer is pointless" (BRP 169), because the analogy is the conveyor of meaning to consciouss-ness. We will try to show this symbolically as well as directly.

There is information available in the stimulation, but there is also information communicated. A change in the environment, when measuring size, is the polar coordinate expression of the ambient optic array. The change is undergoing, because of a parameter of structure that is invariant, so the disruption in the array specifies the event. That event causes transition and transformation. Physical

space uses mathematics to describe time in specifically a linear way. Psychophysical, or perceptual space is focused primarily on the event of perception, thus it uses a cyclic interpretation of the time element to the mathematical correlations.

$$\left\{\left\{\eta \to -\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right\}\right\}$$ is the height of a cone in terms of a difference of circumferences, invariant through r, because it is always the slant of the cone and also the value that the base of the cone cannot reach, because once it reaches that value, it is no longer a cone, but collapses to a circle. (209)

Solve$\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \eta,\ r\right]$

$$\left\{\left\{r \to -\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}, \left\{r \to \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}\right\} \tag{210}$$

$$\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}} = r = \frac{2\,\pi * r * \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} \tag{211}$$

Where η is a given height of a cone, and θ the amount of accumulated time during transition, r*θ is the difference of the change in circumference between two circles that correlates to a height in the third dimension.

Note that whatever r is equal to, the equation simplifies to $1 = \frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$ (212)

The polar graph of this function represents the change in η of a radius through time.

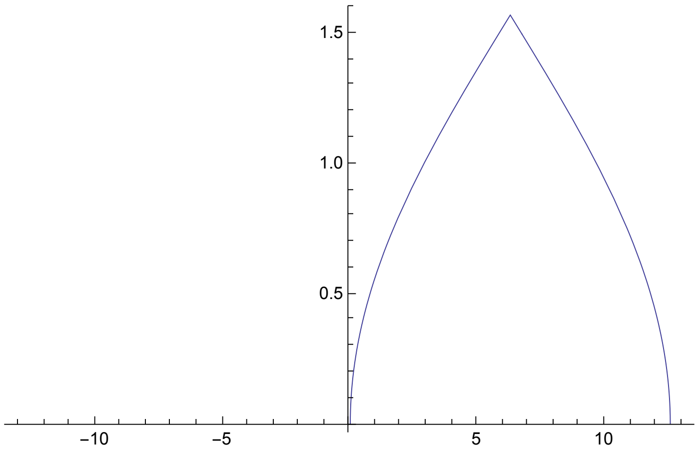
We can solve this equation for β, the angle made by the slant of the cone and the base of the cone, in terms of theta (the amount of angle involved in folding the circle up into the third dimension when the slant is always equal to the radius.

Solve$\left[1 == \frac{2\,\pi\ \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \beta\right]$

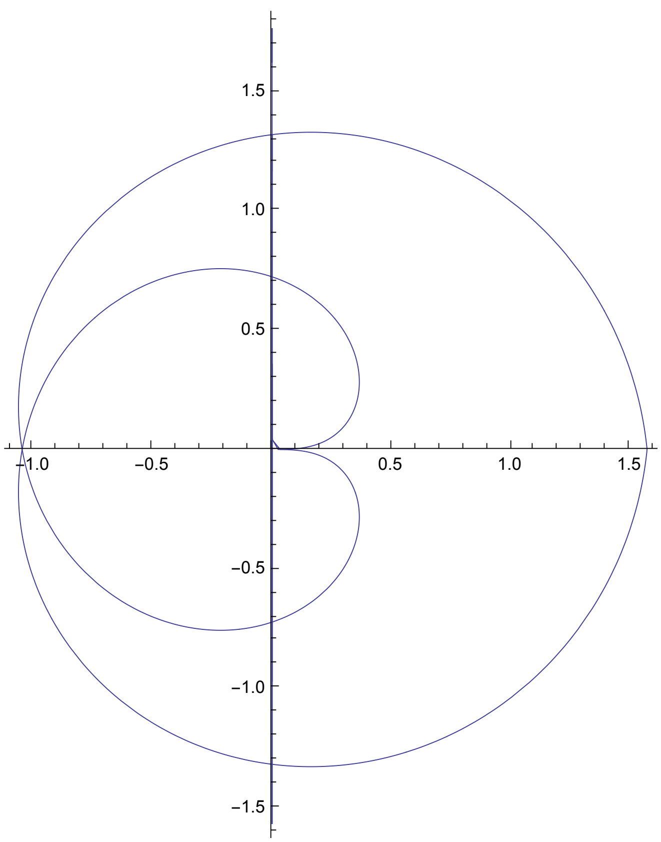
$$\left\{\left\{\beta \to \mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]\right\}\right\} \tag{213}$$

```
Plot[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)], {θ, -13, 13}]
```

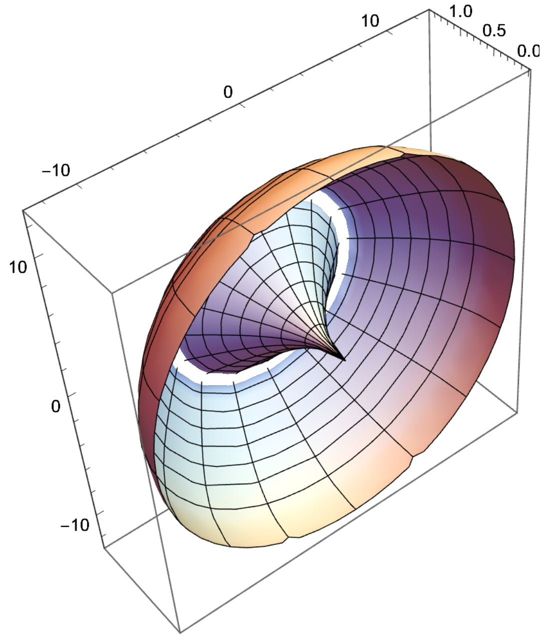
$$\text{Plot}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\{\theta,-13,13\}\right]$$



```
RevolutionPlot3D[ArcSin[√((4 π - θ) θ) / (2 π)], {θ, -13, 13}]
```




```
Ian said, "We were chased through tunnels by five million dragons.
James replied, "We should kill all of them with a sword."
Parker thought,
"It is these two bricks of sugar called cookies that is meaning throughness."
```

The field of optical flow, light traveling through the ambient array, I propose, is represented by the polar coordinate graph of a change in radius of the base of a cone over time through transition to being the height of the cone. A revolution delivers information to the perceiver given the intensity, hue, etc. of light. A single revolution of the systme is equivalent to the flow of combined light in the ambient array at the station point of perception or at a single, tiny piece of the array.

There are ways of solving for the radius in terms of purely the angle, θ. We will examine these nested sets of ways of understanding the point of view. By nested, we mean that depending on how in depth one goes into observing the world or extrapolating a function of light in the array, one will see different visual representations of the structuring of that information that are more or less informationally dense.

This will lead to a series of functions that give us introspection into the structuring of light in terms of a cyclic perspective on time. For the system, it is important to realize that in the normal course of parameterizing the motion in the case at hand, θ does not go beyond 4π (i.e. that it sends the height of the cone up to its maximum value and back down over the course of two revolutions of a circle), and that β would not be able to be easily thought of beyond π or 2π (it has a value of π at the maximum

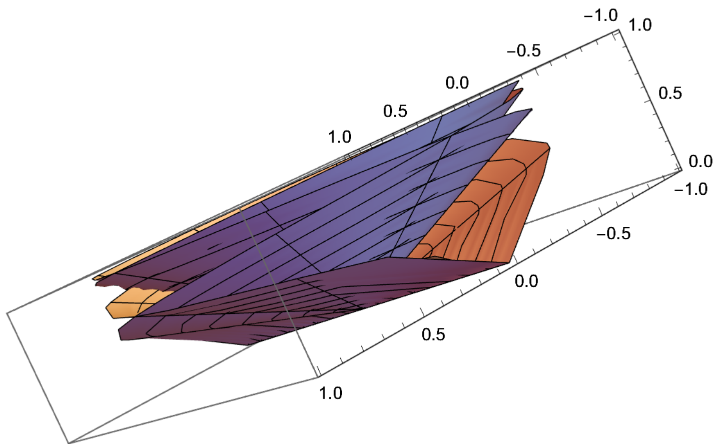
height of the transition, and a value of 2 π once the cone comes back down from the height).

$$\text{Solve}\left[1 == \frac{2\,\pi\ \text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \theta\right]$$

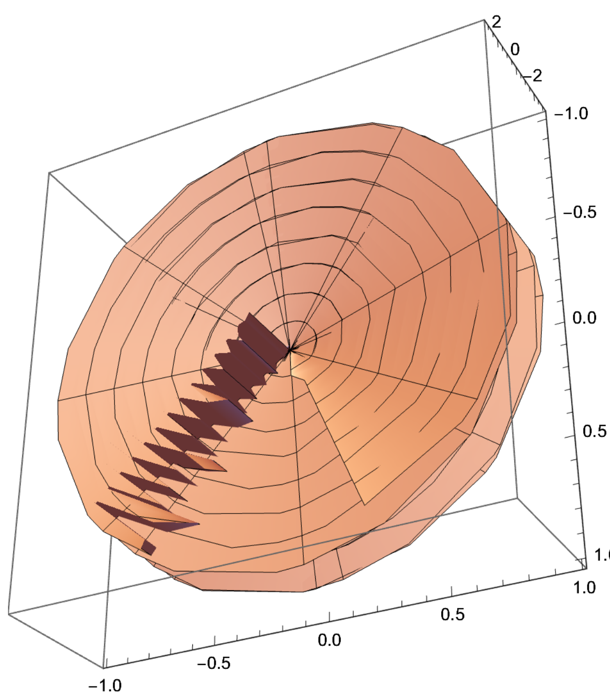
$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\ \text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\ \text{Sin}[\beta]^2}\right)\right\}\right\} \tag{214}$$

$$\eta \to \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ \{r,\ -1,\ 1\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}},\ \{\eta,\ -1,\ 1\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$



From this, we can visually see that each small piece of the ambient array contains within it a certain kind of contour that relates directly to the height and angle of the transition within that piece of contour and the growing ecological contour that maps out objects in the world for visual perception.

The Analogy of a Change in Position Relating to a Change in Contour during the Pickup of Invariants

Gibson has said that, "The theory of information pickup requires perceptual systems, not senses" (BRP 77). Gibson also he subtlety of the perceptual system to learning and time. He thinks that we continue learning to perceive in more detail as time goes on. This will be an important idea when discussing the extrapolation of functions relating to the information in the array over time.

The wavelength of the light we are discussing is the initial radius of the circle. Its path is to the subjective perceiver and a single wavelength.The parameters of the velocity of its travel, or the travel of any substance, are frequency and wavelength.

$$\text{We state that : } v = \lambda f, \text{ where } v \text{ is velocity, } \lambda = r \text{ is wavelength, and } 1/\text{time} = f = \text{frequency.} \tag{215}$$

$$\text{Time} = 6\,(\theta_{\text{degrees}}) = 6\,(180/\pi)\,\theta = (1080/\pi)\,\theta \tag{216}$$

The velocity being discussed is the first derivative of the distance, which is the height of the cone, η. A tiny piece of the ambient array would contain within it information regarding information of the surface off of which the light flowing through the array is reflecting. H contains information about the time and initial distance of a wavelength of light.

Information of variable contour is transferred to the perceiver by the flux of information in ambient light through each point in the optic array, represented by item number four. The rate of this variance is analogous to velocity in a rotational system, like the structuring of light through space - time. This is what is meant by information in the light.

Helmholtz proposes that phenomena regarding the visual system can be described by the use of analogy when things begin to look paradoxical. He takes into consideration the psychic faculties and suggests that the processing of the environment and its perceptual phenomena may occur through an unconscious working of analogy in the mind. I find this to be interesting and agreeable. It provides a humanist account through the recognition of biological factors regarding perceptual systems.

The Wavelength with Constant Value

$$v =$$

$$\lambda f = r\,(1/(1080/\pi)\,\theta) = (1/(1080/\pi))\,D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right] = \frac{4\pi r^2 - 2 r^2\theta}{4320\sqrt{4\pi r^2\theta - r^2\theta^2}}$$

We will try to build up as many functions as possible without resorting to designating something to be having a velocity of light or non - light. It is simply a velocity for the time being. This way, we will

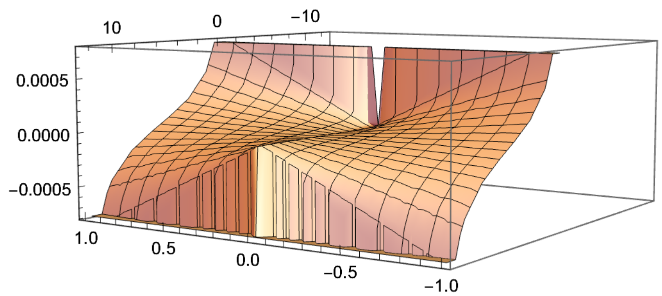
have access to a realm of general functions of correlated variables.

$$(1 / (1080 / \pi))\ D\left[\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}, \theta\right]$$

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}$$

Velocity when r is constant $= \dfrac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}$

$$\text{Plot3D}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}}, \{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}\right]$$



We also have access to the equation,

$$\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\,(1 / (1080 / \pi)\ \theta), \tag{217}$$

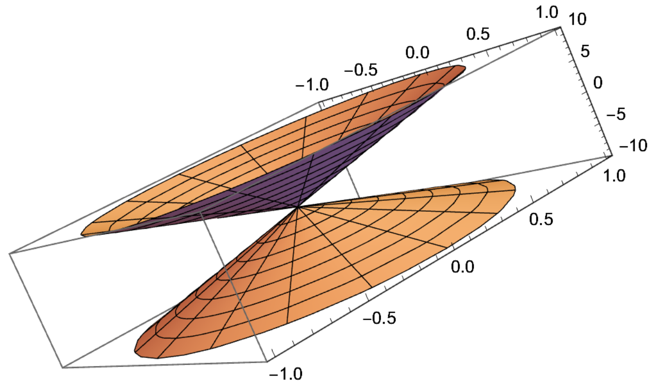
which winds up having the r variable cancel out,
and delivers three exact solutions for theta.

$$\text{Solve}\left[\frac{4\pi r^2 - 2 r^2 \theta}{4320 \sqrt{4\pi r^2 \theta - r^2 \theta^2}} == r\,(1 / ((1080 / \pi)\ \theta)), \theta\right]$$

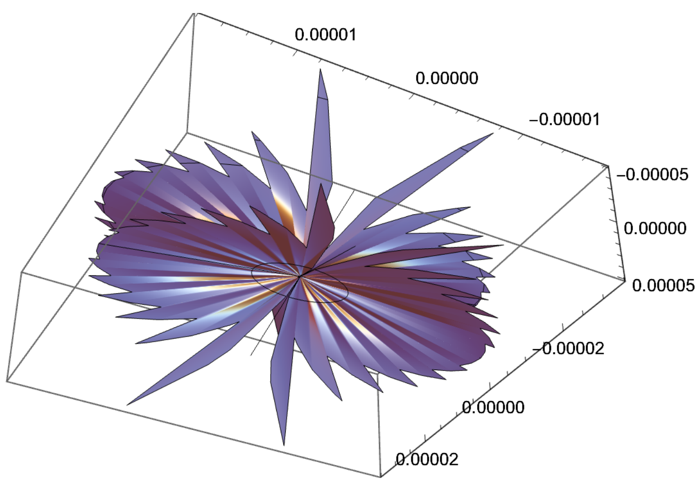
$$\begin{aligned}&\left\{\left\{\theta \to \frac{2}{3}\left(2\pi - \frac{2\pi}{\left(17 + 3\sqrt{33}\right)^{1/3}} + \left(17 + 3\sqrt{33}\right)^{1/3}\pi\right)\right\},\right.\\ &\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1 + i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 - i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi\right\},\\ &\left.\left\{\theta \to \frac{4\pi}{3} + \frac{2\left(1 - i\sqrt{3}\right)\pi}{3\left(17 + 3\sqrt{33}\right)^{1/3}} - \frac{1}{3}\left(1 + i\sqrt{3}\right)\left(17 + 3\sqrt{33}\right)^{1/3}\pi\right\}\right\}\end{aligned} \tag{218}$$

We will note that an arc length is equal to r*θ. Thus, we will be able to see what the arc length is, because it represents the change in circumference of two circles. In this case, as the circle, viewed from head on, recedes from the perceiver into the distance, it gets smaller. This is a change in amount of surface area taken up on the retinal image, but also a way of visualizing the imaginary solutions the time element of waves traveling in space.

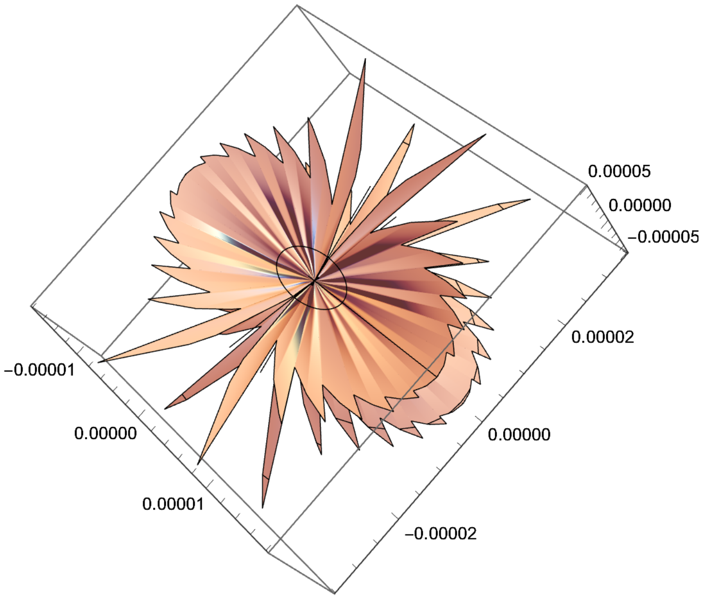
$$\texttt{RevolutionPlot3D}\left[r\,\frac{2}{3}\left(2\,\pi-\frac{2\,\pi}{\left(17+3\,\sqrt{33}\right)^{1/3}}+\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right),\ \{r,\,-1,\,1\}\right]$$



$$\texttt{RevolutionPlot3D}\left[r\left(\frac{4\,\pi}{3}+\frac{2\left(1+\mathrm{i}\,\sqrt{3}\right)\pi}{3\left(17+3\,\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1-\mathrm{i}\,\sqrt{3}\right)\left(17+3\,\sqrt{33}\right)^{1/3}\pi\right),\ \{r,\,-1,\,1\}\right]$$



$$\text{RevolutionPlot3D}\left[r\left(\frac{4\pi}{3}+\frac{2\left(1-\mathbb{i}\sqrt{3}\right)\pi}{3\left(17+3\sqrt{33}\right)^{1/3}}-\frac{1}{3}\left(1+\mathbb{i}\sqrt{3}\right)\left(17+3\sqrt{33}\right)^{1/3}\pi\right),\{r,-1,1\}\right]$$



When combined, the three imaginary solutions form a cone, but seperately, they exist primarily in the complex plane. It requires all three solutions to deliver information of depth to the perceiver through light in terms of the real. In Gibson' s theory, depth is intimately connected with contour. Contour is delivered by the pickup of the invariant, r, in the ambient array, changing context in a different way from point to point. Thus, understanding of two truths in the real world like information given to the perceiver of an object by an edge, for instance is enabled.

Mach begins by verifying a belief in the space - sense, an area of parameterized space relating the sense of an individual to the stimulus in the world. The space - sense provides a workspace for the individual senses like sense of sight and touch to enable a perceptual experience.“ The perception of Depth depends on extra - occular experiences” (BRP 118) is an idea that makes a great deal of sense to me, because when we experience or perceive truth, we use multiple faculties to make sense of a phenomenon.

The Wavelength with Changing Value during a Transition

The initial radius changes contexts, but can it be said to actually change? The wavelength, r, could be said to be changing if we consider that $\Delta r = r - r_1$. Although it is invariant in the context of always being the slant of the cone, it changes when understood to be the base of a cone. The height of the cone starts at zero and goes toward the locus of perception, which is the subjective perceiver. In the ambient array, many different wavelengths are present. It is reasonable, then to think that a wavelength could change during the course of traveling a single wavelength. When the circle is infinitely far away, it has a perceived radius of 0. It is important to discuss the ecological context of the meaning of the array. The initial radius could be thought of being analogous to the monocular field of vision.

$$v = \lambda f = r\,(1/(1080/\pi)\,\theta) = (1/(1080/\pi))\,D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, r, \theta\right] \tag{219}$$

$$(1/(1080/\pi))\,D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, r, \theta\right]$$

$$\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080} = \text{velocity during a transition} \tag{219}$$

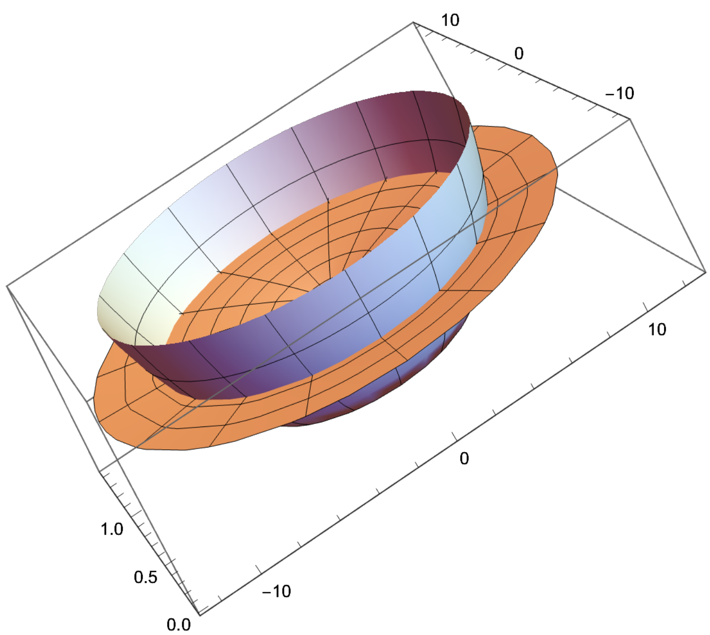
$$(1080/\pi)\,\theta = \text{time} \tag{220}$$

$$\frac{2\pi v t}{\sqrt{4\pi\theta-\theta^2}} = \frac{2\pi v\,(1080/\pi)\,\theta}{\sqrt{4\pi\theta-\theta^2}} = \frac{2\pi\,\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}\,(1080/\pi)\,\theta}{\sqrt{4\pi\theta-\theta^2}} \tag{221}$$

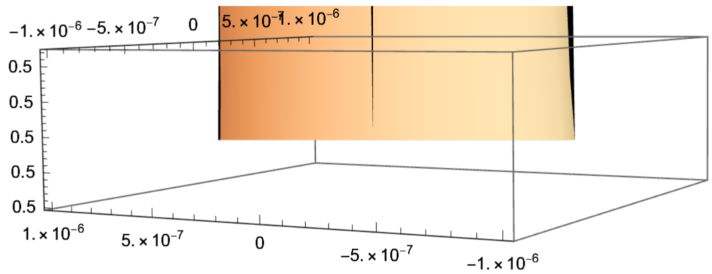
$$\text{Solve}\left[r == \frac{2*\left(\frac{\pi\left(-\frac{(4\pi r^2-2r^2\theta)(8\pi r\theta-2r\theta^2)}{8\pi(4\pi r^2\theta-r^2\theta^2)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}\right)*6\,((180/\pi)\,\theta)*\pi}{\sqrt{4\pi\theta-(\theta)^2}}, r\right]$$

$$\left\{\left\{r \to -\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}, \left\{r \to \sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\right\}\right\}$$

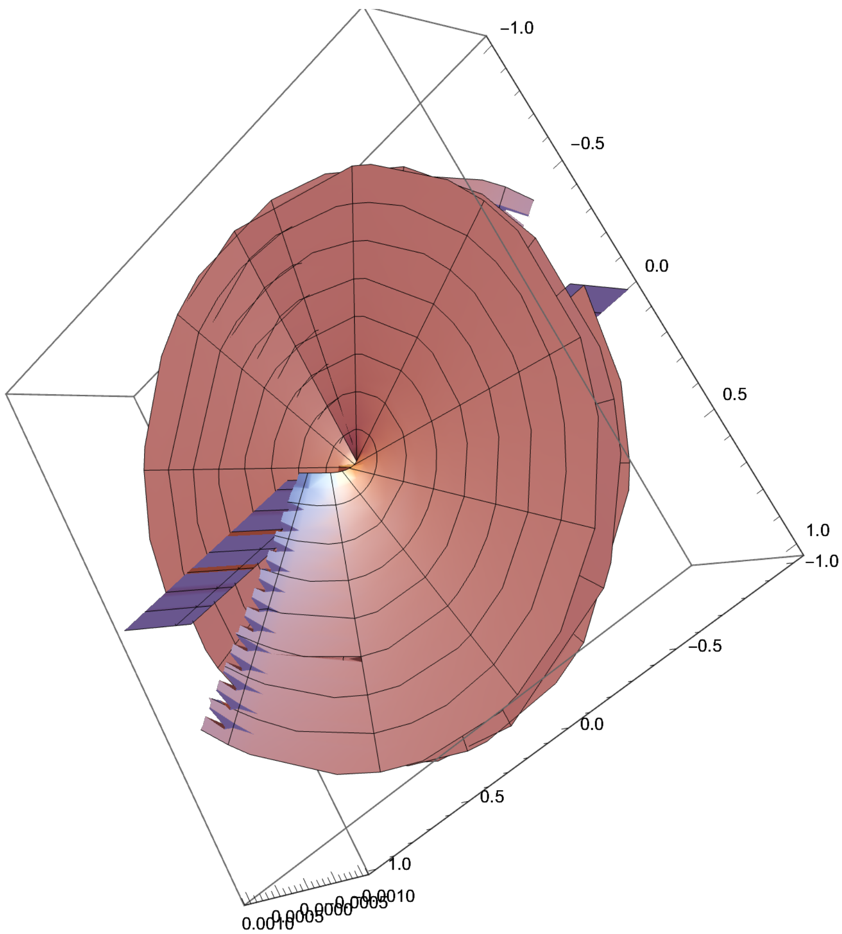
$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}, \{\theta, -4\pi, 4\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}},\ \{\theta,\ -.000001,\ .0000001\}\right]$$



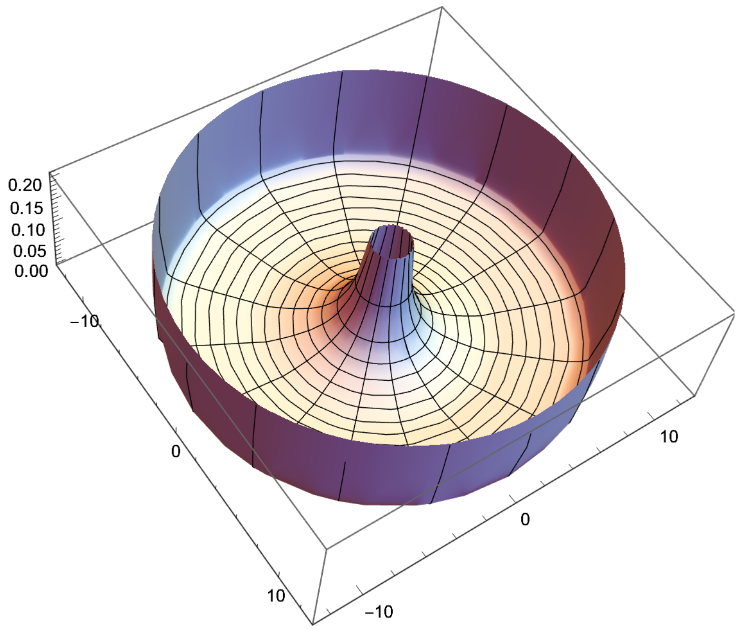
$$\text{RevolutionPlot3D}\left[\frac{\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}{1080},\ \{r,\ -1,\ 1\},\ \{\theta,\ -3\,\pi,\ 3\,\pi\}\right]$$



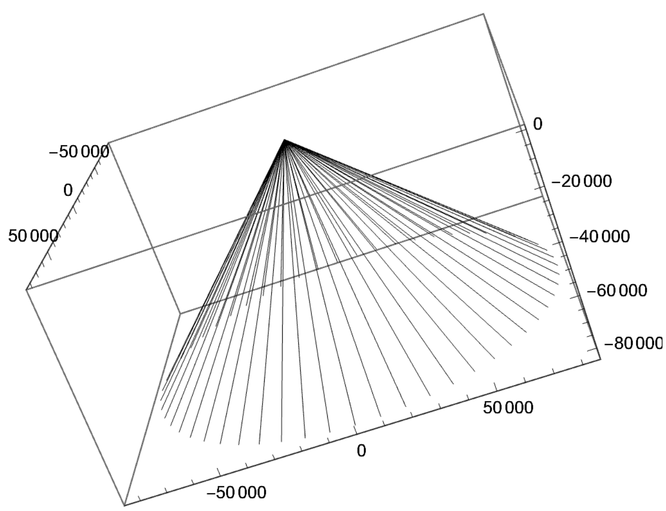
$$\text{Solve}\left[\frac{\pi\left(-\frac{\left(4\,\pi\,r^2-2\,r^2\,\theta\right)\left(8\,\pi\,r\,\theta-2\,r\,\theta^2\right)}{8\,\pi\left(4\,\pi\,r^2\,\theta-r^2\,\theta^2\right)^{3/2}}+\frac{8\,\pi\,r-4\,r\,\theta}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}\right)}{1080}==r\,(1\,/\,(1080\,/\,\pi)\,\theta),\ r\right]$$

$$\left\{\left\{r\to-\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\},\ \left\{r\to\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}, \{\theta, -13, 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\left\{\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}, -\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right\}, \{\theta, -13, 13\}\right]$$



This shows us that the parametric structure of our system still holds when the consideration that the wavelength of light, r, changes during transition. This leads to some evidence for Gibson's idea of an invariant in the structure of light.

$$\text{Solve}\left[\frac{\pi\left(-\frac{\left(4\pi r^2-2r^2\theta\right)\left(8\pi r\theta-2r\theta^2\right)}{8\pi\left(4\pi r^2\theta-r^2\theta^2\right)^{3/2}}+\frac{8\pi r-4r\theta}{4\pi\sqrt{4\pi r^2\theta-r^2\theta^2}}\right)}{1080}==r\,(1/(1080/\pi)\,\theta),\theta\right]$$

$$\text{RevolutionPlot3D}\Bigg[$$

$$\Bigg\{\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}$$
$$\left.\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)-$$
$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\right.}$$
$$\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$
$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$
$$\left.\left.\left.\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)\right)\right)\Bigg\},$$

$$\Bigg\{\pi-\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}$$
$$\left.\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)+$$
$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\right.}$$
$$\frac{\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}-\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/$$
$$\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4-96\sqrt{3}\,\pi^4\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\right\},$$

$$\left\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)-$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\left.\left.\left.\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)\right)\right)\right\},$$

$$\left\{\pi+\frac{1}{2}\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

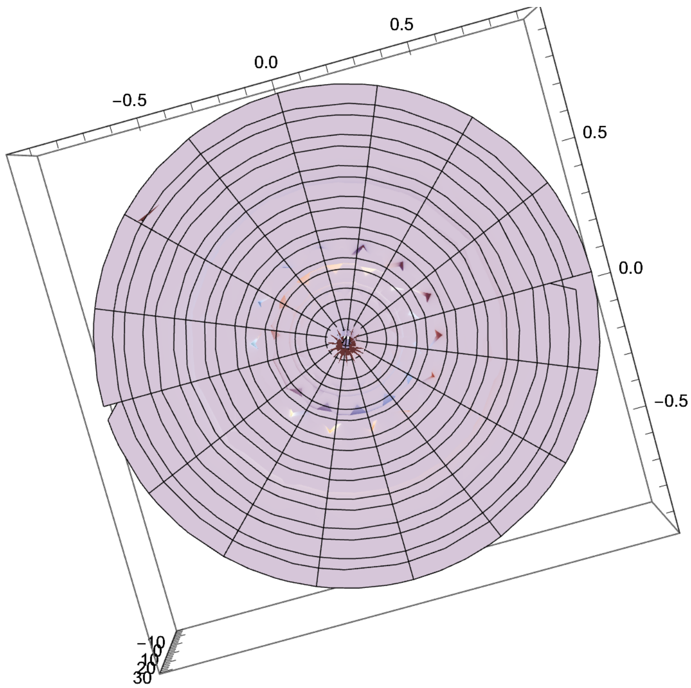
$$\left.\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\,\pi^2-\frac{1}{3\,\pi^2\,r^2}-\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}-\right.}$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}+\left(64\,\pi^3+\frac{4}{\pi\,r^2}\right)\Big/$$

$$\left(4\sqrt{\left(4\,\pi^2-\frac{1}{6\,\pi^2\,r^2}+\frac{1}{12\,\pi^2\,r^2\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}+\right.}\right.$$

$$\frac{\left(1+13\,824\,\pi^8\,r^4-96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8\,r^8}\right)^{1/3}}{12\,\pi^2\,r^2}\Bigg)\Bigg)\Bigg)\Bigg\}\Bigg\}, \{r, -1, 1\}\Bigg]$$



In this wheel, when viewing it from head on, we see the entire rainbow of colors in terms of contour of a surface.

We recently found out that these are all valid statements for r, even when it is considered to be changing during a transition.

$$r = \pm\frac{2\,\pi * r * \mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} = \pm\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}} = \pm\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}$$

We can find out what η, the height of the cone is in terms of theta alone from this relation when r is changing.

$$\mathrm{Solve}\left[\frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}} == \frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}, \eta\right]$$

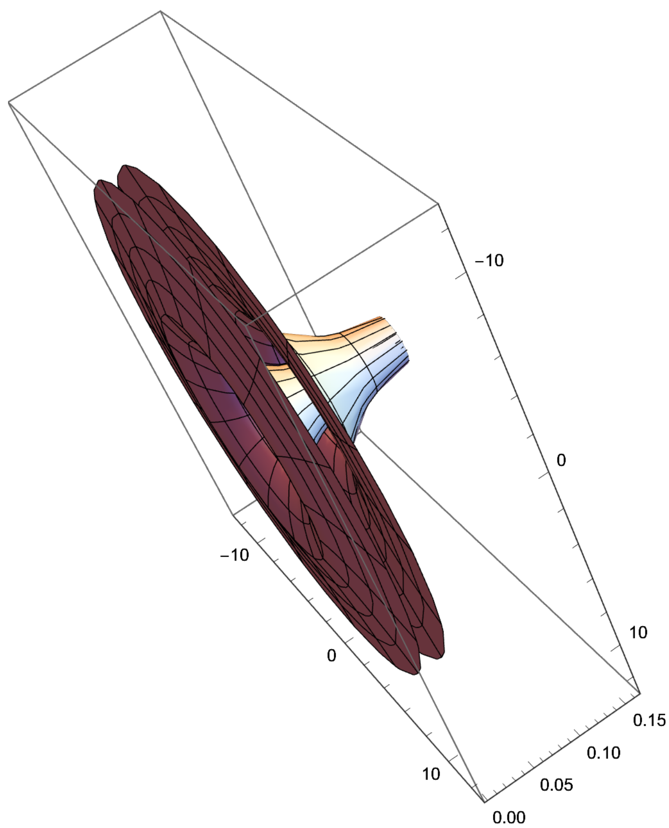
$$\left\{\left\{\eta \to \frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right\}\right\}$$

When r = η, the circle will have gone around 2 π degrees. If the relations for a changing r hold, then we should arive at that answer.

$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}} == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}},\ \theta\right]$$

$\{\{\theta \to 2\pi\}\}$

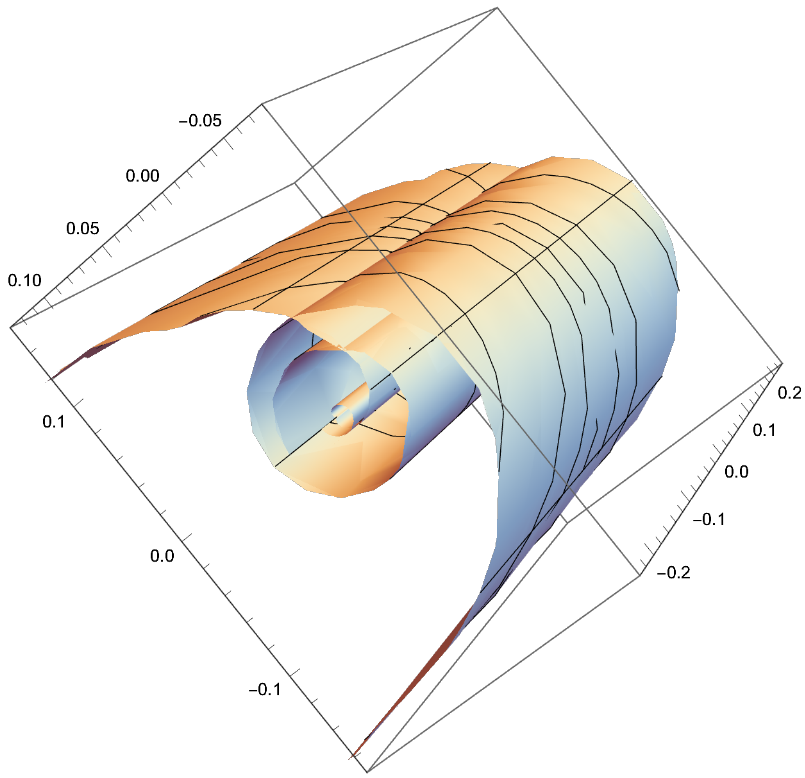
$$\text{RevolutionPlot3D}\left[\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}},\ \{\theta,\ -4\pi,\ 4\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi * r * \text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} == \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}},\ r\right]$$

$$\left\{\left\{r \to \frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \text{Csc}[\beta]}{8\pi^2\sqrt{\theta}}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\text{Csc}[\beta]}{8\,\pi^2\,\sqrt{\theta}},\{\beta,-\pi,\pi\},\{\theta,-4\,\pi,4\,\pi\}\right]$$



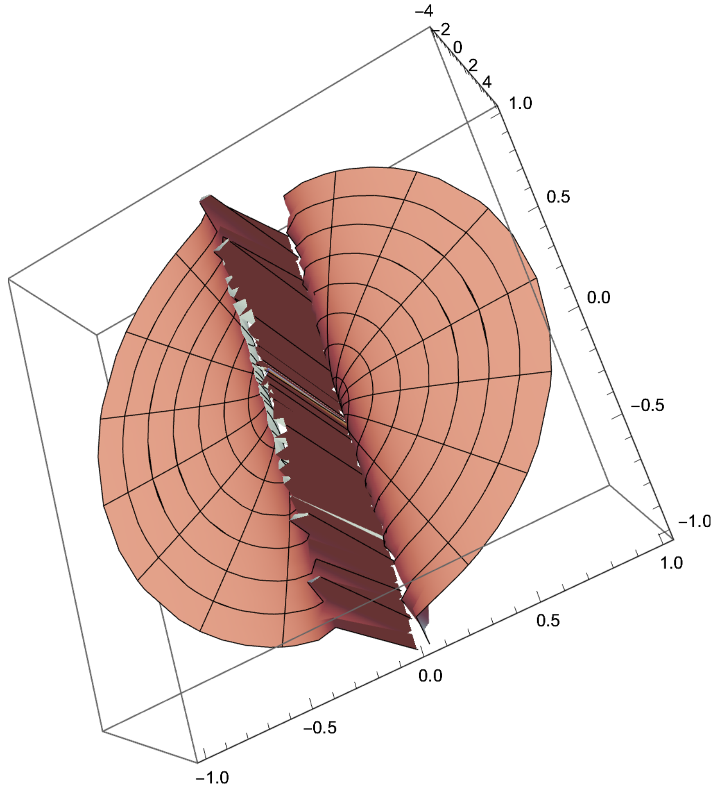
$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\text{Csc}[\beta]}{8\,\pi^2\,\sqrt{\theta}}==r,\beta\right]$$

$$\left\{\left\{\beta\to\text{ArcCsc}\left[\frac{4\,\pi^2\,r\,\sqrt{\frac{(2\,\pi-\theta)^2}{(4\,\pi-\theta)\,\theta^2}}\,\theta^{3/2}\,\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\pi^2-4\,\pi\,\theta+\theta^2}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\text{Csc}[\beta]}{8\,\pi^2\,\sqrt{\theta}}==r,\theta\right]$$

$$\left\{\left\{\theta\to-\frac{2\,\pi}{-1+4\,\pi^2\,r\,\text{Sin}[\beta]}\right\},\left\{\theta\to\frac{2\,\pi}{1+4\,\pi^2\,r\,\text{Sin}[\beta]}\right\}\right\}$$

```
RevolutionPlot3D[2π/(1 + 4 π^2 r Sin[β]), {r, -1, 1}, {β, -π, π}]
```



II. Spectral Sensitivity

The analogy of a change in position relating to a change in contour

$$\eta \to \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi} = r \operatorname{Sin}[\beta]$$

$$r = \frac{2 \pi \eta}{\sqrt{4 \pi \theta - \theta^2}} = \frac{\sqrt{\frac{1}{4 \pi - \theta} + \frac{4 \pi}{\theta^2} - \frac{3}{\theta}} \sqrt{4 \pi \theta - \theta^2} \operatorname{Csc}[\beta]}{8 \pi^2 \sqrt{\theta}} = \sqrt{1 + \frac{4 \pi^2}{(4 \pi - \theta)^2} - \frac{4 \pi}{4 \pi - \theta}}$$

Boynton proposes that there is a, "scotopic spectral sensitivity curve, appropriate to the threshhold of the dark adapted eye outside the voeal region" (Psychophysic of Vision, 15). Boynton submits that the stimulus, "must be imaged in a part of the retina containing ahigh density of rod photoreceptors" (Psychophysics of Vision, 15).

Using induction, we can develop a series of true statements for r, so long as n is an integer. n would be a certain number of r, and r would always be a base unit of measure. Thus, we can say that:

```
c := speed of light := (2.99792458 * 10^8) m / s

c := (2.99792458 * 10^8)
```

First, we will use the following conversion

$$\eta := \text{rate} * \text{time} = c * \tau = \text{height of cone} \tag{222}$$

$\tau := 6\ (\theta_{\text{degrees}}) = 6\ ((180/\pi)\ \theta)$, because if theta were in radians to begin with, we would have to convert that number of radians to degrees. This way, both our thetas are in radians, but our result accounts for the constant of the degrees involved in measuring time.

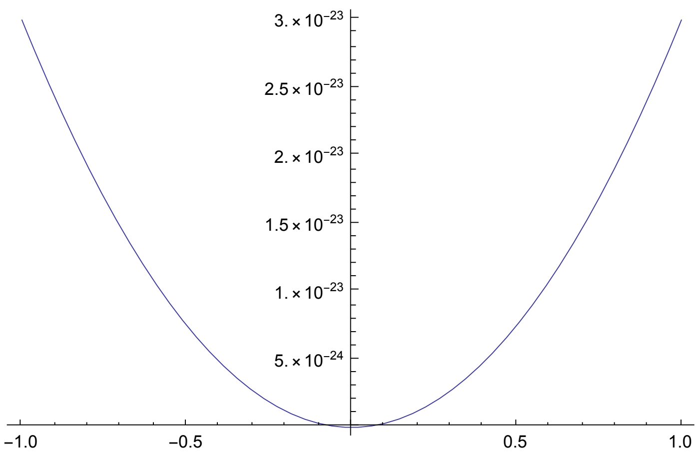
(180 / π)

$$r = \frac{2 * c * \tau * \pi}{\sqrt{4\,\pi\,\theta - \theta)^2}} = \frac{2 * c * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\,\pi\,\theta - (\theta)^2}}$$

$$\mathbf{Solve}\left[r == \frac{2 * c * 6\ ((180/\pi)\ \theta) * \pi}{\sqrt{4\,\pi\,\theta - (\theta)^2}}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2}\right\}\right\}$$

$$\mathbf{Plot}\left[\frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2}, \{r, -1, 1\}\right]$$

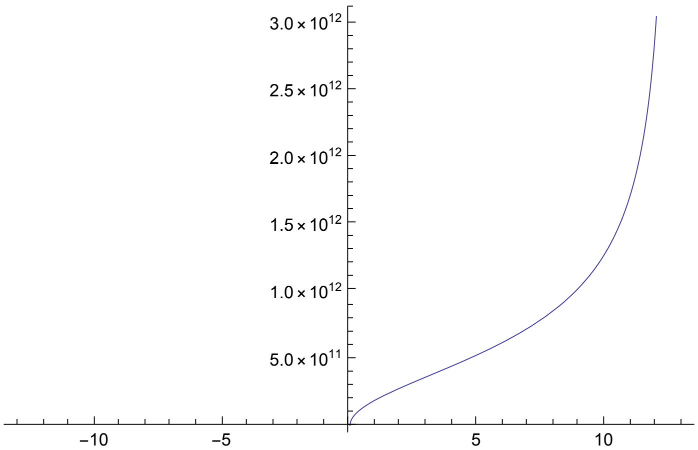


We zoom in

$$\mathbf{Solve}\left[\theta == \frac{4\,\pi\,r^2}{4\,665\,600\,c^2 + r^2}, r\right]$$

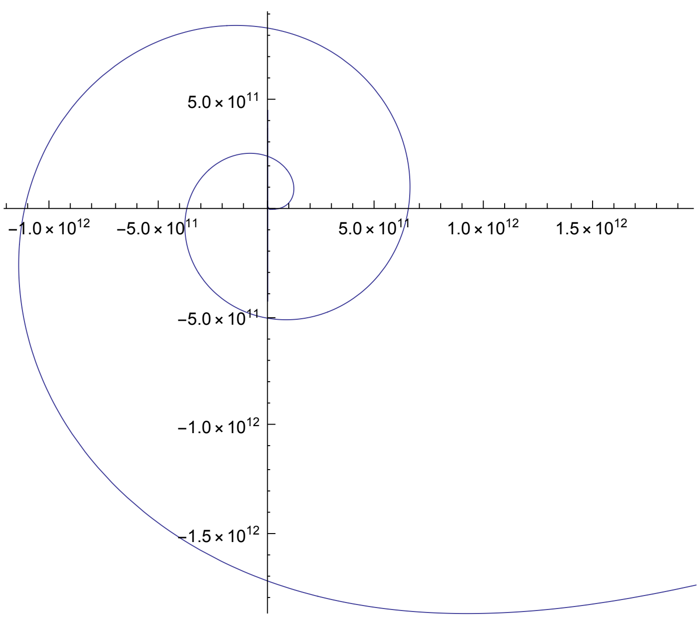
$$\left\{\left\{r \to -\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\}, \left\{r \to \frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\ \pi - \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



If the quantum of light can be parameterized by its traveling up the height of the cone through time, we can say that the radius of the distance a wavelength of light travels expands to infinity over the course of two rotations, or 4π radians. The measurement

$$\text{PolarPlot}\left[\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\ \pi - \theta}},\ \{\theta,\ -13,\ 13\}\right]$$



This is what the motion would look like in polar coordinates.

$$r := \frac{2\ \pi\ \eta}{\sqrt{4\ \pi\ \theta - \theta^2}};\ \eta = r\ \text{Sin}[\theta]$$

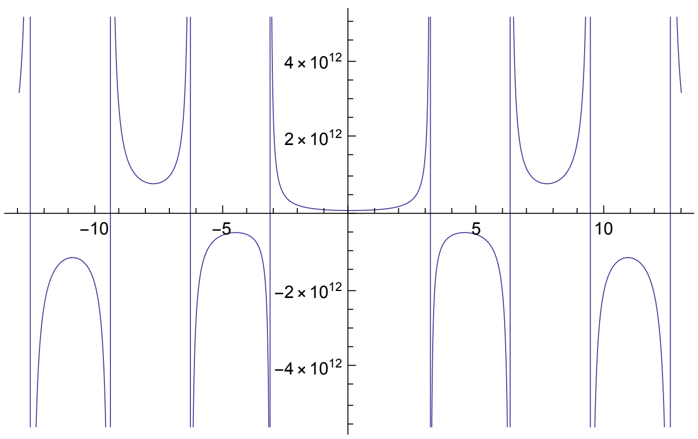
$$\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\ \pi - \theta}} = \frac{2\ \pi\ \eta}{\sqrt{4\ \pi\ \theta - \theta^2}} = \frac{2\ \pi\ r\ \text{Sin}[\theta]}{\sqrt{4\ \pi\ \theta - \theta^2}}$$

$$\text{Solve}\left[\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}} == \frac{2\,\pi\, r\, \text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ r\right]$$

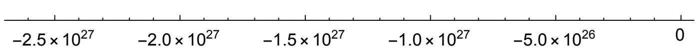
$$\left\{\left\{r \to \frac{1080\, c\, \sqrt{\theta}\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi - \theta}}\right\}\right\}$$

It looks as though by setting up different true statements about what r is, we can get several different perspectives of what it does in terms of time. This suggests that there are multiple valid ways of perceiving a given change in perceptual space. These equations are meant to accurately represent the subjective experience of making a discernment in measuring some change in contour or size out in the world. In this sense, the meaning of that change in contour is already in the world, just like information.

$$\text{Plot}\left[\frac{1080\, c\, \sqrt{\theta}\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi - \theta}},\ \{\theta, -13, 13\}\right]$$



$$\text{PolarPlot}\left[\frac{1080\, c\, \sqrt{\theta}\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi - \theta}},\ \{\theta, -4\,\pi, 4\,\pi\}\right]$$



$$r = \frac{2 * c * \tau * \pi}{\sqrt{4\,\pi\ (\theta) - (\theta)^2}} = \frac{1080\, c\, \sqrt{\theta}\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi - \theta}} = \text{wavelength of light} = \lambda \quad (223)$$

$$\text{velocity} = \lambda\nu,\ \ \text{where}\ \nu = \text{number of mols of frequency} = n * f \quad (224)$$

$$f = 1 / (6 * (180 / \pi)\ \theta) = 1 / \tau \quad (225)$$

$$\text{Velocity} = \text{speed of light}$$

$$\text{Solve}\left[\frac{1080\, c\, \sqrt{\theta}\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi - \theta}}\ n\ (1 / (6\ (\theta))) == c,\ n\right]$$

$$\left\{\left\{n \to \frac{\pi\ \sqrt{4\,\pi - \theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\,\pi - \theta)\ \theta}}\right\}\right\} \quad (226)$$

r^2 = 1 + 3 + 5 ... (2 n - 1), where n is the position in the series.

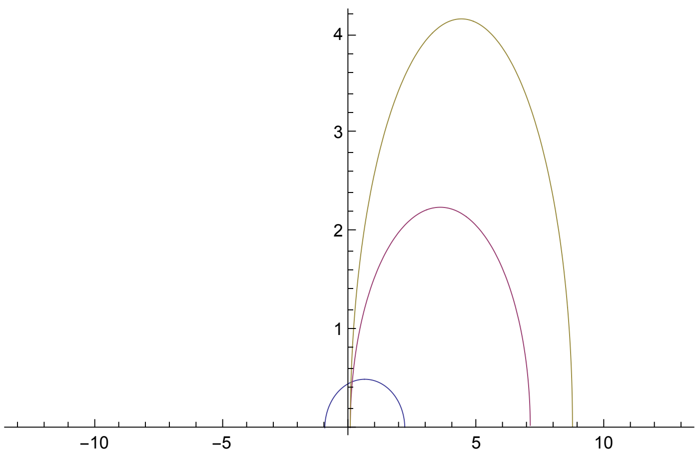
We will now plot this equation to resemble something similar to Figure 2 on Page 16 of Contemporary Theory and Research of Visual Perception edited by Haber.

$$\eta == \frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

$$\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

$$\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi}$$

$$\mathrm{Plot}\left[\left\{\frac{\sqrt{4\,\pi\,1^2\,(\theta+1)-2^2\,(\theta+1)^2}}{2\,\pi},\ \frac{\sqrt{4\,\pi\,3^2\,\theta-4^2\,\theta^2}}{2\,\pi},\ \frac{\sqrt{4\,\pi\,5^2\,\theta-6^2\,\theta^2}}{2\,\pi}\right\},\ \{\theta,\ -13,\ 13\}\right]$$



In Boynton' s experiment, a method of sensory scaling was applied to the visual system, and yielded results that tell us the relative sensitivity (Radiance Basis) - Percent.

$$\sqrt{\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{r\,\sqrt{4\,\pi\,\theta-\theta^2}}{8\,\pi^2\,\sqrt{\theta}}\right)^2},$$

$$\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}$$

$$\left\{\left\{\beta\to\mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right\}\right\} \tag{227}$$

$$\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\beta]}{\pi\,\sqrt{4\,\pi-\theta}}$$

$$\frac{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\beta]}{180\,\sqrt{(4\pi-\theta)\,\theta}}$$

$$\frac{r\,(2\pi-\theta)}{2\pi\theta\,\sqrt{r^2\,(4\pi-\theta)\,\theta}}$$

$$\text{Plot3D}\Big[\Big\{\frac{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]}{180\,\sqrt{(4\pi-\theta)\,\theta}},$$

$$\sqrt{r^2-\left(\frac{r\,\sqrt{4\pi\theta-\theta^2}}{8\pi^2\,\sqrt{\theta}}\right)^2},\ \sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^{\,2}-\left(\frac{r\,\sqrt{4\pi\theta-\theta^2}}{8\pi^2\,\sqrt{\theta}}\right)^2},$$

$$\left(\pi+\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}+\right.$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2 r^2}-\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}-\frac{\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}+\left(64\pi^3+\frac{4}{\pi r^2}\right)\Big/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2 r^2}+\frac{1}{12\pi^2 r^2\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}+\frac{\left(1+13\,824\,\pi^8 r^4+96\,\sqrt{3}\,\pi^4\,\sqrt{r^4+6912\,\pi^8 r^8}\right)^{1/3}}{12\pi^2 r^2}\right)}\right)\right)}\Bigg),$$

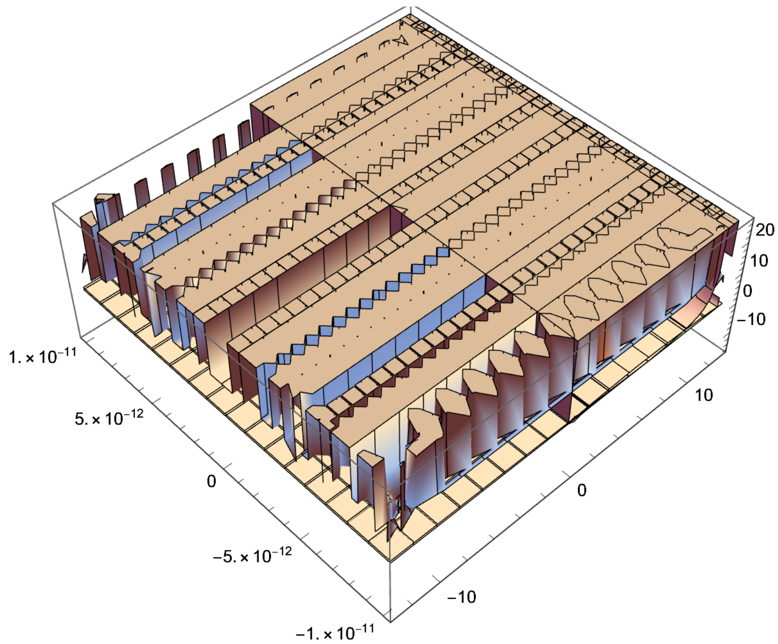
$$\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]}{\pi\,\sqrt{4\pi-\theta}},\ \text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big],$$

$$\frac{r\,(2\pi-\theta)}{2\pi\theta\,\sqrt{r^2\,(4\pi-\theta)\,\theta}},$$

$$\sqrt{r^2-\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\,\sqrt{4\pi\theta-\theta^2}}{8\pi^2\,\sqrt{\theta}}\right)^2},$$

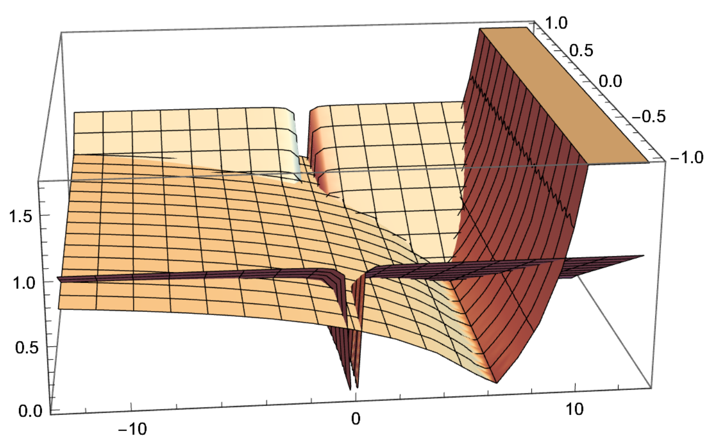
$$\sqrt{\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^{2}}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\right)^{2}-\left(\frac{r\,\sqrt{4\,\pi\,\theta-\theta^{2}}}{8\,\pi^{2}\,\sqrt{\theta}}\right)^{2}}\Big\},$$

```
{θ, -13, 13}, {r, -.00000000001,
  .00000000001}]
```



$$\texttt{Plot3D}\Big[\Big\{\sqrt{\sqrt{1+\frac{4\,\pi^{2}}{(4\,\pi-\theta)^{2}}-\frac{4\,\pi}{4\,\pi-\theta}}^{\,2}-\left(\frac{r\,\sqrt{4\,\pi\,\theta-\theta^{2}}}{8\,\pi^{2}\,\sqrt{\theta}}\right)^{2}},$$

$$\sqrt{(r)^{2}-\left(\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^{2}}-\frac{3}{\theta}}\,\sqrt{4\,\pi\,\theta-\theta^{2}}}{8\,\pi^{2}\,\sqrt{\theta}}\right)^{2}}\Big\},\ \{\theta,-13,13\},\ \{r,-1,1\}\Big]$$



$$\text{Plot3D}\Bigg[\Bigg\{\frac{\pi\sqrt{4\pi-\theta}\sqrt{\theta}\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]\right]}{180\sqrt{(4\pi-\theta)\theta}},$$

$$\sqrt{r^2-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},\ \sqrt{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}^2-\left(\frac{r\sqrt{4\pi\theta-\theta^2}}{8\pi^2\sqrt{\theta}}\right)^2},$$

$$\left(\pi+\frac{1}{2}\sqrt{\left(4\pi^2-\frac{1}{6\pi^2r^2}+\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}+\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}\right)}+\right.$$

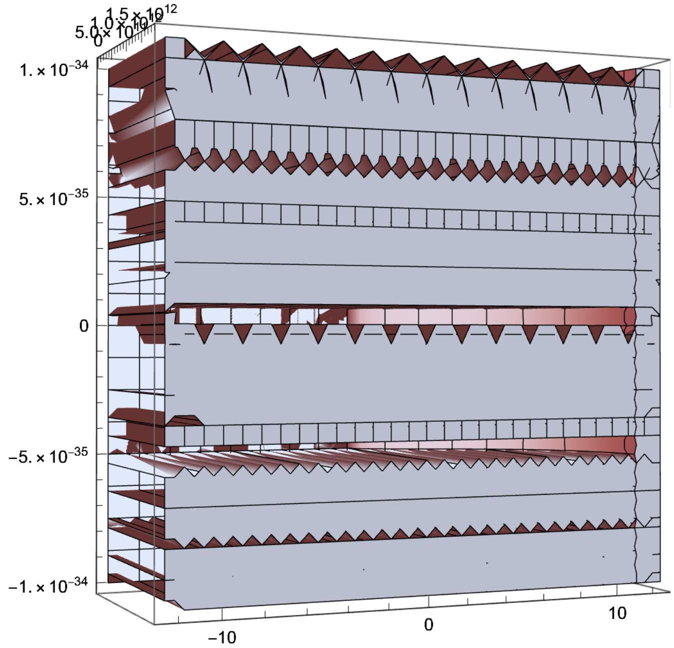
$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{1}{3\pi^2r^2}-\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}-\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}+\left(64\pi^3+\frac{4}{\pi r^2}\right)\Bigg/\left(4\sqrt{\left(4\pi^2-\frac{1}{6\pi^2r^2}+\frac{1}{12\pi^2r^2\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}+\frac{\left(1+13824\pi^8r^4+96\sqrt{3}\pi^4\sqrt{r^4+6912\pi^8r^8}\right)^{1/3}}{12\pi^2r^2}\right)}\right)\right)}\Bigg),$$

$$\frac{1080\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\theta}\,\text{Csc}\left[\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\theta}}{2\pi}\right]\right]}{\pi\sqrt{4\pi-\theta}}\Bigg\},\{\theta,-4\pi,$$

$$4\pi\},\{r,$$

$$-10\wedge-34,$$

$$10\wedge-34\}\Bigg]$$



$$\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}\ \sqrt{4\pi\theta-\theta^2}\ \mathrm{Csc}[\beta]}{8\pi^2\sqrt{\theta}}$$

The Mathematics of the 8 Fold Path

∞πcghmtθ

by Parker Emmerson

$$m \to \frac{2.2086893333333334`*^{\wedge}-42}{r} =$$

$$-\frac{(0.`+5.468107888071038`*^{\wedge}-56\,i)\ \sqrt{-1.60287714`*^{\wedge}8+1.2755291`*^{\wedge}7\,\theta}}{\sqrt{\theta}}$$

This function of mass comes from the parameters of light traveling from a circle into a cone, thus the change in radius can be integrated. When a circle folds into a cone, it doesn't have to go all the way around the cone in order to reach the height. For the above equation, we used the S.I. substitution of 6 θ = time, where theta is the distance in angle through which the initial radius of the circle translates into a height for a cone. The parameters of the cone do not include that it is necessary to go all the way around the circle. We will see into the wave nature of light more closely and make the observation of the diagonal wave shape of the assymptotic functions of wisdom (i.e. the first two roots).

$$\text{Solve}\left[m == \frac{2.2086893333333334\grave{}*\hat{}-42}{r}, r\right]$$

$$\left\{\left\{r \to \frac{2.20869 \times 10^{-42}}{m}\right\}\right\}$$

This is the equation for radius in terms of the mass of light.

$$\left\{\left\{\nu \to \frac{0.02652582384864922\grave{}\ \sqrt{12.566370614359172\grave{}\ \theta - 1.\grave{}\ \theta^2}}{\theta}\right\}\right\}$$

This frequency comes from :

$$r = \frac{2\ (3.0 * 10\hat{}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} = \lambda$$

$$c = \lambda f$$

(See the Geometric Patterns of Perception Series for more in depth solutions (explainations, system of variables and postulates))

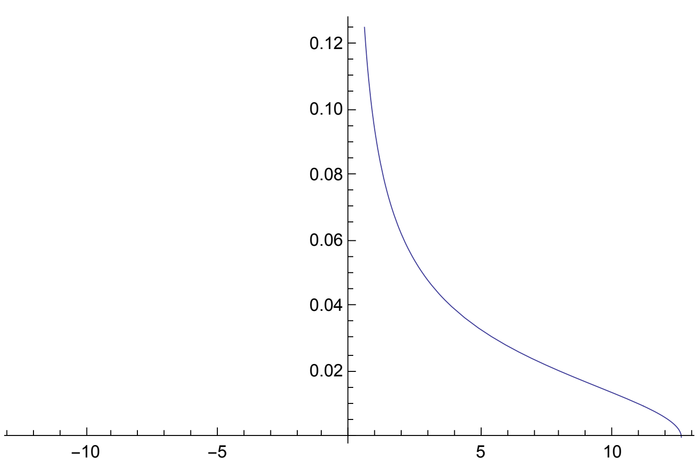
$$\text{Solve}\left[(3.0 * 10\hat{}8) == \frac{2\ (3.0 * 10\hat{}8)\ (6)\ (\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} * \nu,\ \nu\right]$$

$$\left\{\left\{\nu \to \frac{0.0265258\ \sqrt{12.5664\ \theta - 1.\ \theta^2}}{\theta}\right\}\right\}$$

$$\text{Solve}\left[1 == \frac{(\theta)\ \pi}{\sqrt{4\ \pi\ \theta - \theta^2}} * \nu,\ \nu\right]$$

$$\left\{\left\{nf \to \frac{\sqrt{(4\ \pi - \theta)\ \theta}}{\pi\ \theta}\right\}\right\}$$

$$\text{Plot}\left[\frac{0.02652582384864922\grave{}\ \sqrt{12.566370614359172\grave{}\ \theta - 1.\grave{}\ \theta^2}}{\theta}, \{\theta, -4\ \pi, 4\ \pi\}\right]$$



ν is the frequency solved from the speed of light and a wavelength of r. r is able to be placed in terms of

purely theta. If *v* is 0, then there is an infinite amount of mass, unless Planck's constant were to be considered nothing (only when nothing in terms of theta reaches infinity in terms of mass).

```
Solve[-1/Sqrt[θ] (0.`+5.468107888071038`*^-56 I) Sqrt[-1.60287714`*^8+1.2755291`*^7 θ] ==
  2.2086893333333334`*^-42/r, θ]
```

$$\left\{\left\{\theta \to \frac{8.21431\times 10^{90}\, r^2}{8.36115\times 10^{109} + 6.53674\times 10^{89}\, r^2}\right\}\right\}$$

$$\left\{\left\{r \to \frac{(0.`+4.039220473596917`*^{\wedge}13\, i)\sqrt{\theta}}{\sqrt{-1.60287714`*^{\wedge}8 + 1.2755291`*^{\wedge}7\, \theta}}\right\}\right\}$$

The equation for the height of the cone from basic postulates of geometry :

$$\sqrt{\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}} = h$$

The gravitational constant for a certain mass :

g = ((m G) / r ^ 2) r̂

That into which we substitute our equations for the radius of a light wave and the mass of an object (a mass that can be described like the wave of energy of light or any light containing object), as well as the radius of the initial circle (i.e. the maximum (and our distance away from the ground) height) is the gravitational constant. The energy of the potential of another object of the same mass falling is then set equal to the energy of light (i.e. our perception or sense of the visual world).

```
G = 6.6742 * (10 ^ -11)

g = ((m (6.6742 * (10 ^ -11))) / r ^ 2) r̂
```

r̂ = the height, because it is the function resulting from the change in radius through theta (which can be integrated for r and not for θ so easily).

$$g = ((m\,(6.6742 * (10^{\wedge}-11)))\, /\, r^{\wedge}2)\sqrt{\frac{r^2\,(4\pi-\theta)\,\theta}{4\pi^2}}$$

$$g = \left(\left(\frac{2.2086893333333334`*^{\wedge}-42}{r}\,(6.6742 * (10^{\wedge}-11))\right)\Big/ r^{\wedge}2\right)$$
$$\sqrt{\left(\frac{1}{4\pi^2} r^2 \left(4\pi - \left(\frac{8.214307872349999`*^{\wedge}90\, r^2}{8.361147002216258`*^{\wedge}109 + 6.53673850981586`*^{\wedge}89\, r^2}\right)\right)\right.}$$
$$\left.\left(\frac{8.214307872349999`*^{\wedge}90\, r^2}{8.361147002216258`*^{\wedge}109 + 6.53673850981586`*^{\wedge}89\, r^2}\right)\right)$$

$$m \to \frac{2.2086893333333334`*^{\wedge}-42}{r}$$

E = mc^2 = mgh, where m is mass, c is speed of light, and h is the height (with a max value of the wave-length, r := λ.

$$E = \frac{2.2086893333333334`*^{-42}}{r}((3.0*10^{8})^{2})$$

$$\frac{2.2086893333333334`*^{-42}}{r}((3.0*10^{8})^{2}) = m*g*h = \frac{2.2086893333333334`*^{-42}}{r}\left(\left(\frac{2.2086893333333334`*^{-42}}{r}(6.6742*(10^{-11}))\right)\Big/ r^{2}\right)$$

$$\sqrt{\left(\frac{1}{4\pi^2} r^2 \left(4\pi - \left(\frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right)\right)\left(\frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right)\right)}$$

$$\left((3.0*10^{8})\ 6\ \frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right) =$$

$$((\text{Planck's Constant})\ \nu) =$$

$$(6.62606896*10^{-34})\ \frac{0.02652582384864922`\ \sqrt{12.566370614359172`\ \theta - 1.`\ \theta^2}}{\theta}$$

This starts the funk :

$$\text{Solve}\left[\sqrt{\left(\frac{1}{4\pi^2} r^2 \left(4\pi - \left(\frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right)\right)\left(\frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right)\right)}\left((3.0*10^{8})\ 6\ \frac{8.214307872349999`*^{90} r^2}{8.361147002216258`*^{109} + 6.53673850981586`*^{89} r^2}\right) == (6.62606896*10^{-34})\ \frac{0.02652582384864922`\ \sqrt{12.566370614359172`\ \theta - 1.`\ \theta^2}}{\theta}, r\right]$$

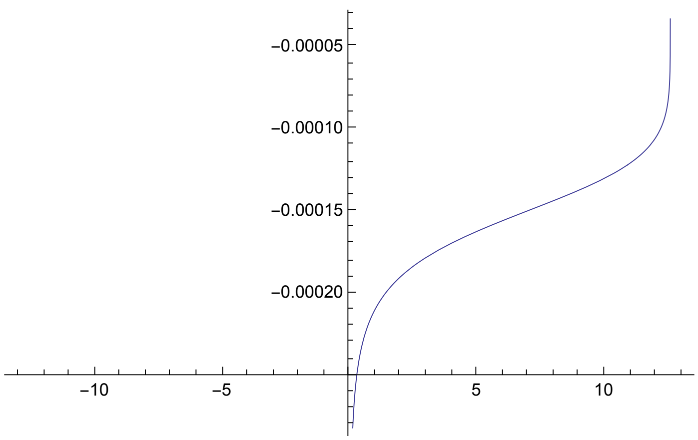
These eight roots symbolize the eightfold path. There is also buddhist art that uses the same shape or design motif for illustration.

$$\{\{r \to \text{Root}[-7.849157417943068569598410586708 0\times 10^{120} +$$
$$6.246161010860286020821744565782 5\times 10^{119}\ \theta +$$
$$(-2.454586173398232926342840267424 3\times 10^{101} +$$
$$1.953297613706744479315018562166 9\times 10^{100}\ \theta)\ \#1^2 +$$
$$(-2.878490468065110166942949656165 4\times 10^{81} +$$
$$2.290629933177328870775767663426 8\times 10^{80}\ \theta)\ \#1^4 +$$
$$(-1.500267805182838755268490225625 9\times 10^{61} +$$

```
            1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
        (-2.93227063660527473335062263601990 × 10^40 +
            1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 1]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
        6.24616101086028602082174456578250 × 10^119 θ +
        (-2.45458617339823292634284026742430 × 10^101 +
            1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
        (-2.87849046806511016694294965616540 × 10^81 +
            2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
        (-1.50026780518283875526849022562590 × 10^61 +
            1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
        (-2.93227063660527473335062263601990 × 10^40 +
            1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 2]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
        6.24616101086028602082174456578250 × 10^119 θ +
        (-2.45458617339823292634284026742430 × 10^101 +
            1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
        (-2.87849046806511016694294965616540 × 10^81 +
            2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
        (-1.50026780518283875526849022562590 × 10^61 +
            1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
        (-2.93227063660527473335062263601990 × 10^40 +
            1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 3]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
        6.24616101086028602082174456578250 × 10^119 θ +
        (-2.45458617339823292634284026742430 × 10^101 +
            1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
        (-2.87849046806511016694294965616540 × 10^81 +
            2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
        (-1.50026780518283875526849022562590 × 10^61 +
            1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
        (-2.93227063660527473335062263601990 × 10^40 +
            1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 4]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
        6.24616101086028602082174456578250 × 10^119 θ +
        (-2.45458617339823292634284026742430 × 10^101 +
            1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
        (-2.87849046806511016694294965616540 × 10^81 +
            2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
        (-1.50026780518283875526849022562590 × 10^61 +
```

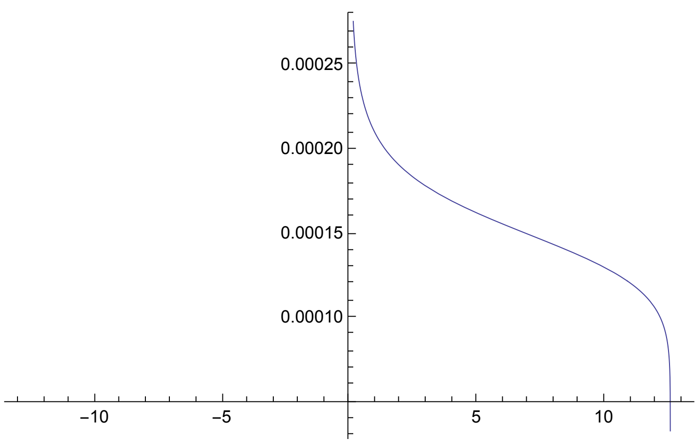
```
        1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
      (-2.93227063660527473335062263601990 × 10^40 +
        1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 5]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
      6.24616101086028602082174456578250 × 10^119 θ +
      (-2.45458617339823292634284026742430 × 10^101 +
        1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
      (-2.87849046806511016694294965616540 × 10^81 +
        2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
      (-1.50026780518283875526849022562590 × 10^61 +
        1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
      (-2.93227063660527473335062263601990 × 10^40 +
        1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 6]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
      6.24616101086028602082174456578250 × 10^119 θ +
      (-2.45458617339823292634284026742430 × 10^101 +
        1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
      (-2.87849046806511016694294965616540 × 10^81 +
        2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
      (-1.50026780518283875526849022562590 × 10^61 +
        1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
      (-2.93227063660527473335062263601990 × 10^40 +
        1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 7]},
  {r → Root[-7.84915741794306856959841058670800 × 10^120 +
      6.24616101086028602082174456578250 × 10^119 θ +
      (-2.45458617339823292634284026742430 × 10^101 +
        1.95329761370674447931501856216690 × 10^100 θ) #1^2 +
      (-2.87849046806511016694294965616540 × 10^81 +
        2.29062993317732887077576766342680 × 10^80 θ) #1^4 +
      (-1.50026780518283875526849022562590 × 10^61 +
        1.19387518578238709450867672374870 × 10^60 θ) #1^6 +
      (-2.93227063660527473335062263601990 × 10^40 +
        1.97730652048188727539887428454920 × 10^150 θ) #1^8 &, 8]}}
```

```
Plot[Root[
  -7.849157417943068569598410586707951131478239279023115070426905888`31.9091795403\
      8199*^120 +
    6.246161010860286020821744565782461907890373567164682719523884 9`31.9091795403\
      8199*^119 θ +
    (-2.4545861733982329263428402674242824008212477219106747750012707 6`31.909179\
        54038201*^101 +
      1.953297613706744479315018562166896114520116794644534511811678 7`31.909179\
        54038201*^100 θ) #1^2 +
    (-2.878490468065110166942949656165444215747600989395505916342216 19`31.909179\
        54038199*^81 +
      2.290629933177328870775767663426793978274328779284240425070631 3`31.909179\
        54038201*^80 θ) #1^4 +
    (-1.500267805182838755268490225625904871888906584143400866136064`31.90917954\
        038201*^61 +
      1.193875185782387094508676723748681622052602176256513302855568`31.90917954\
        038201*^60 θ) #1^6 +
    (-2.93227063660527473335062263601994151097 23`31.909179540382016*^40 +
      1.977306520481887275398874284549242310569786537058990 56`31.90917954038201\
        *^150 θ) #1^8 &, 1], {θ, -13, 13}]
```



Oh Yeah !

```
Plot[Root[
  -7.84915741794306856959841058670795113147823927902311507042690588`31.9091795403⋱
      8199*^120 +
    6.24616101086028602082174456578246190789037356716468271952388849`31.9091795403⋱
      8199*^119 θ +
    (-2.454586173398232926342840267424282400821247721910674775001270 76`31.909179⋱
        54038201*^101 +
      1.95329761370674447931501856216689611452011679464453451181167 87`31.909179⋱
        54038201*^100 θ) #1^2 +
    (-2.87849046806511016694294965616544421574760098939550591634221619`31.909179⋱
        54038199*^81 +
      2.29062993317732887077576766342679397827432877928424042507063 13`31.909179⋱
        54038201*^80 θ) #1^4 +
    (-1.50026780518283875526849022562590487188890658414340086613606 4`31.90917954⋱
        038201*^61 +
      1.19387518578238709450867672374868162205260217625651330285568`31.90917954⋱
        038201*^60 θ) #1^6 +
    (-2.93227063660527473335062263601994151097 23`31.909179540382016*^40 +
      1.97730652048188727539887428454924231056978653705899056`31.90917954038201⋱
        *^150 θ) #1^8 &, 2], {θ, -13, 13}]
```



The rest of the roots won' t plot, or their plots are 0. The eight roots are symbolic of the eightfold path, for when.

But, what if the frequency is 0? Could we find the plots of the other roots?

Thanks ! ©Parker Emmerson 2009

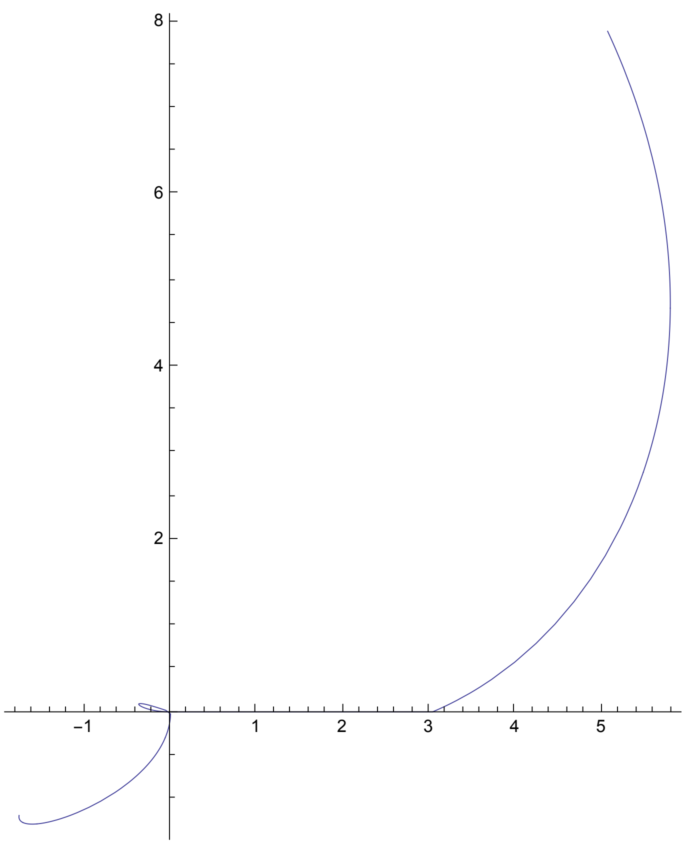
```
Solve[Sqrt[(1/(4 π^2) r^2 (4 π - (8.214307872349999`*^90 r^2/(8.361147002216258`*^109 + 6.53673850981586`*^89 r^2)))
    (8.214307872349999`*^90 r^2/(8.361147002216258`*^109 + 6.53673850981586`*^89 r^2)))]
   ((3.0 * 10^8) 6 8.214307872349999`*^90 r^2/(8.361147002216258`*^109 + 6.53673850981586`*^89 r^2)) ==
  (6.62606896 * 10^-34) (0), r]
```

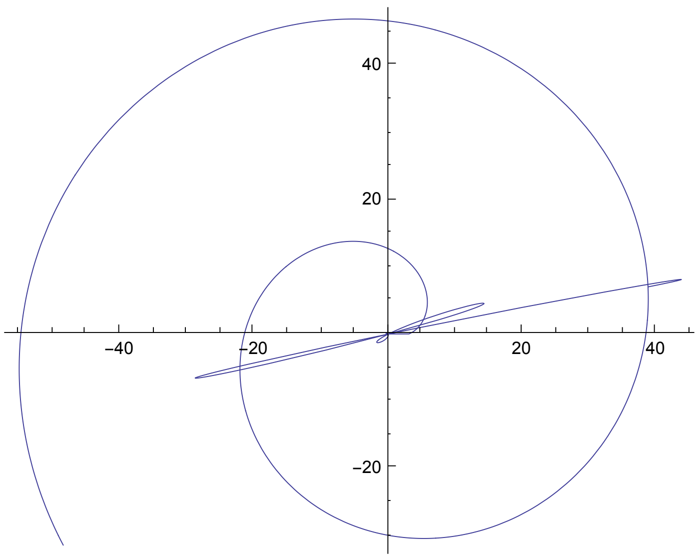
{{r → 0.}}

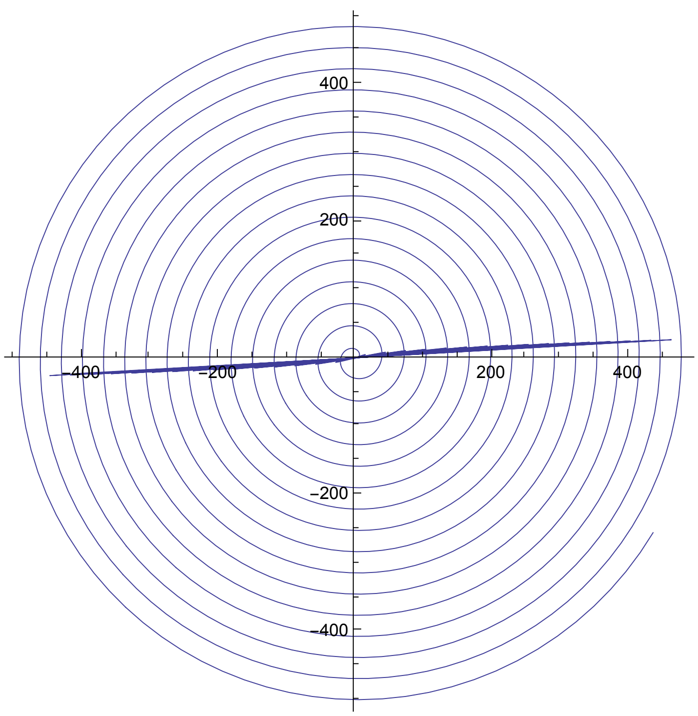
Mu! Emptiness, no Holiness! Grr ...eatest is God!

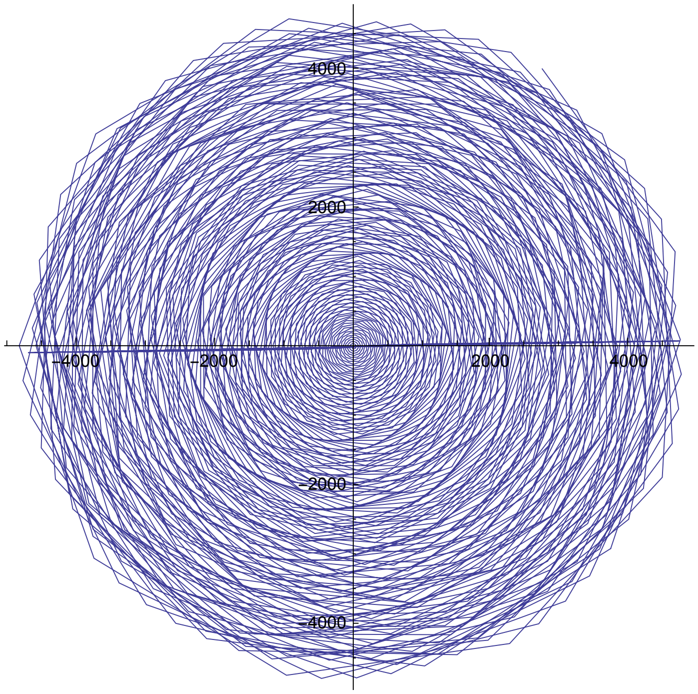
Math to Art

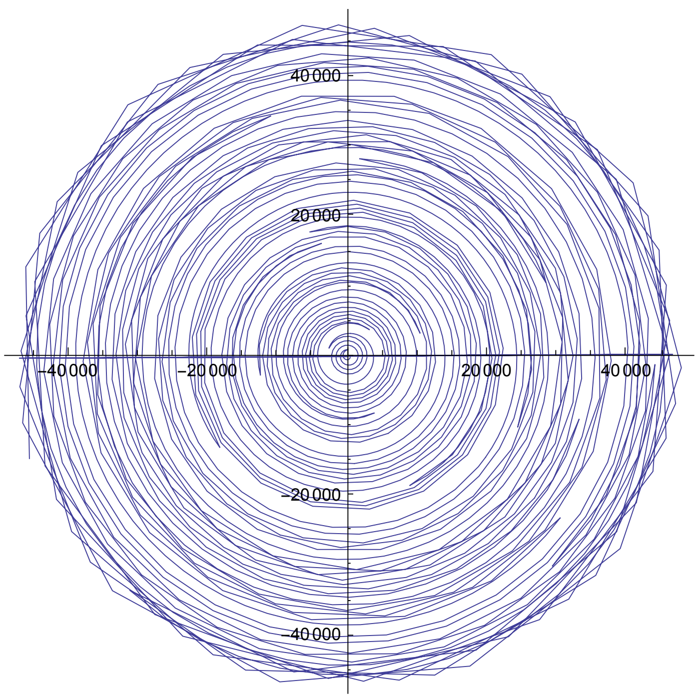
by Parker Emmerson

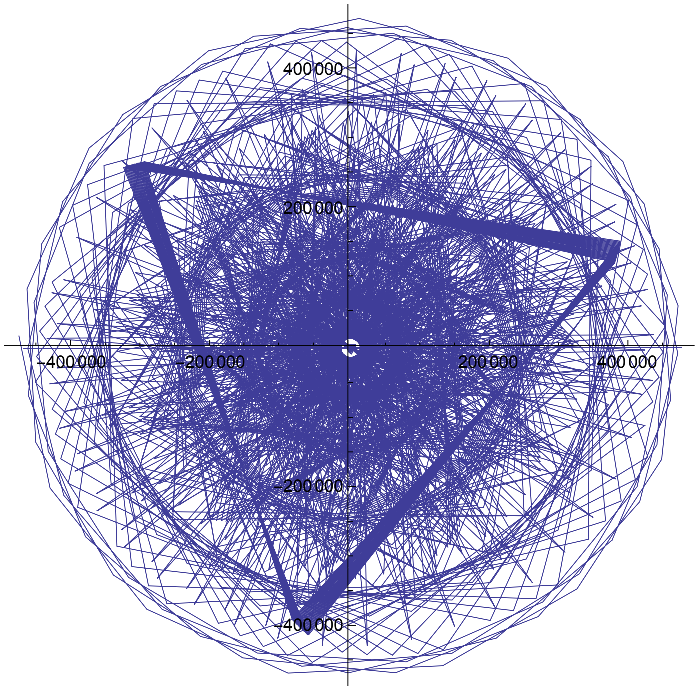


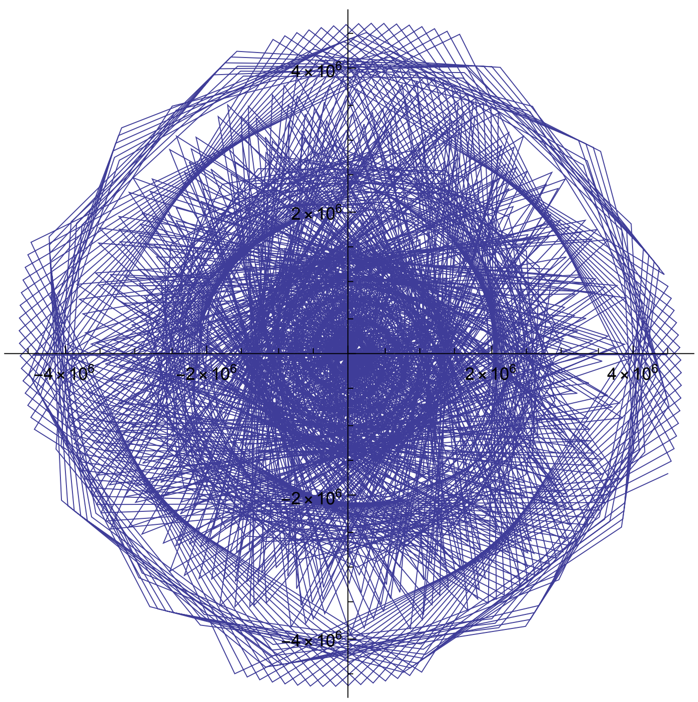

40
20
-40
-20
20
40
-20

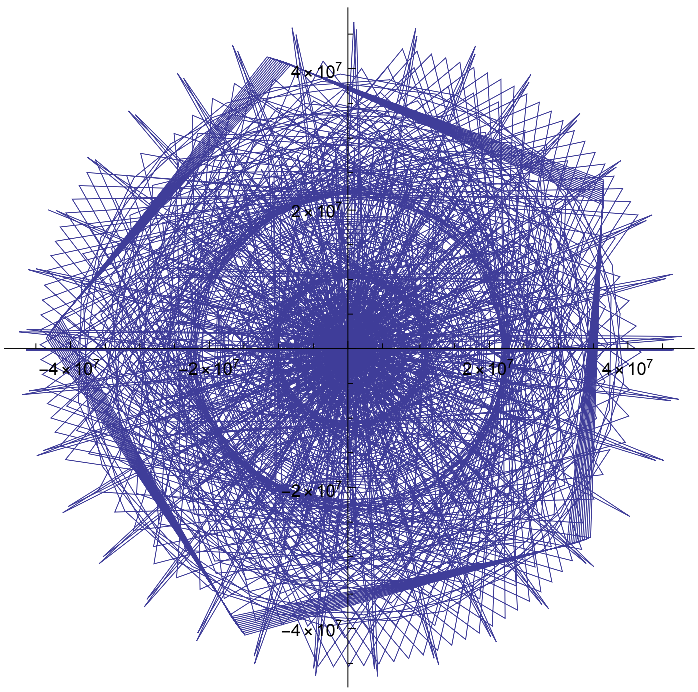

400
200
-400
-200
200
400
-200
-400

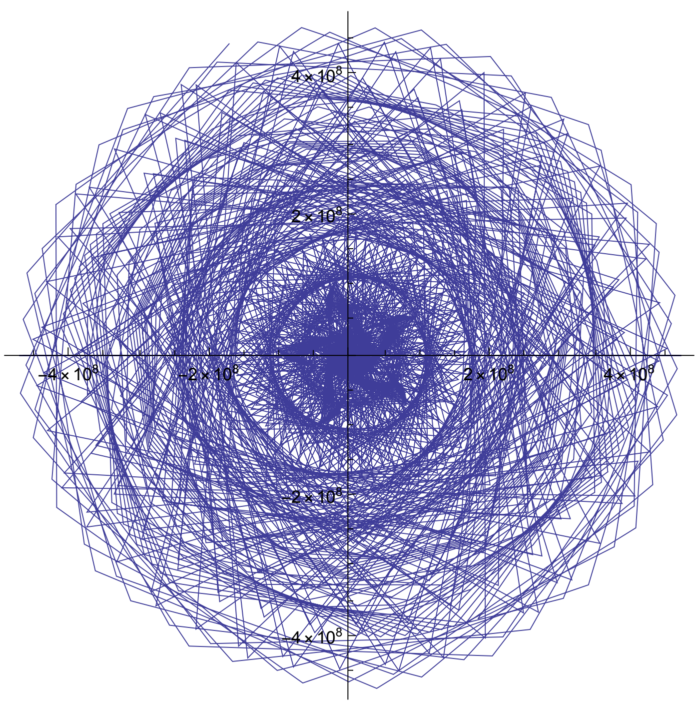

4000
2000
−4000
−2000
2000
4000
−2000
−4000

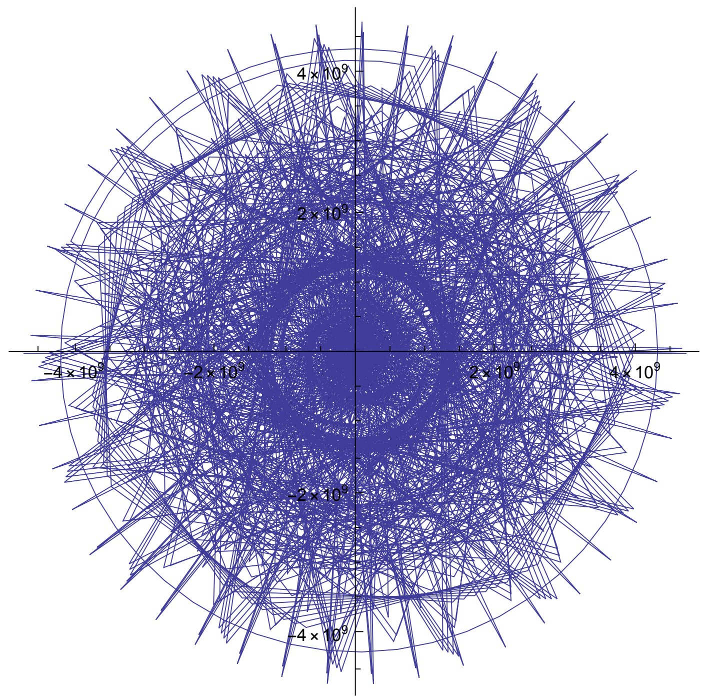

40 000
20 000
−40 000
−20 000
20 000
40 000
−20 000
−40 000

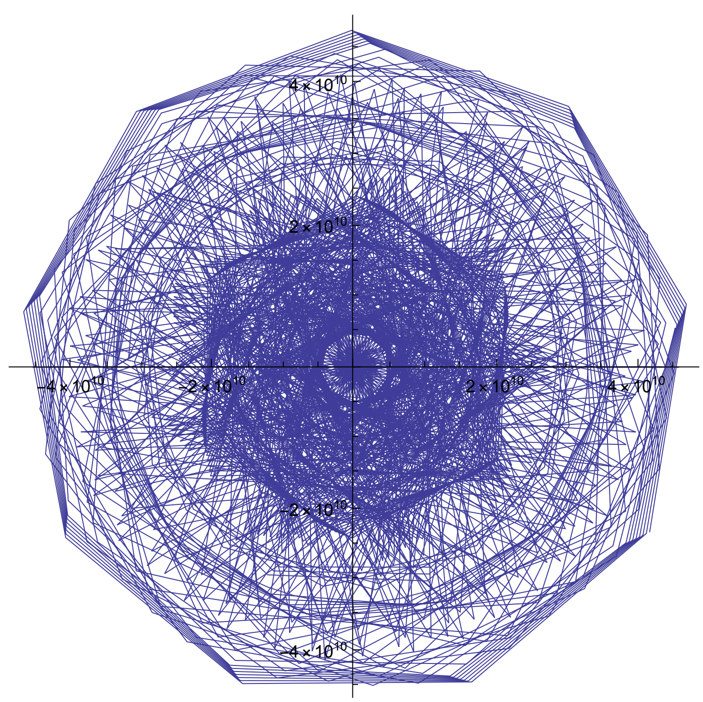

400 000
200 000
−400 000
−200 000
200 000
400 000
−200 000
−400 000

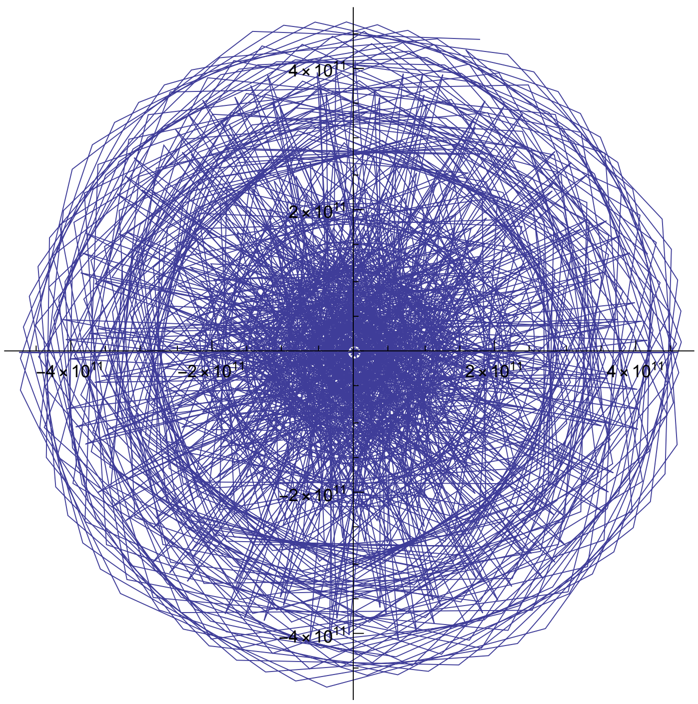

4×10^6
2×10^6
-4×10^6
-2×10^6
2×10^6
4×10^6
-2×10^6
-4×10^6

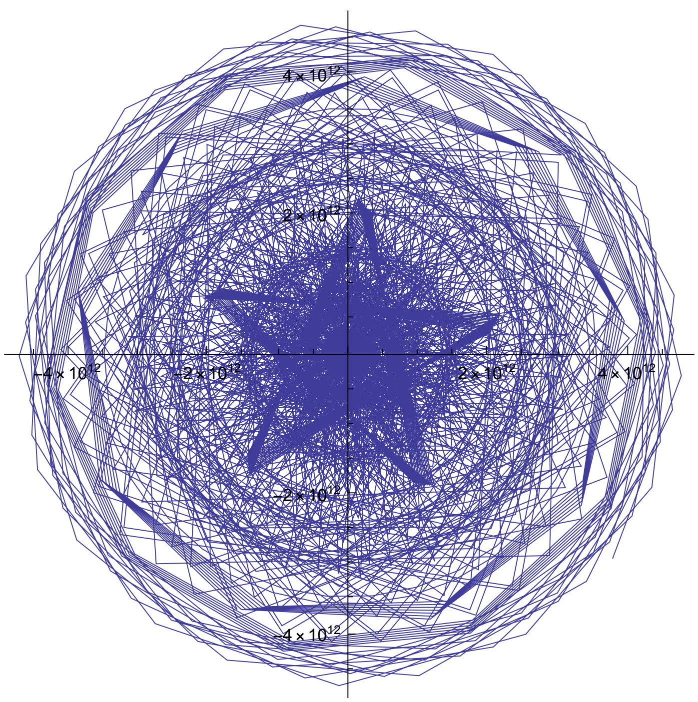

4×10^7
2×10^7
−4×10^7
−2×10^7
2×10^7
4×10^7
−2×10^7
−4×10^7

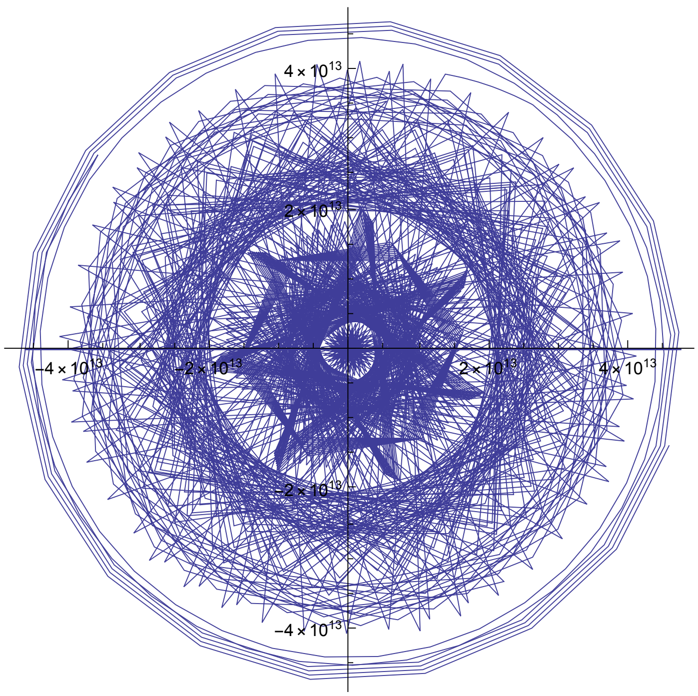

4×10^8
2×10^8
−4×10^8
−2×10^8
2×10^8
4×10^8
−2×10^8
−4×10^8

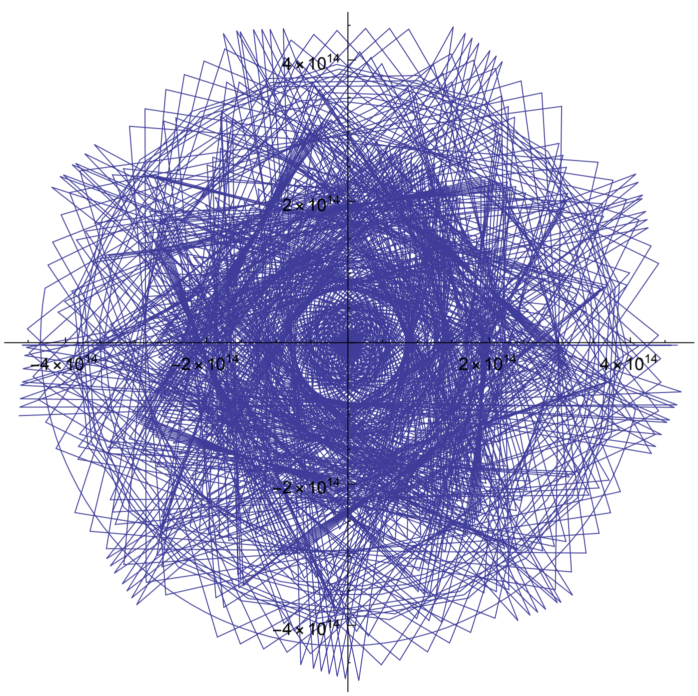

4×10^9
2×10^9
−4×10^9
−2×10^9
2×10^9
4×10^9
−2×10^9
−4×10^9

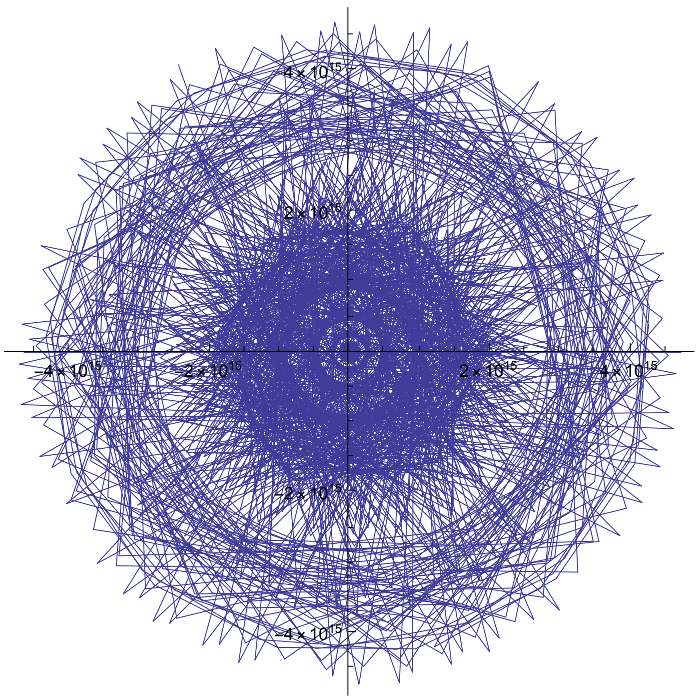

4×10^10
2×10^10
−4×10^10
−2×10^10
2×10^10
4×10^10
−2×10^10
−4×10^10


4×10^{11}
2×10^{11}
-4×10^{11}
-2×10^{11}
2×10^{11}
4×10^{11}
-2×10^{11}
-4×10^{11}

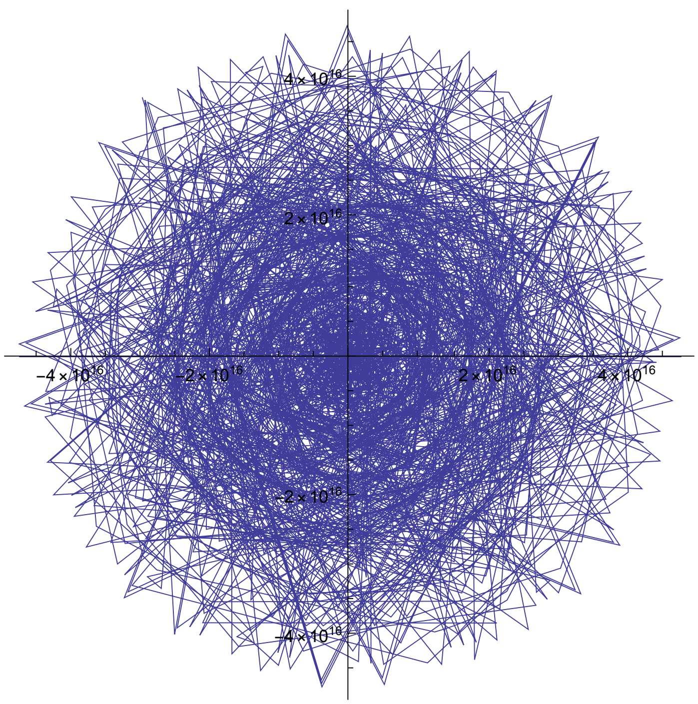

4×10^{12}
2×10^{12}
-4×10^{12}
-2×10^{12}
2×10^{12}
4×10^{12}
-2×10^{12}
-4×10^{12}


4 × 10^13
2 × 10^13
−4 × 10^13
−2 × 10^13
2 × 10^13
4 × 10^13
−2 × 10^13
−4 × 10^13

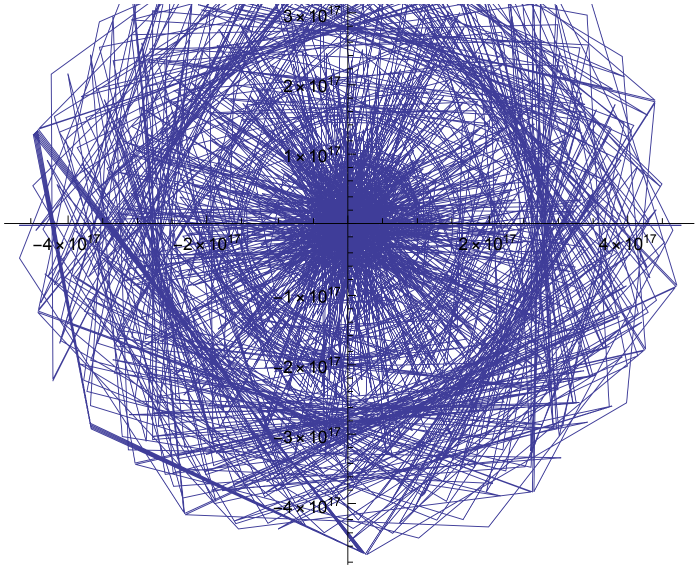

4 × 10^14
2 × 10^14
−4 × 10^14
−2 × 10^14
2 × 10^14
4 × 10^14
−2 × 10^14
−4 × 10^14

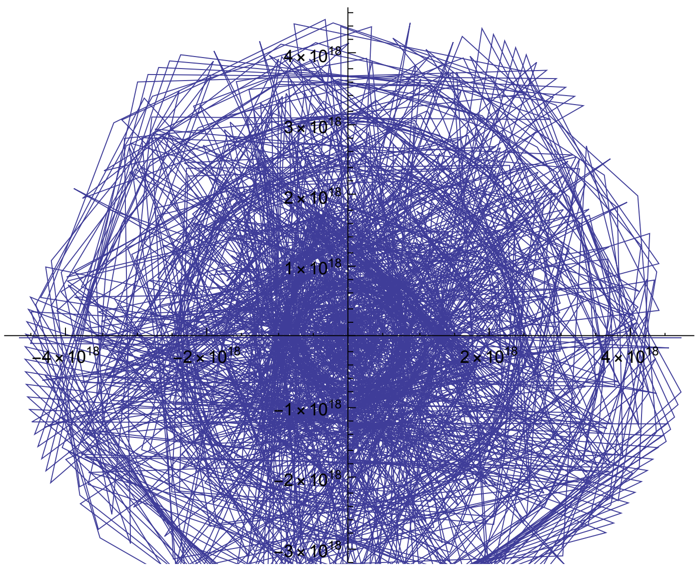


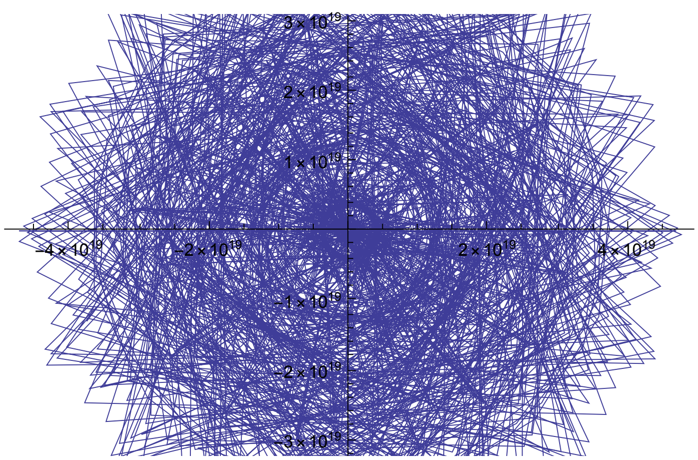
4×10^{15}
2×10^{15}
-4×10^{15}
-2×10^{15}
2×10^{15}
4×10^{15}
-2×10^{15}
-4×10^{15}

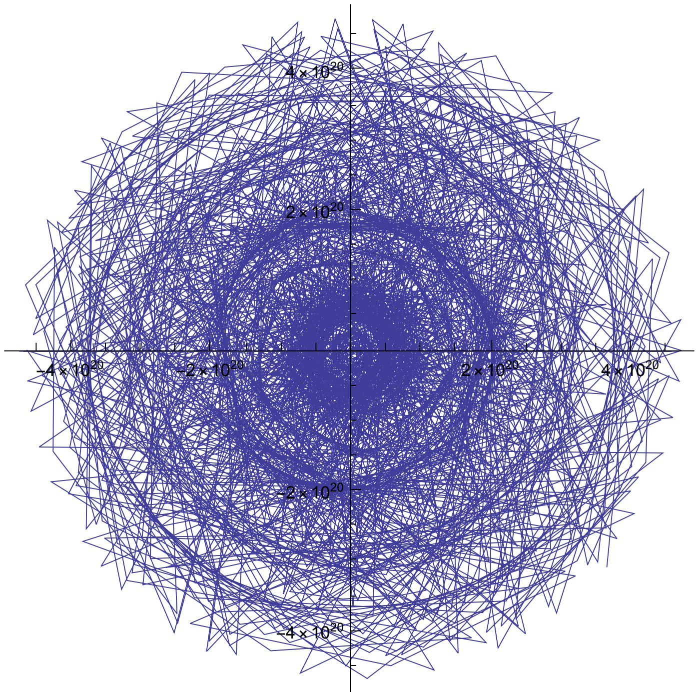


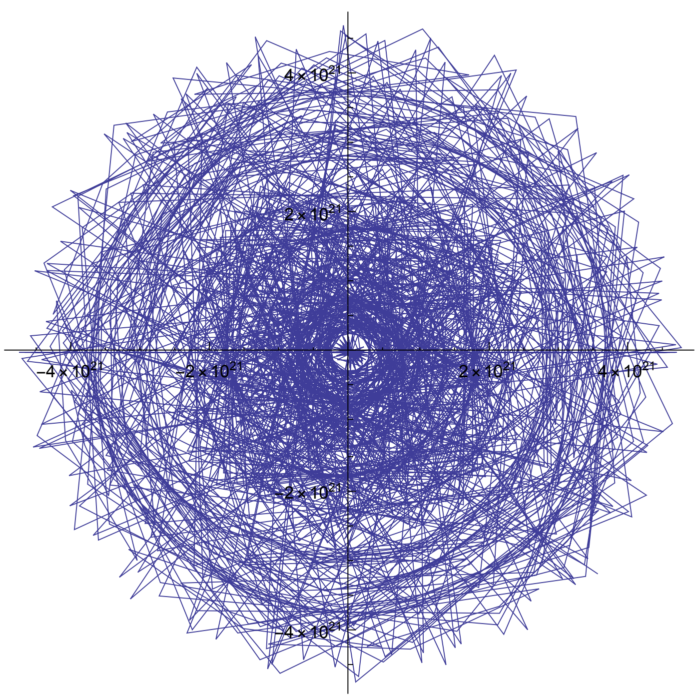
4×10^{16}
2×10^{16}
-4×10^{16}
-2×10^{16}
2×10^{16}
4×10^{16}
-2×10^{16}
-4×10^{16}

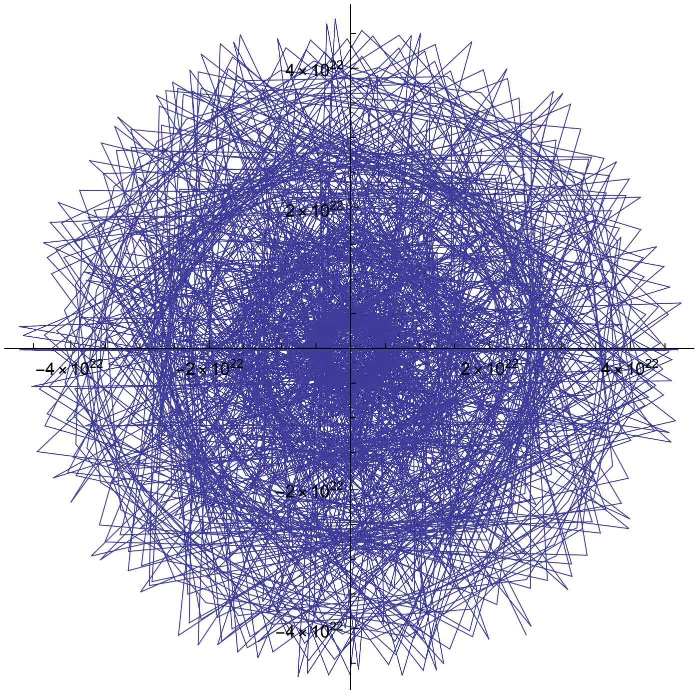

3×10^{17}
2×10^{17}
1×10^{17}
-4×10^{17}
-2×10^{17}
2×10^{17}
4×10^{17}
-1×10^{17}
-2×10^{17}
-3×10^{17}
-4×10^{17}

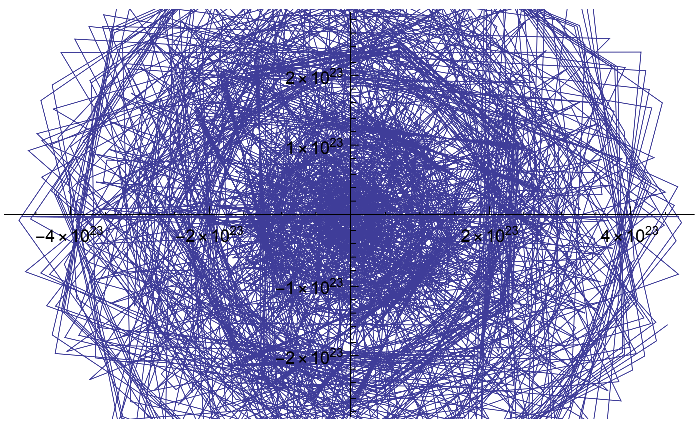

4×10^{18}
3×10^{18}
2×10^{18}
1×10^{18}
-4×10^{18}
-2×10^{18}
2×10^{18}
4×10^{18}
-1×10^{18}
-2×10^{18}
-3×10^{18}

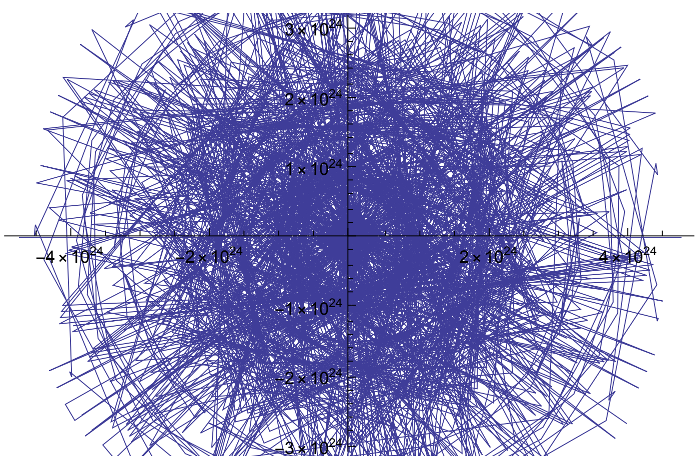

3×10^{19}
2×10^{19}
1×10^{19}
-4×10^{19}
-2×10^{19}
2×10^{19}
4×10^{19}
-1×10^{19}
-2×10^{19}
-3×10^{19}

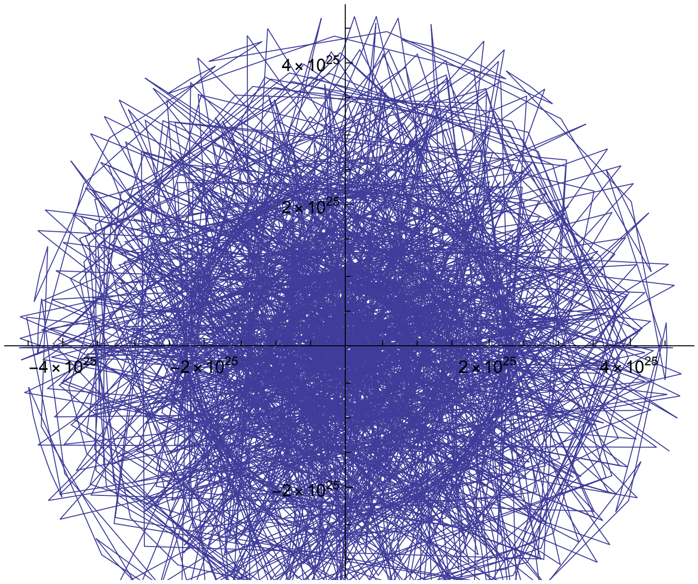

4×10^20
2×10^20
−4×10^20
−2×10^20
2×10^20
4×10^20
−2×10^20
−4×10^20

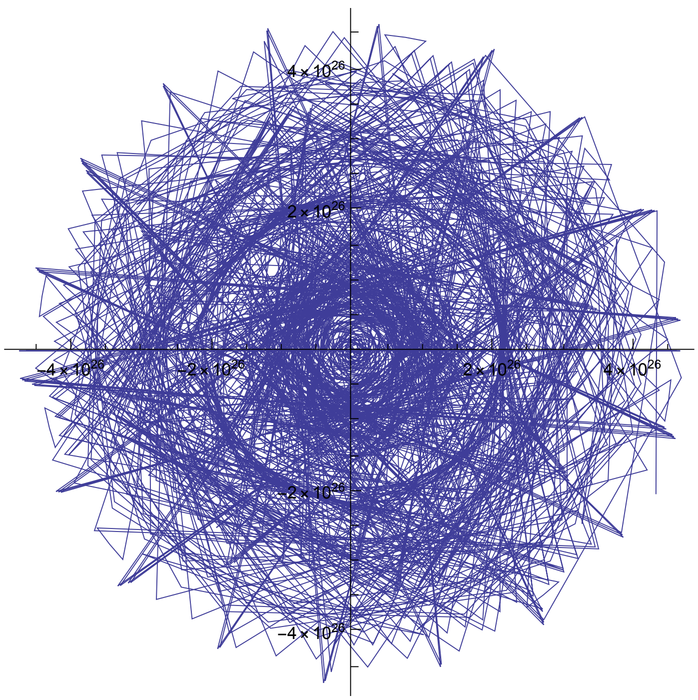

4×10^21
2×10^21
−4×10^21
−2×10^21
2×10^21
4×10^21
−2×10^21
−4×10^21

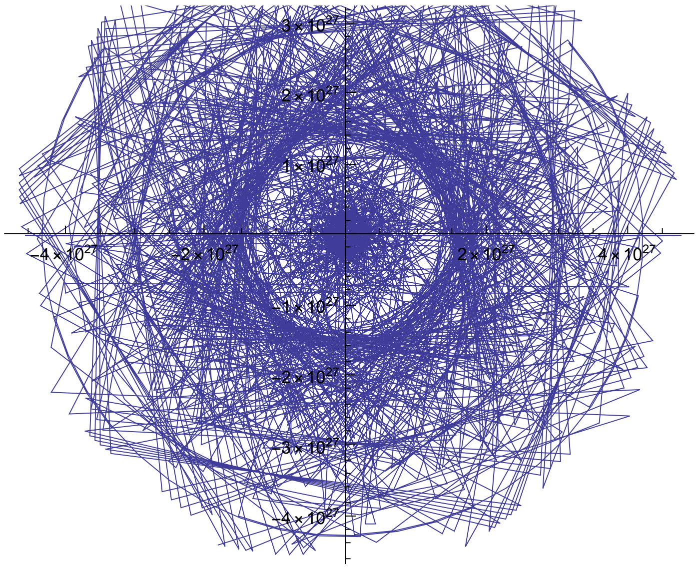

4 × 10^22
2 × 10^22
-4 × 10^22
-2 × 10^22
2 × 10^22
4 × 10^22
-2 × 10^22
-4 × 10^22

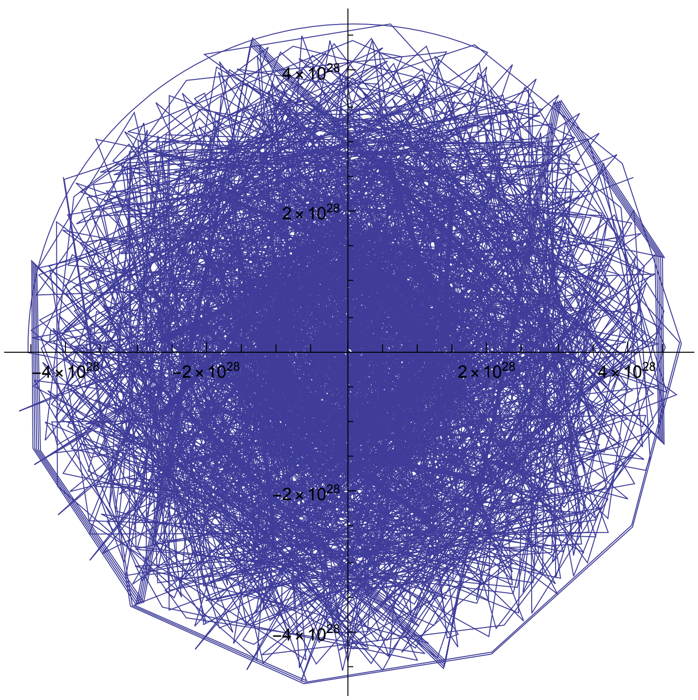

2 × 10^23
1 × 10^23
-4 × 10^23
-2 × 10^23
2 × 10^23
4 × 10^23
-1 × 10^23
-2 × 10^23

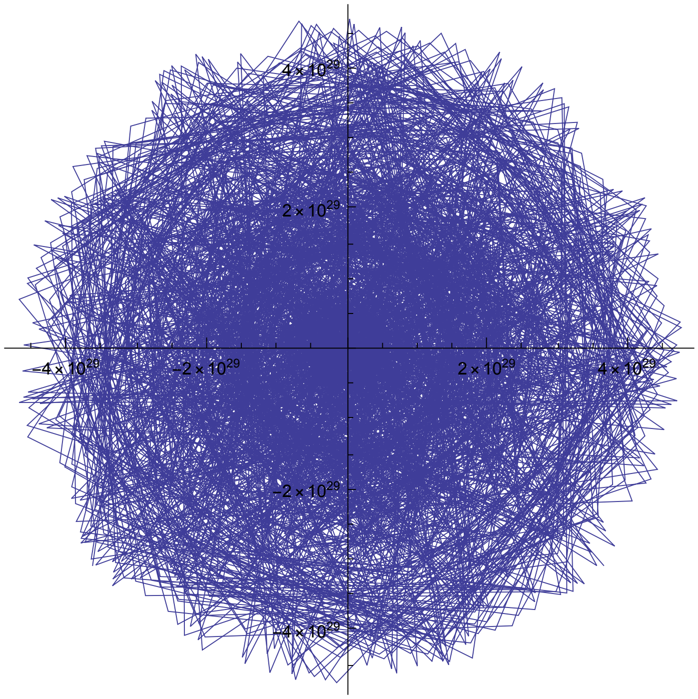

3 × 10^24
2 × 10^24
1 × 10^24
-4 × 10^24
-2 × 10^24
2 × 10^24
4 × 10^24
-1 × 10^24
-2 × 10^24
-3 × 10^24

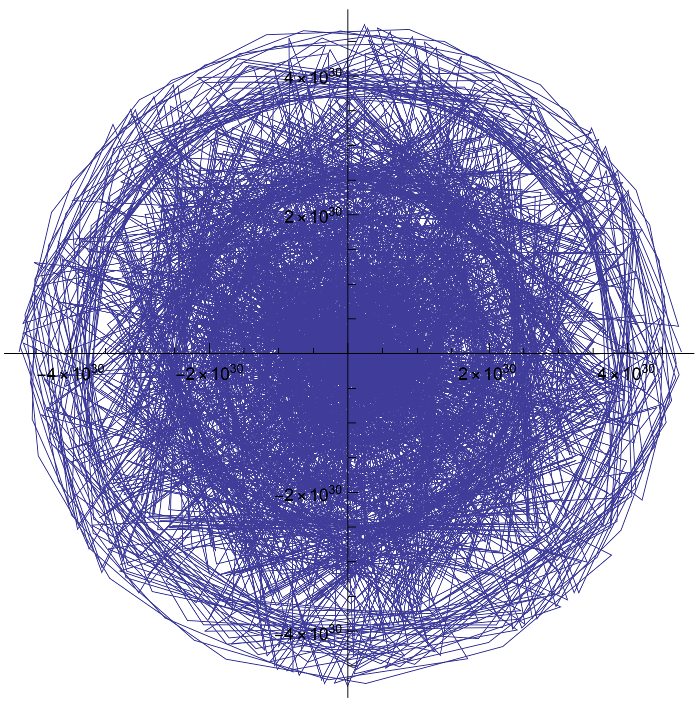

4 × 10^25
2 × 10^25
−4 × 10^25
−2 × 10^25
2 × 10^25
4 × 10^25
−2 × 10^25

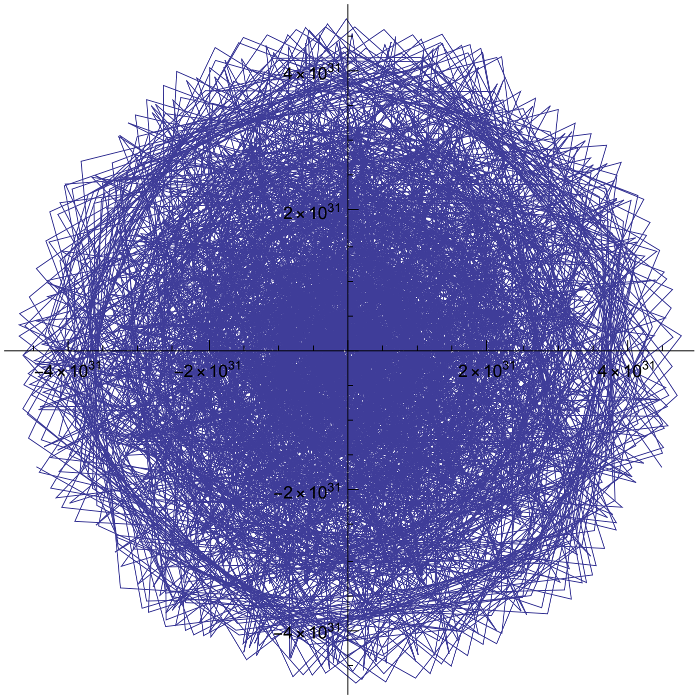

4 × 10^26
2 × 10^26
−4 × 10^26
−2 × 10^26
2 × 10^26
4 × 10^26
−2 × 10^26
−4 × 10^26

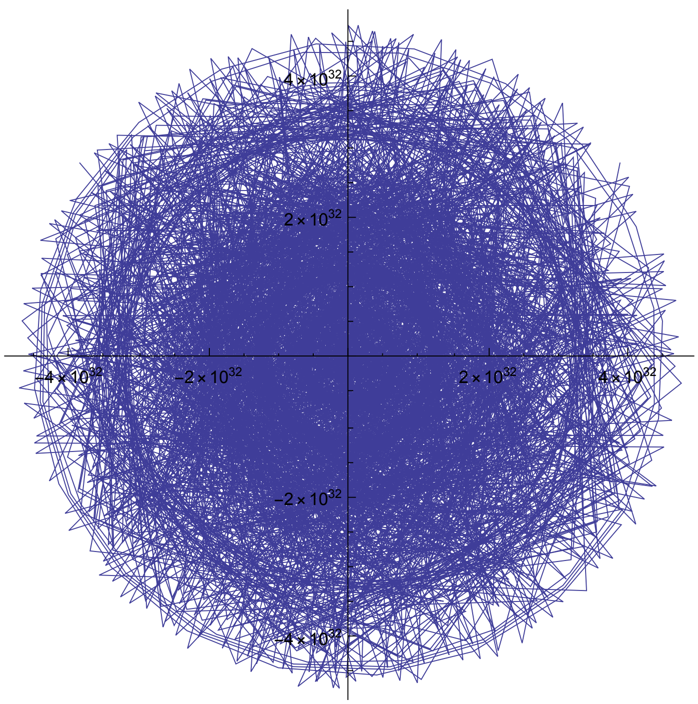

3×10^27
2×10^27
1×10^27
−4×10^27
−2×10^27
2×10^27
4×10^27
−1×10^27
−2×10^27
−3×10^27
−4×10^27

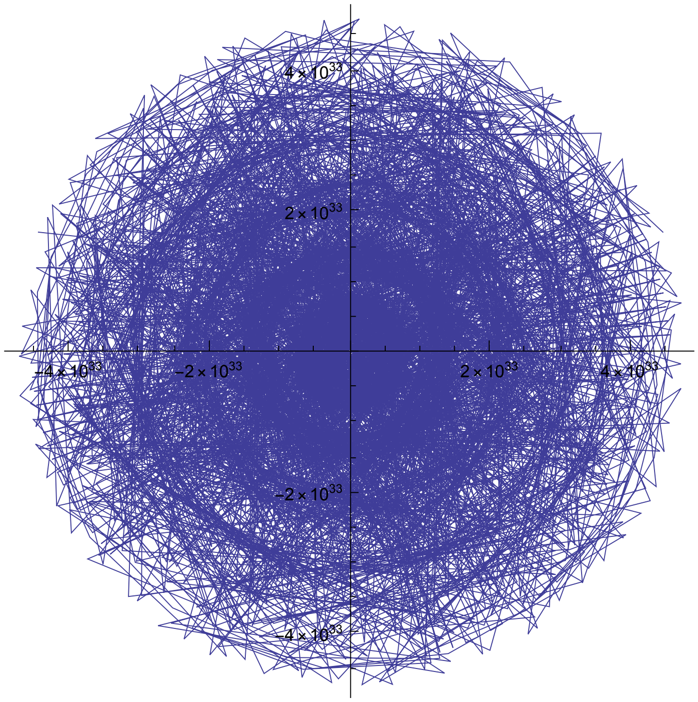

4×10^28
2×10^28
−4×10^28
−2×10^28
2×10^28
4×10^28
−2×10^28
−4×10^28

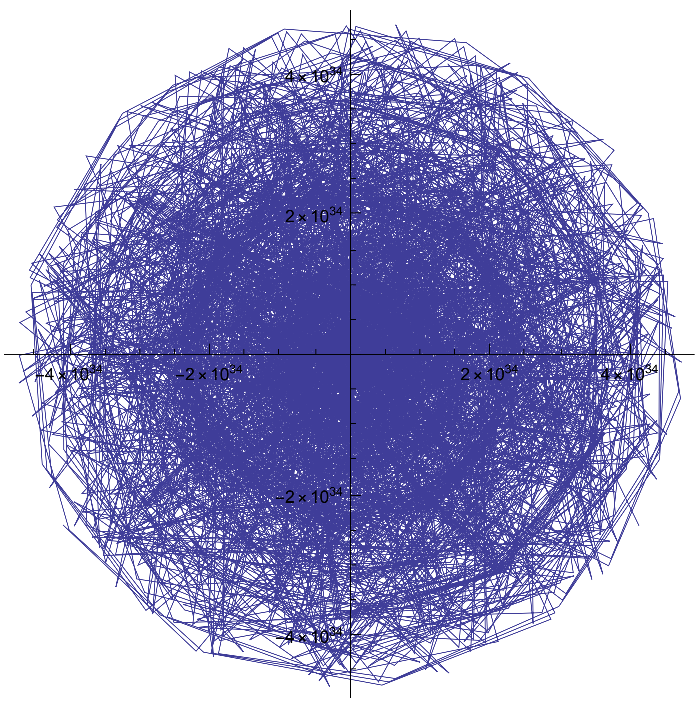

4×10^29
2×10^29
−4×10^29
−2×10^29
2×10^29
4×10^29
−2×10^29
−4×10^29

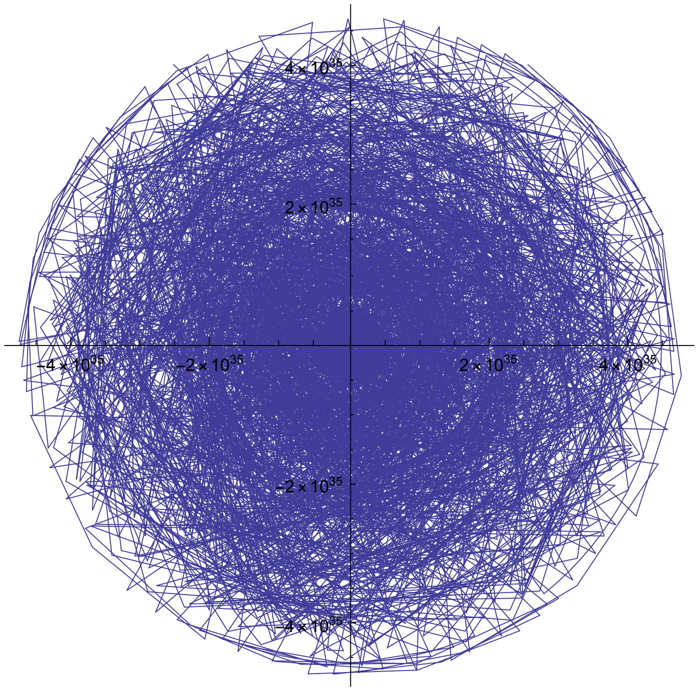

4×10^30
2×10^30
−4×10^30
−2×10^30
2×10^30
4×10^30
−2×10^30
−4×10^30

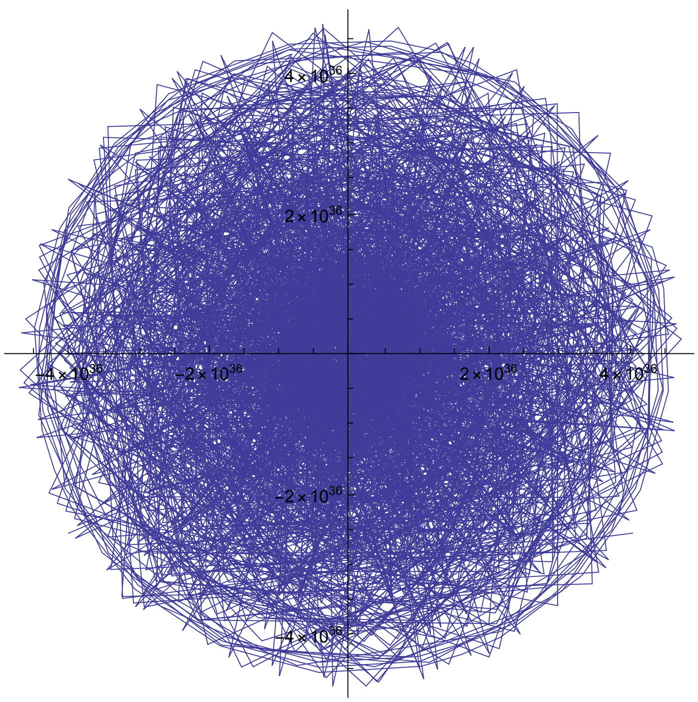

4×10^31
2×10^31
-4×10^31
-2×10^31
2×10^31
4×10^31
-2×10^31
-4×10^31

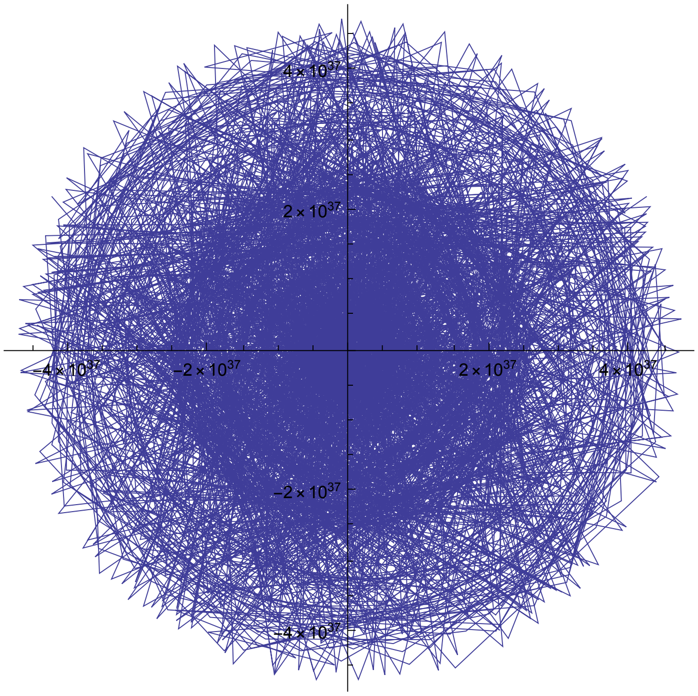

4×10^32
2×10^32
-4×10^32
-2×10^32
2×10^32
4×10^32
-2×10^32
-4×10^32


4×10^33
2×10^33
−4×10^33
−2×10^33
2×10^33
4×10^33
−2×10^33
−4×10^33


4×10^34
2×10^34
−4×10^34
−2×10^34
2×10^34
4×10^34
−2×10^34
−4×10^34


4 × 10^35
2 × 10^35
−4 × 10^35
−2 × 10^35
2 × 10^35
4 × 10^35
−2 × 10^35
−4 × 10^35


4 × 10^36
2 × 10^36
−4 × 10^36
−2 × 10^36
2 × 10^36
4 × 10^36
−2 × 10^36
−4 × 10^36



$\theta\, r = 2\,\pi\, r - 2\,\pi\, \sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)}$

$\gamma\, x = 2\,\pi\, r - 2\,\pi\, x$

$\gamma\, x\, \theta\, r == \left(2\,\pi\, r - 2\,\pi\, \sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)}\right)\left(2\,\pi\, \sqrt{h^2 + x^2} - 2\,\pi\, x\right)$

$\text{Solve}\left[\gamma\, x\, \theta\, r == \left(2\,\pi\, r - 2\,\pi\, \sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)}\right)\left(2\,\pi\, r - 2\,\pi\, \sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)}\right), \eta\right]$

$$\left\{\left\{\eta \to -\frac{1}{2}\sqrt{-\frac{4\, r^{3/2}\sqrt{x}\,\sqrt{\gamma}\,\sqrt{\theta}}{\pi} - \frac{r\, x\, \gamma\, \theta}{\pi^2}}\right\}, \left\{\eta \to \frac{1}{2}\sqrt{-\frac{4\, r^{3/2}\sqrt{x}\,\sqrt{\gamma}\,\sqrt{\theta}}{\pi} - \frac{r\, x\, \gamma\, \theta}{\pi^2}}\right\},\right.$$
$$\left.\left\{\eta \to -\frac{1}{2}\sqrt{\frac{4\, r^{3/2}\sqrt{x}\,\sqrt{\gamma}\,\sqrt{\theta}}{\pi} - \frac{r\, x\, \gamma\, \theta}{\pi^2}}\right\}, \left\{\eta \to \frac{1}{2}\sqrt{\frac{4\, r^{3/2}\sqrt{x}\,\sqrt{\gamma}\,\sqrt{\theta}}{\pi} - \frac{r\, x\, \gamma\, \theta}{\pi^2}}\right\}\right\}$$

```
c := 2.99792458 * (10 ^ 8)

r ^ (3 / 2)
```

$r^{3/2}$

$r\,\sqrt{r}$

$r^{3/2}$

$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\, \text{Sin}[\beta]^2}\right)$

$$\gamma := \frac{2\left(\pi - \pi\, \text{Sin}[\beta]^2 + \sqrt{\pi^2 - \pi^2\, \text{Sin}[\beta]^2}\right)}{-1 + \text{Sin}[\beta]^2}$$

$$r := \frac{x\,\gamma\,\theta}{48\,\pi^2} + \left(\left(1+\mathbb{i}\,\sqrt{3}\right)\left(-384\,\pi^4\,x^2\,\gamma^2\,\eta^2\,\theta^2 - x^4\,\gamma^4\,\theta^4\right)\right)\Big/ \left(96\,\pi^2\,x\,\gamma\,\theta\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}\right) - \frac{1}{96\,\pi^2\,x\,\gamma\,\theta}\left(1-\mathbb{i}\,\sqrt{3}\right)\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}$$

$$\text{Solve}\left[h == \frac{1}{2}\sqrt{\left(\frac{4\,r\,\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{x\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\gamma\Big/\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\theta\Big/\sqrt{1-\frac{(v)^2}{c^2}}}}{\pi} - \frac{r\,x\,\gamma\,\theta}{\pi^2}\right)},\ v\right]$$

$$\Big\{\Big\{v \to -0.5\sqrt{\Big(-\big(2.\,(-3.00492\times10^{35}\,h^4 - 1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta + 3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta - 1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2)\big)\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big) - 2.\sqrt{\Big(\big(-3.00492\times10^{35}\,h^4 - 1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta + 3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta - 1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2 - \big(4.\,(1.35034\times10^{52}\,h^4 + 6.84093\times10^{50}\,h^2\,r\,x\,\gamma\,\theta - 1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta + 8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2)\big)\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\Big)}\Big)}\Big\},$$

$$\Big\{v \to 0.5\sqrt{\Big(-\big(2.\,(-3.00492\times10^{35}\,h^4 - 1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta + 3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta - 1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2)\big)\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big) - 2.\sqrt{\Big(\big(-3.00492\times10^{35}\,h^4 - 1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta + 3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta - 1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2 - \big(4.\,(1.35034\times10^{52}\,h^4 + 6.84093\times10^{50}\,h^2\,r\,x\,\gamma\,\theta - 1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta + 8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2)\big)\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\Big)}\Big)}\Big\},$$

$$\Big\{v \to -0.5\sqrt{\Big(-\big(2.\,(-3.00492\times10^{35}\,h^4 - 1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta + 3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta - 1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2)\big)\Big/\big(1.67171\times10^{18}\,h^4 + 8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta - 1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta + 1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big) +$$

$$2.\sqrt{\left(\left(-3.00492\times10^{35}\,h^4-1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\right)^2\Big/\left(1.67171\times10^{18}\,h^4+8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\right)^2-\left(4.\left(1.35034\times10^{52}\,h^4+6.84093\times10^{50}\,h^2\,r\,x\,\gamma\,\theta-1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta+8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2\right)\right)\Big/\left(1.67171\times10^{18}\,h^4+8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\right)\right)}\Bigg\}\Bigg\},$$

$$\Bigg\{v\to0.5\sqrt{\Big(-\left(2.\left(-3.00492\times10^{35}\,h^4-1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\right)\right)\Big/\left(1.67171\times10^{18}\,h^4+8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\right)+2.\sqrt{\left(\left(-3.00492\times10^{35}\,h^4-1.52231\times10^{34}\,h^2\,r\,x\,\gamma\,\theta+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\right)^2\Big/\left(1.67171\times10^{18}\,h^4+8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\right)^2-\left(4.\left(1.35034\times10^{52}\,h^4+6.84093\times10^{50}\,h^2\,r\,x\,\gamma\,\theta-1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta+8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2\right)\right)\Big/\left(1.67171\times10^{18}\,h^4+8.469\times10^{16}\,h^2\,r\,x\,\gamma\,\theta-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\right)\right)}\Big)}\Bigg\}\Bigg\}$$

$$r := \sqrt{x^{\wedge}2+h^{\wedge}2}$$

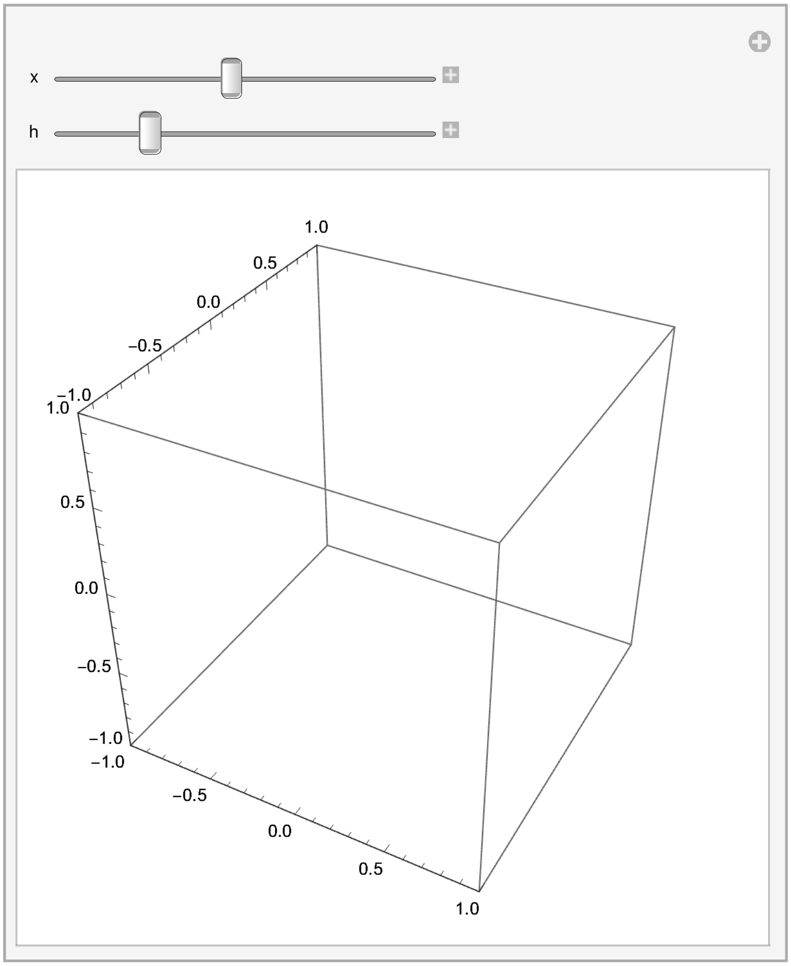
$$h := \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$

$$\theta := \left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

$$r := -\frac{-8\,\pi^2\,x-x\,\gamma\,\theta+x\,\sqrt{\gamma}\,\sqrt{\theta}\,\sqrt{16\,\pi^2+\gamma\,\theta}}{8\,\pi^2}$$

$$r := \frac{x\,\gamma\,\theta}{48\,\pi^2}+\left(\left(1+\mathrm{i}\,\sqrt{3}\right)\left(-384\,\pi^4\,x^2\,\gamma^2\,\eta^2\,\theta^2-x^4\,\gamma^4\,\theta^4\right)\right)\Big/\left(96\,\pi^2\,x\,\gamma\,\theta\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2+576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4+x^6\,\gamma^6\,\theta^6+1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4+x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}\right)-\frac{1}{96\,\pi^2\,x\,\gamma\,\theta}\left(1-\mathrm{i}\,\sqrt{3}\right)\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2+576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4+x^6\,\gamma^6\,\theta^6+1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4+x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}$$

```
Manipulate[SphericalPlot3D[
  0.5` √(-(2.` (-3.0049220849611958`*^35 h^4 - 1.522311312006349`*^34 h^2 r x γ θ +
            3.044622624012698`*^34 r^3 x γ θ - 1.928029800057543`*^32 r^2 x^2 γ^2 θ^2)) /
        (1.671713363134415`*^18 h^4 + 8.468998833174608`*^16 h^2 r x γ θ -
          1.6937997666349216`*^17 r^3 x γ θ + 1.072611232553536`*^15 r^2 x^2 γ^2 θ^2) +
      2.` √(((-3.0049220849611958`*^35 h^4 - 1.522311312006349`*^34 h^2 r x γ θ +
               3.044622624012698`*^34 r^3 x γ θ - 1.928029800057543`*^32 r^2 x^2 γ^2 θ^2)^2 /
            (1.671713363134415`*^18 h^4 + 8.468998833174608`*^16 h^2 r x γ θ -
               1.6937997666349216`*^17 r^3 x γ θ + 1.072611232553536`*^15 r^2 x^2 γ^2 θ^2)^2 -
           (4.` (1.350344642779755`*^52 h^4 + 6.840925876576728`*^50 h^2 r x γ θ -
                1.3681851753153455`*^51 r^3 x γ θ + 8.664133837803139`*^48 r^2 x^2 γ^2 θ^2)) /
            (1.671713363134415`*^18 h^4 + 8.468998833174608`*^16 h^2 r x γ θ -
              1.6937997666349216`*^17 r^3 x γ θ + 1.072611232553536`*^15 r^2 x^2 γ^2 θ^2))),
  {θ, -2 π, 2 π}, {γ, -8 π, 8 π}], {x, -100,
  100},
 {h,
  -100,
  100}]
```



$$r := \Big(-32\,\pi^4\,\gamma - 8\,\pi^3\,\gamma^2 + 32\,\pi^4\,\theta + 32\,\pi^3\,\gamma\,\theta + 8\,\pi^2\,\gamma^2\,\theta - 8\,\pi^3\,\theta^2 - 8\,\pi^2\,\gamma\,\theta^2 - 2\,\pi\,\gamma^2\,\theta^2 + 4\,\pi^2\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\sqrt{(4\,\pi-\theta)\,\theta} + \frac{4\,\pi^2\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}{\sqrt{4\,\pi+\gamma}} - \frac{4\,\pi^2\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}{\sqrt{\gamma}} - 4\,\pi\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta} - \frac{\pi\,\sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}{\sqrt{4\,\pi+\gamma}} + \frac{\pi\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}{\sqrt{\gamma}} + \sqrt{\gamma}\,\sqrt{(2\,\pi+\gamma)^2}\,\sqrt{4\,\pi+\gamma}\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\Big) \Big/ \left(\pi^2\,\left(128\,\pi^3\,\gamma + 32\,\pi^2\,\gamma^2 - 128\,\pi^3\,\theta - 128\,\pi^2\,\gamma\,\theta - 32\,\pi\,\gamma^2\,\theta + 32\,\pi^2\,\theta^2 + 32\,\pi\,\gamma\,\theta^2 + 8\,\gamma^2\,\theta^2\right)\right)$$

$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}$$

$$x := r - \frac{(r\,\theta)}{2\,\pi}$$

```
SphericalPlot3D[
 0.5` √(-(2.` (-3.0049220849611958`*^35 η^4 + 3.044622624012698`*^34 r^3 x γ θ -
        1.522311312006349`*^34 r x γ η^2 θ - 1.928029800057543`*^32 r^2 x^2 γ^2 θ^2)) /
     (1.671713363134415`*^18 η^4 - 1.6937997666349216`*^17 r^3 x γ θ +
       8.468998833174608`*^16 r x γ η^2 θ + 1.072611232553536`*^15 r^2 x^2 γ^2 θ^2) +
    2.` √((-3.0049220849611958`*^35 η^4 + 3.044622624012698`*^34 r^3 x γ θ -
          1.522311312006349`*^34 r x γ η^2 θ - 1.928029800057543`*^32 r^2 x^2 γ^2 θ^2)^2/
        (1.671713363134415`*^18 η^4 - 1.6937997666349216`*^17 r^3 x γ θ +
          8.468998833174608`*^16 r x γ η^2 θ + 1.072611232553536`*^15 r^2 x^2 γ^2 θ^2)^2 -
       (4.` (1.350344642779755`*^52 η^4 - 1.3681851753153455`*^51 r^3 x γ θ +
           6.840925876576728`*^50 r x γ η^2 θ + 8.664133837803139`*^48 r^2 x^2 γ^2 θ^2)) /
        (1.671713363134415`*^18 η^4 - 1.6937997666349216`*^17 r^3 x γ θ +
         8.468998833174608`*^16 r x γ η^2 θ +
         1.072611232553536`*^15 r^2 x^2 γ^2 θ^2))), {θ, -2 π, 2 π}, {γ, -2 π, 2 π}]
```

$$\text{Solve}\left[\eta == \frac{1}{2}\sqrt{\left(\frac{4\,r\,\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{x\,\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\gamma\Big/\sqrt{1-\frac{(v)^2}{c^2}}}\,\sqrt{\theta\Big/\sqrt{1-\frac{(v)^2}{c^2}}}}{\pi} - \frac{r\,x\,\gamma\,\theta}{\pi^2}\right)},\ v\right]$$

```
{{v → -0.5
     √(-(2. (-3.00492×10^35 η^4 + 3.04462×10^34 r^3 x γ θ - 1.52231×10^34 r x γ η^2 θ - 1.92803×
            10^32 r^2 x^2 γ^2 θ^2)) / (1.67171×10^18 η^4 -
          1.6938×10^17 r^3 x γ θ + 8.469×10^16 r x γ η^2 θ + 1.07261×10^15 r^2 x^2 γ^2 θ^2) -
       2. √((-3.00492×10^35 η^4 + 3.04462×10^34 r^3 x γ θ - 1.52231×10^34 r x γ η^2 θ -
             1.92803×10^32 r^2 x^2 γ^2 θ^2)^2 / (1.67171×10^18 η^4 - 1.6938×10^17 r^3 x γ θ +
             8.469×10^16 r x γ η^2 θ + 1.07261×10^15 r^2 x^2 γ^2 θ^2)^2 -
          (4. (1.35034×10^52 η^4 - 1.36819×10^51 r^3 x γ θ + 6.84093×10^50 r x γ η^2 θ +
               8.66413×10^48 r^2 x^2 γ^2 θ^2)) / (1.67171×10^18 η^4 - 1.6938×10^17 r^3 x γ θ +
             8.469×10^16 r x γ η^2 θ + 1.07261×10^15 r^2 x^2 γ^2 θ^2)))},
 {v → 0.5 √(-(2. (-3.00492×10^35 η^4 + 3.04462×10^34 r^3 x γ θ - 1.52231×10^34 r x γ η^2 θ -
            1.92803×10^32 r^2 x^2 γ^2 θ^2)) / (1.67171×10^18 η^4 -
          1.6938×10^17 r^3 x γ θ + 8.469×10^16 r x γ η^2 θ + 1.07261×10^15 r^2 x^2 γ^2 θ^2) -
       2. √((-3.00492×10^35 η^4 + 3.04462×10^34 r^3 x γ θ - 1.52231×10^34 r x γ η^2 θ -
```

$$1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2-$$
$$\big(4.\,\big(1.35034\times10^{52}\,\eta^4-1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta+6.84093\times10^{50}\,r\,x\,\gamma\,\eta^2\,\theta+$$
$$8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\big)\big\},$$

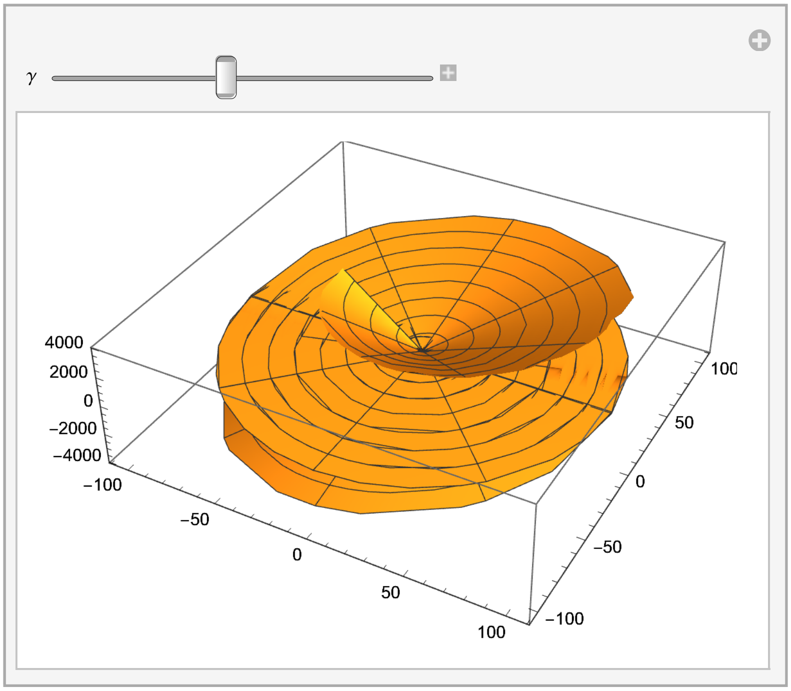
$$\big\{v\to-0.5\sqrt{\big(-\big(2.\,\big(-3.00492\times10^{35}\,\eta^4+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.52231\times10^{34}\,r\,x\,\gamma\,\eta^2\,\theta-}$$
$$1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\Big/\big(1.67171\times10^{18}\,\eta^4-$$
$$1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)+$$
$$2.\sqrt{\big(\big(-3.00492\times10^{35}\,\eta^4+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.52231\times10^{34}\,r\,x\,\gamma\,\eta^2\,\theta-}$$
$$1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2-$$
$$\big(4.\,\big(1.35034\times10^{52}\,\eta^4-1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta+6.84093\times10^{50}\,r\,x\,\gamma\,\eta^2\,\theta+$$
$$8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\big)\big\},$$

$$\big\{v\to0.5\sqrt{\big(-\big(2.\,\big(-3.00492\times10^{35}\,\eta^4+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.52231\times10^{34}\,r\,x\,\gamma\,\eta^2\,\theta-}$$
$$1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\Big/\big(1.67171\times10^{18}\,\eta^4-$$
$$1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)+$$
$$2.\sqrt{\big(\big(-3.00492\times10^{35}\,\eta^4+3.04462\times10^{34}\,r^3\,x\,\gamma\,\theta-1.52231\times10^{34}\,r\,x\,\gamma\,\eta^2\,\theta-}$$
$$1.92803\times10^{32}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)^2-$$
$$\big(4.\,\big(1.35034\times10^{52}\,\eta^4-1.36819\times10^{51}\,r^3\,x\,\gamma\,\theta+6.84093\times10^{50}\,r\,x\,\gamma\,\eta^2\,\theta+$$
$$8.66413\times10^{48}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\Big/\big(1.67171\times10^{18}\,\eta^4-1.6938\times10^{17}\,r^3\,x\,\gamma\,\theta+$$
$$8.469\times10^{16}\,r\,x\,\gamma\,\eta^2\,\theta+1.07261\times10^{15}\,r^2\,x^2\,\gamma^2\,\theta^2\big)\big)\big)\big\}\big\}$$

Solve[γ x θ r == (2 π r - 2 π x) (2 π r - 2 π x), r]

$$\left\{\left\{r\to-\frac{-8\,\pi^2\,x-x\,\gamma\,\theta-x\,\sqrt{\gamma}\,\sqrt{\theta}\,\sqrt{16\,\pi^2+\gamma\,\theta}}{8\,\pi^2}\right\},\left\{r\to-\frac{-8\,\pi^2\,x-x\,\gamma\,\theta+x\,\sqrt{\gamma}\,\sqrt{\theta}\,\sqrt{16\,\pi^2+\gamma\,\theta}}{8\,\pi^2}\right\}\right\}$$

$$\text{Manipulate}\left[\text{RevolutionPlot3D}\left[\frac{-8\,\pi^2\,x - x\,\gamma\,\theta + x\,\sqrt{\gamma}\,\sqrt{\theta}\,\sqrt{16\,\pi^2 + \gamma\,\theta}}{8\,\pi^2},\right.\right.$$
$$\left.\left.\{x, -100, 100\}, \{\theta, -2\,\pi, 2\,\pi\}\right], \{\gamma, -2000\,\pi, 2000\,\pi\}\right]$$



$$\text{Solve}\left[\gamma\,x\,\theta\,r == \left(2\,\pi\,r - 2\,\pi\,\sqrt{(r^{\wedge}2 - \eta^{\wedge}2)}\right)\left(2\,\pi\,\sqrt{\eta^2 + x^2} - 2\,\pi\,x\right), r\right]$$

$$\left\{\left\{r \to -\left(4\sqrt{\left(8\,\pi^6\,x\,\eta^4 - 8\,\pi^6\,\eta^4\,\sqrt{x^2+\eta^2} - 2\,\pi^4\,x^3\,\gamma\,\eta^2\,\theta - \pi^4\,x\,\gamma\,\eta^4\,\theta + 2\,\pi^4\,x^2\,\gamma\,\eta^2\,\sqrt{x^2+\eta^2}\,\theta\right)}\right)\Big/\right.\right.$$
$$\left.\left(\sqrt{-64\,\pi^4\,x\,\gamma\,\eta^2\,\theta + 16\,\pi^2\,x^3\,\gamma^2\,\theta^2 + x^3\,\gamma^3\,\theta^3}\right)\right\},$$
$$\left\{r \to \left(4\sqrt{\left(8\,\pi^6\,x\,\eta^4 - 8\,\pi^6\,\eta^4\,\sqrt{x^2+\eta^2} - 2\,\pi^4\,x^3\,\gamma\,\eta^2\,\theta - \pi^4\,x\,\gamma\,\eta^4\,\theta + 2\,\pi^4\,x^2\,\gamma\,\eta^2\,\sqrt{x^2+\eta^2}\,\theta\right)}\right)\Big/\right.$$
$$\left.\left.\left(\sqrt{-64\,\pi^4\,x\,\gamma\,\eta^2\,\theta + 16\,\pi^2\,x^3\,\gamma^2\,\theta^2 + x^3\,\gamma^3\,\theta^3}\right)\right\}\right\}$$

$$\text{Solve}\left[\frac{2\left(\pi - \pi\,\text{Sin}[\beta]^2 + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)}{-1 + \text{Sin}[\beta]^2}\,x\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)r ==\right.$$
$$\left.\left(2\,\pi\,r - 2\,\pi\,\sqrt{(r^{\wedge}2 - \eta^{\wedge}2)}\right)\left(2\,\pi\,\sqrt{\eta^2 + x^2} - 2\,\pi\,x\right), x\right]$$

$$\left(4\sqrt{\left(8\,\pi^6\,x\,\eta^4 - 8\,\pi^6\,\eta^4\,\sqrt{x^2+\eta^2} - 2\,\pi^4\,x^3\,\gamma\,\eta^2\,\theta - \pi^4\,x\,\gamma\,\eta^4\,\theta + 2\,\pi^4\,x^2\,\gamma\,\eta^2\,\sqrt{x^2+\eta^2}\,\theta\right)}\right)\Big/$$
$$\left(\sqrt{-64\,\pi^4\,x\,\gamma\,\eta^2\,\theta + 16\,\pi^2\,x^3\,\gamma^2\,\theta^2 + x^3\,\gamma^3\,\theta^3}\right)$$

$$\text{Solve}\left[\gamma\, x\, \theta\, r == \left(2\pi r - 2\pi\sqrt{(r\hat{}2-\eta\hat{}2)}\right)\left(2\pi r - 2\pi\sqrt{(r\hat{}2-\eta\hat{}2)}\right), r\right]$$

$$\Big\{\Big\{r \to \frac{x\gamma\theta}{48\pi^2} - \left(-384\pi^4 x^2\gamma^2\eta^2\theta^2 - x^4\gamma^4\theta^4\right)\Big/\left(48\pi^2 x\gamma\theta\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\right) + \frac{1}{48\pi^2 x\gamma\theta}\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\Big\},$$

$$\Big\{r \to \frac{x\gamma\theta}{48\pi^2} + \left(\left(1+i\sqrt{3}\right)\left(-384\pi^4 x^2\gamma^2\eta^2\theta^2 - x^4\gamma^4\theta^4\right)\right)\Big/\left(96\pi^2 x\gamma\theta\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\right) - \frac{1}{96\pi^2 x\gamma\theta}\left(1-i\sqrt{3}\right)\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\Big\},$$

$$\Big\{r \to \frac{x\gamma\theta}{48\pi^2} + \left(\left(1-i\sqrt{3}\right)\left(-384\pi^4 x^2\gamma^2\eta^2\theta^2 - x^4\gamma^4\theta^4\right)\right)\Big/\left(96\pi^2 x\gamma\theta\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\right) - \frac{1}{96\pi^2 x\gamma\theta}\left(1+i\sqrt{3}\right)\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\Big\}\Big\}$$

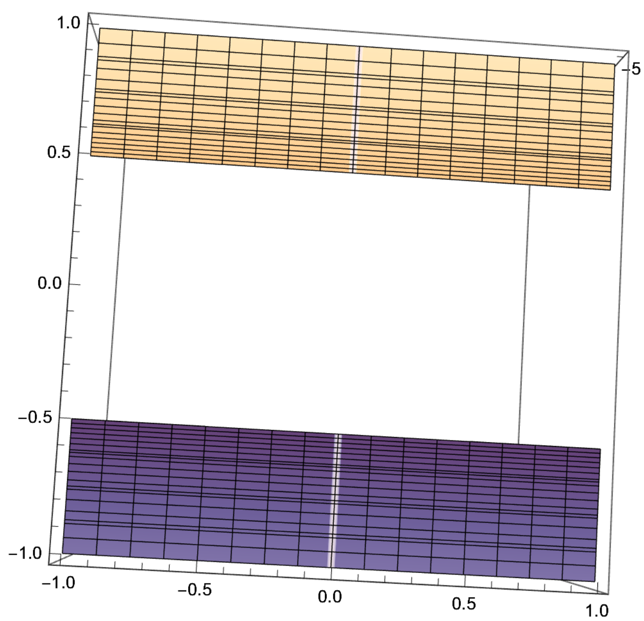
$$\frac{x\gamma\theta}{48\pi^2} - \left(-384\pi^4 x^2\gamma^2\eta^2\theta^2 - x^4\gamma^4\theta^4\right)\Big/\left(48\pi^2 x\gamma\theta\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}\right) + \frac{1}{48\pi^2 x\gamma\theta}\left(55296\pi^8 x^2\gamma^2\eta^4\theta^2 + 576\pi^4 x^4\gamma^4\eta^2\theta^4 + x^6\gamma^6\theta^6 + 1536\sqrt{3}\pi^6\sqrt{432\pi^4 x^4\gamma^4\eta^8\theta^4 + x^6\gamma^6\eta^6\theta^6}\right)^{1/3}$$

$$\theta := \frac{2\left(4\pi^2 + \pi\gamma\right)}{2\pi + \gamma}$$

ContourPlot3D[

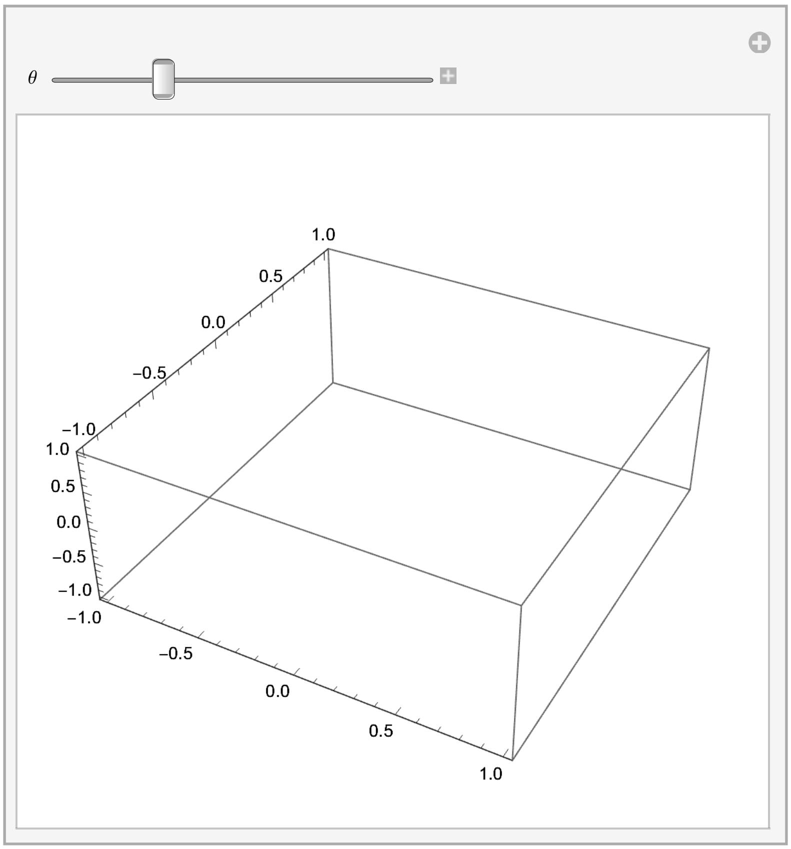
$$\frac{x\,\gamma\,\theta}{48\,\pi^2} - \left(-384\,\pi^4\,x^2\,\gamma^2\,\eta^2\,\theta^2 - x^4\,\gamma^4\,\theta^4\right) \Big/ \left(48\,\pi^2\,x\,\gamma\,\theta\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}\right) + \frac{1}{48\,\pi^2\,x\,\gamma\,\theta}\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}$$

, {x, -1, 1}, {η, -1, 1}, {γ, -2 π, 2 π}]



$$\gamma := \frac{2\,\pi\,\theta}{2\,\pi - \theta}$$

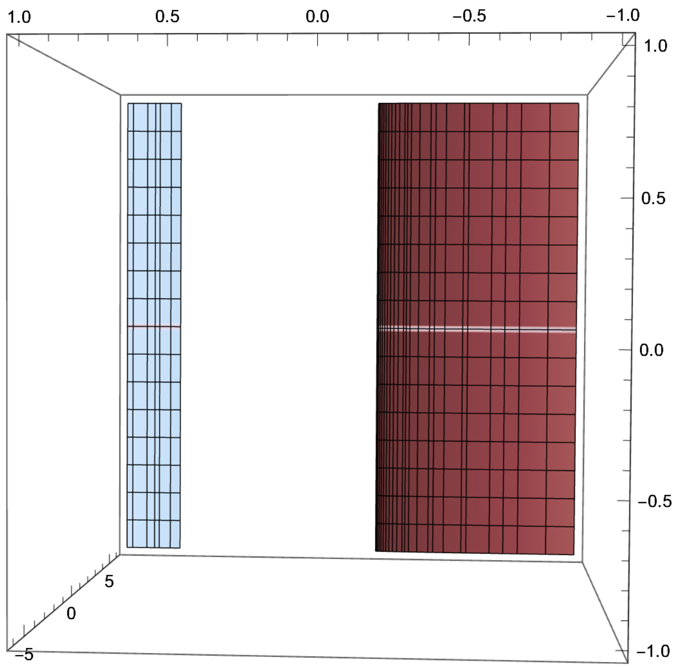
```
Manipulate[Plot3D[
  x γ θ/(48 π^2) - (-384 π^4 x^2 γ^2 η^2 θ^2 - x^4 γ^4 θ^4) / (48 π^2 x γ θ (55296 π^8 x^2 γ^2 η^4 θ^2 + 576 π^4 x^4 γ^4 η^2 θ^4 +
        x^6 γ^6 θ^6 + 1536 Sqrt[3] π^6 Sqrt[432 π^4 x^4 γ^4 η^8 θ^4 + x^6 γ^6 η^6 θ^6])^(1/3)) +
   1/(48 π^2 x γ θ) (55296 π^8 x^2 γ^2 η^4 θ^2 + 576 π^4 x^4 γ^4 η^2 θ^4 + x^6 γ^6 θ^6 + 1536 Sqrt[3] π^6
        Sqrt[432 π^4 x^4 γ^4 η^8 θ^4 + x^6 γ^6 η^6 θ^6])^(1/3), {x, -1, 1}, {η, -1, 1}], {θ, -2 π, 2 π}]
```



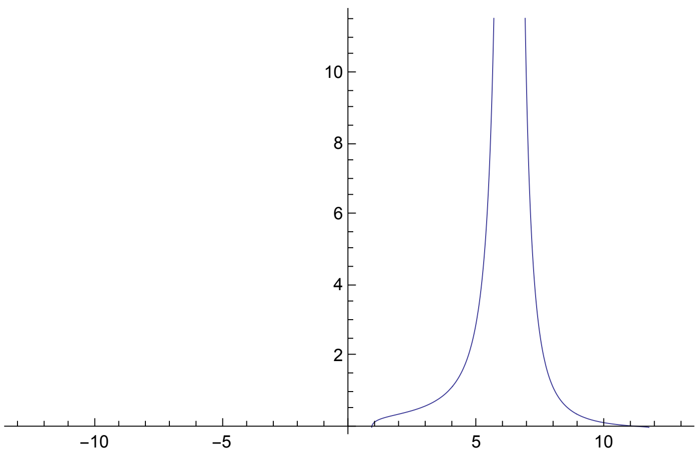
```
ContourPlot3D[
```

$$\frac{x\,\gamma\,\theta}{48\,\pi^2} - \left(-384\,\pi^4\,x^2\,\gamma^2\,\eta^2\,\theta^2 - x^4\,\gamma^4\,\theta^4\right) \Big/ \left(48\,\pi^2\,x\,\gamma\,\theta\,\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}\right) + \frac{1}{48\,\pi^2\,x\,\gamma\,\theta}\left(55\,296\,\pi^8\,x^2\,\gamma^2\,\eta^4\,\theta^2 + 576\,\pi^4\,x^4\,\gamma^4\,\eta^2\,\theta^4 + x^6\,\gamma^6\,\theta^6 + 1536\,\sqrt{3}\,\pi^6\,\sqrt{432\,\pi^4\,x^4\,\gamma^4\,\eta^8\,\theta^4 + x^6\,\gamma^6\,\eta^6\,\theta^6}\right)^{1/3}$$

```
, {x, -1, 1}, {η, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{Plot}\left[\sqrt{\left(\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\right)\text{^}2-\left(\frac{\left(\frac{2\,\pi^{3/2}\,\sqrt{-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}}}{\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}}\Big/\;(6\,\theta)\right)6\;(\theta)\;\pi}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)\text{^}2\right)},\ \{\theta,\,-13,\,13\}\right]$$



$$\text{Plot}\Bigg[\Bigg(\frac{4\pi^3\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-$$

$$\frac{4\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

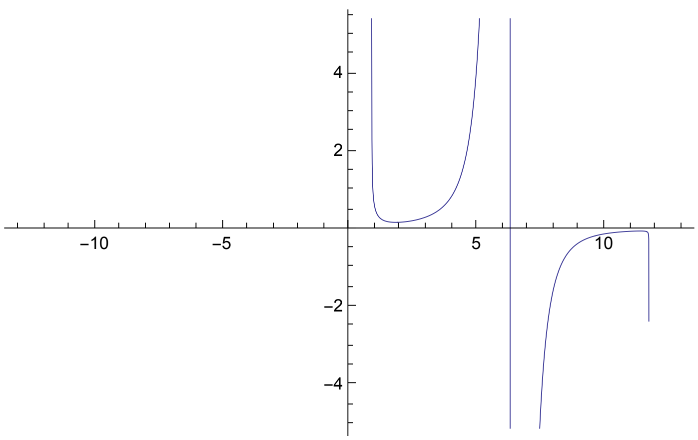
$$\frac{4\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\pi^5\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\pi^5(4\pi-2\theta)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}\Bigg)\Bigg/$$

$$\left(2\sqrt{\left(\frac{4\pi^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-\right.}\right.$$

$$\left.\left.\frac{4\pi^5\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}\right)\right),\ \{\theta,-13,13\}\Bigg]$$



$$\text{Plot}\Bigg[-\Bigg(\frac{4\pi^3\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-$$

$$\frac{4\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\frac{4\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\left.\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^2\Bigg/$$

$$\left(4\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.\right.$$

$$\left.\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^{3/2}\right)+$$

$$\left(\left(4\,\pi^3\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.$$

$$\left.\left.\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)-$$

$$\left(4\,\pi^5\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\left.\left.\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-$$

$$\left(8\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\left(8\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\frac{8\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{8\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{4\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

$$\left(8\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$

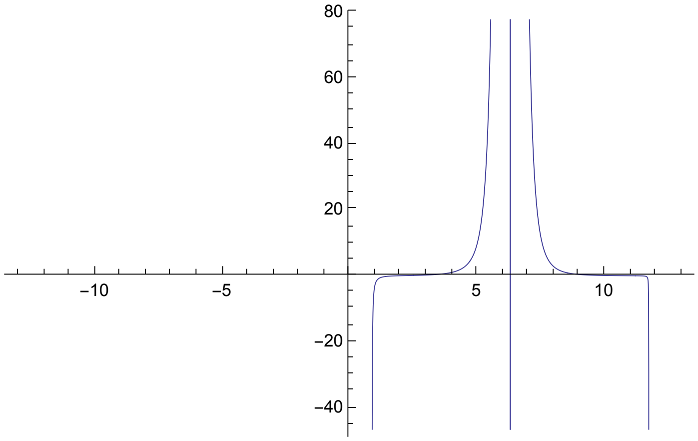
$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\left.\frac{8\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\Big/$$

$$\left(2\,\sqrt{\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.}\right.$$

$$\left.\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\right),\ \{\theta,\,-13,\,13\}\Big]$$



$$\text{Plot}\Bigg[\Bigg(3\Bigg(\frac{4\,\pi^3\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-$$

$$\frac{4\,\pi^5\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\frac{4\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\Bigg)^3\Bigg)\Bigg/$$

$$\Bigg(8\Bigg(\frac{4\,\pi^3\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-$$

$$\frac{4\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\Bigg)^{5/2}\Bigg)-$$

$$\Bigg(3\Bigg(\Bigg(4\,\pi^3\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\Bigg)\Bigg/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)-$$

$$\left(4\,\pi^5\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-\left(8\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\left(8\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\frac{8\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{8\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{4\,\pi^3\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

$$\left(8\,\pi^5\,(4\,\pi-2\,\theta)\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\left.\frac{8\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)$$

$$\left(\frac{4\,\pi^3\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.$$

$$\frac{4\,\pi^5\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\frac{4\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\left.\left.\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\right)\Big/$$

$$\left(4\left(\frac{4\,\pi^3\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.\right.$$

$$\left.\left.\frac{4\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^{3/2}\right)+$$

$$\left(\left(4\,\pi^3\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{12\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+$$

$$\left.\left.\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\right)\right)\Big/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)-$$

$$\left(4\,\pi^5\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+$$

$$\frac{12\,(4\pi-2\theta)}{\pi^2\,\theta^3\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)\right)-$$

$$\Bigg(12\pi^3\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\,\Bigg(\frac{(4\pi-2\theta)^2}{4\pi^3\,((4\pi-\theta)\,\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\,\theta\,((4\pi-\theta)\,\theta)^{3/2}}+$$

$$\frac{1}{\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\,(4\pi-2\theta)}{\pi^2\,\theta^2\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2+\Bigg(12\pi^5\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)$$

$$\Bigg(\frac{(4\pi-2\theta)^2}{4\pi^3\,((4\pi-\theta)\,\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\,\theta\,((4\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\pi-2\theta)}{\pi^2\,\theta^2\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)+$$

$$\Bigg(12\pi^5\,(4\pi-2\theta)\,\Bigg(\frac{(4\pi-2\theta)^2}{4\pi^3\,((4\pi-\theta)\,\theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\,\theta\,((4\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\pi-2\theta)}{\pi^2\,\theta^2\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)^2\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)\right)+$$

$$\Bigg(24\pi^3\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2$$

$$\Bigg(-\frac{4\pi-2\theta}{2\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3-\Bigg(24\pi^5\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2$$

$$\Bigg(-\frac{4\pi-2\theta}{2\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)-\Bigg(12\pi^3\,\left(48\pi^2-48\pi\theta+12\theta^2\right)$$

$$\Bigg(-\frac{4\pi-2\theta}{2\pi^3\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\,\theta\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2+\left(12\pi^5\left(48\pi^2-48\pi\theta+12\theta^2\right)\right.$$
$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\right)\Big/$$
$$\left(\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)-$$
$$\left(24\pi^5(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$
$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\right)\Big/$$
$$\left(\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)-$$
$$\frac{24\pi^5(4\pi-2\theta)^2\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)^3\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$
$$\frac{24\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$
$$\frac{24\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^4}+$$
$$\frac{24\pi^5\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^4}+$$
$$\left(24\pi^3\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$
$$\left.\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\right)\Big/\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3-$$
$$\left(24\pi^5\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$
$$\left.\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\right)\Big/$$
$$\left(\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)+$$
$$\left(24\pi^5(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\right)\Big/$$
$$\left(\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)-$$

$$\frac{4\,\pi^3\,(-48\,\pi+24\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,(-48\,\pi+24\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

$$\frac{12\,\pi^5\,(4\,\pi-2\,\theta)\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\left(24\,\pi^5\,(4\,\pi-2\,\theta)^2\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

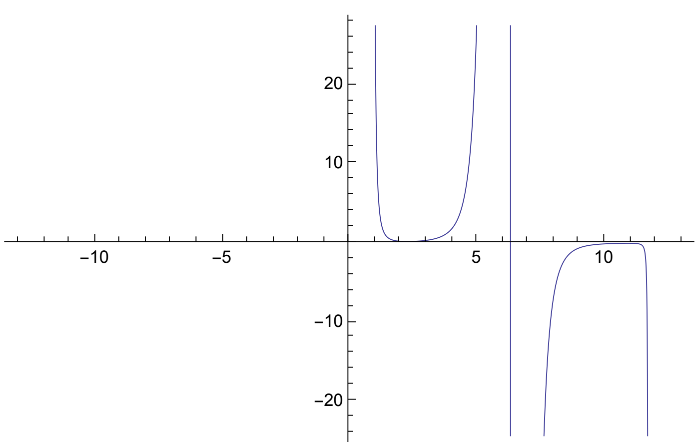
$$\frac{24\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{24\,\pi^5\,(4\,\pi-2\,\theta)^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^4\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\left.\frac{48\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\Big/$$

$$\left(2\,\sqrt{\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.}\right.$$

$$\left.\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\right),\ \{\theta,\ -13,\ 13\}\Big]$$



$$\text{Plot}\Big[-\left(15\,\left(\frac{4\,\pi^3\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.\right.$$

$$\frac{4\,\pi^5\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\frac{4\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\Bigg)\Bigg)^4\Bigg)\Bigg/$$

$$\Bigg(16\,\Bigg(\frac{4\,\pi^3\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-$$

$$\frac{4\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\Bigg)^{7/2}\Bigg)+$$

$$\Bigg(9\,\Bigg(\Bigg(4\,\pi^3\,\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Bigg/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)-$$

$$\Bigg(4\,\pi^5\,\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Bigg/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-$$

$$\Bigg(8\,\pi^3\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)$$

$$\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\Bigg)\Bigg/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\Bigg(8\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)$$

$$\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\bigg)\bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)+$$

$$\frac{8\pi^5(4\pi-2\theta)\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}+$$

$$\frac{8\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3}-$$

$$\frac{8\pi^5\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3}-$$

$$\frac{4\pi^3\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\pi^5\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}-$$

$$\left(8\pi^5(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\right)\bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)-$$

$$\frac{8\pi^5(4\pi-2\theta)^2\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^3\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\left.\frac{8\pi^5\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}\right)$$

$$\left(\frac{4\pi^3\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-\right.$$

$$\frac{4\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\frac{4\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\left.\left.\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^2\right)\Bigg/$$

$$\left(4\,\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.\right.$$

$$\left.\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^{5/2}\right)-$$

$$\left(3\,\left(\left(4\,\pi^3\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.\right.\right.$$

$$\left.\left.\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Bigg/\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\right.$$

$$\left.\theta^4\right)-\left(4\,\pi^5\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.\right.$$

$$\left.\left.\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Bigg/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-\left(8\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-\right.\right.$$

$$\left.\left.24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Bigg/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\left(8\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Bigg/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\frac{8\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{8\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{4\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-\Bigg(8\,\pi^5\,(4\,\pi-2\,\theta)$$

$$\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$

$$\frac{8\,\pi^5\,(4\,\pi-2\,\theta)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$

$$\left.\left.\frac{8\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^2\right)\Big/$$

$$\left(4\,\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.\right.$$

$$\left.\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^{3/2}\right)-$$

$$\left(\left(\left(4\,\pi^3\,\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.\right.\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{12\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+$$

$$\left.\left.\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\right)\right)\Big/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)-$$

$$\left(4\,\pi^5\,\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.$$

$$\frac{3\ (4\pi-2\theta)^2}{\pi^2\theta^2\ ((4\pi-\theta)\ \theta)^{3/2}}+\frac{6\ (4\pi-2\theta)}{\pi^2\theta\ ((4\pi-\theta)\ \theta)^{3/2}}+$$

$$\left.\left.\frac{12\ (4\pi-2\theta)}{\pi^2\theta^3\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{12}{\pi^2\theta^2\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{24\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^4}\right)\right)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)\right)-$$

$$\left(12\pi^3\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\ \left(\frac{(4\pi-2\theta)^2}{4\pi^3\ ((4\pi-\theta)\ \theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta\ ((4\pi-\theta)\ \theta)^{3/2}}+\right.\right.$$

$$\left.\left.\frac{1}{\pi^3\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4\ (4\pi-2\theta)}{\pi^2\theta^2\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4}{\pi^2\theta\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{8\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2+\left(12\pi^5\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right.$$

$$\left(\frac{(4\pi-2\theta)^2}{4\pi^3\ ((4\pi-\theta)\ \theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta\ ((4\pi-\theta)\ \theta)^{3/2}}+\frac{1}{\pi^3\ \sqrt{(4\pi-\theta)\ \theta}}-\right.$$

$$\left.\left.\frac{4\ (4\pi-2\theta)}{\pi^2\theta^2\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4}{\pi^2\theta\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{8\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)+$$

$$\left(12\pi^5\ (4\pi-2\theta)\ \left(\frac{(4\pi-2\theta)^2}{4\pi^3\ ((4\pi-\theta)\ \theta)^{3/2}}-\frac{(4\pi-2\theta)^2}{\pi^2\theta\ ((4\pi-\theta)\ \theta)^{3/2}}+\frac{1}{\pi^3\ \sqrt{(4\pi-\theta)\ \theta}}-\right.\right.$$

$$\left.\left.\frac{4\ (4\pi-2\theta)}{\pi^2\theta^2\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4}{\pi^2\theta\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{8\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^3}\right)\right)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)^2\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)\right)+$$

$$\left(24\pi^3\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\right.$$

$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{2\ (4\pi-2\theta)}{\pi^2\theta\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^2}\right)\right)\Big/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3-\left(24\pi^5\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\right.$$

$$\left.\left(-\frac{4\pi-2\theta}{2\pi^3\ \sqrt{(4\pi-\theta)\ \theta}}+\frac{2\ (4\pi-2\theta)}{\pi^2\theta\ \sqrt{(4\pi-\theta)\ \theta}}-\frac{4\ \sqrt{(4\pi-\theta)\ \theta}}{\pi^2\theta^2}\right)\right)\Big/$$

$$\left(\left(4\pi\theta-\theta^2\right)\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)-\left(12\pi^3\ \left(48\pi^2-48\pi\theta+12\theta^2\right)\right.$$

$$\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\Bigg)\Bigg/$$

$$\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2+\Bigg(12\pi^5\left(48\pi^2-48\pi\theta+12\theta^2\right)$$

$$\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\Bigg)\Bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)-$$

$$\Bigg(24\pi^5(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)$$

$$\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)\Bigg)\Bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)-$$

$$\frac{24\pi^5(4\pi-2\theta)^2\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)^3\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\frac{24\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\frac{24\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^4}+$$

$$\frac{24\pi^5\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^4}+$$

$$\Bigg(24\pi^3\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)$$

$$\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\Bigg)\Bigg/\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3-$$

$$\Bigg(24\pi^5\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)$$

$$\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)\Bigg)\Bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)+\Bigg(24\pi^5(4\pi-2\theta)$$

$$\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2\left(-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\Bigg)\Bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^3\right)-$$

$$\frac{4\pi^3\,(-48\pi+24\theta)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\pi^5\,(-48\pi+24\theta)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}-$$

$$\frac{12\pi^5\,(4\pi-2\theta)\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\Bigg(24\pi^5\,(4\pi-2\theta)^2\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)$$

$$\left(-\frac{\sqrt{(4\pi-\theta)\,\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\Bigg)\Bigg/$$

$$\left(\left(4\pi\theta-\theta^2\right)^3\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2\right)+$$

$$\frac{24\pi^5\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{24\pi^5\,(4\pi-2\theta)^3\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^4\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}+$$

$$\left.\frac{48\pi^5\,(4\pi-2\theta)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(4\pi\theta-\theta^2\right)^3\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}\right)$$

$$\left(\frac{4\pi^3\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-\right.$$

$$\frac{4\pi^5\left(-\frac{4\pi-2\theta}{2\pi^3\sqrt{(4\pi-\theta)\theta}}+\frac{2\,(4\pi-2\theta)}{\pi^2\theta\sqrt{(4\pi-\theta)\theta}}-\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta^2}\right)}{\left(4\pi\theta-\theta^2\right)\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)}-$$

$$\frac{4\pi^3\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\left(-\frac{\sqrt{(4\pi-\theta)\theta}}{\pi^3}+\frac{4\sqrt{(4\pi-\theta)\theta}}{\pi^2\theta}\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^2}+$$

$$\frac{4\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\left.\left.\frac{4\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\right)\Bigg/$$

$$\left(\frac{4\,\pi^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.$$

$$\left.\frac{4\,\pi^5\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)^{3/2}+$$

$$\left(\frac{1}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}\,4\,\pi^3\,\left(\frac{15\,(4\,\pi-2\,\theta)^4}{16\,\pi^3\,((4\,\pi-\theta)\,\theta)^{7/2}}-\frac{15\,(4\,\pi-2\,\theta)^4}{4\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{7/2}}+\right.\right.$$

$$\frac{9\,(4\,\pi-2\,\theta)^2}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{6\,(4\,\pi-2\,\theta)^3}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{18\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}+$$

$$\frac{3}{\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{12\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{24\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}-$$

$$\left.\frac{12}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{48\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{48}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{96\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^5}\right)-$$

$$\left(4\,\pi^5\,\left(\frac{15\,(4\,\pi-2\,\theta)^4}{16\,\pi^3\,((4\,\pi-\theta)\,\theta)^{7/2}}-\frac{15\,(4\,\pi-2\,\theta)^4}{4\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{7/2}}+\frac{9\,(4\,\pi-2\,\theta)^2}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}-\right.\right.$$

$$\frac{6\,(4\,\pi-2\,\theta)^3}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{5/2}}-\frac{18\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3}{\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-$$

$$\frac{12\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{24\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{12}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}-$$

$$\left.\left.\frac{48\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{48}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{96\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^5}\right)\right)\Bigg/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-$$

$$\left(16\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\,\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\right.\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+$$

$$\left.\left.\frac{12\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\left(16\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+$$

$$\left.\left.\frac{12\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\left(16\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{3\,(4\,\pi-2\,\theta)^3}{8\,\pi^3\,((4\,\pi-\theta)\,\theta)^{5/2}}+\frac{3\,(4\,\pi-2\,\theta)^3}{2\,\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{5/2}}-\right.\right.$$

$$\frac{3\,(4\,\pi-2\,\theta)}{2\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{3\,(4\,\pi-2\,\theta)^2}{\pi^2\,\theta^2\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{6\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+$$

$$\left.\left.\frac{12\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{12}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{24\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^4}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)+$$

$$\left(48\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.$$

$$\left.\left.\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3-\left(48\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\right.$$

$$\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\right.$$

$$\left.\left.\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)-$$

$$\left(24\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\right.\right.$$

$$\left.\left.\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2+\Bigg(24\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)$$

$$\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$

$$\Bigg(48\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)$$

$$\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$

$$\Bigg(48\,\pi^5\,(4\,\pi-2\,\theta)^2\,\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-$$

$$\Bigg(48\,\pi^5\,\Bigg(\frac{(4\,\pi-2\,\theta)^2}{4\,\pi^3\,((4\,\pi-\theta)\,\theta)^{3/2}}-\frac{(4\,\pi-2\,\theta)^2}{\pi^2\,\theta\,((4\,\pi-\theta)\,\theta)^{3/2}}+\frac{1}{\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}-$$

$$\frac{4\,(4\,\pi-2\,\theta)}{\pi^2\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{8\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^3}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)\right)-$$

$$\Bigg(96\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^3$$

$$\Bigg(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^4+\Bigg(96\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^3$$

$$\Bigg(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^4\right)+$$

$$\left(96\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3-$$

$$\left(96\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)+$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)-$$

$$\frac{16\,\pi^3\,(-48\,\pi+24\,\theta)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{16\,\pi^5\,(-48\,\pi+24\,\theta)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

$$\left(48\,\pi^5\,(4\,\pi-2\,\theta)\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)^2\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\left(96\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\right.$$

$$\left.\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)+$$

$$\frac{96\,\pi^5\,(4\,\pi-2\,\theta)^3\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^4\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\frac{192\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-\frac{4\,\pi-2\,\theta}{2\,\pi^3\,\sqrt{(4\,\pi-\theta)\,\theta}}+\frac{2\,(4\,\pi-2\,\theta)}{\pi^2\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}-\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta^2}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}+$$

$$\frac{96\,\pi^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^4\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^5}-$$

$$\frac{96\,\pi^5\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^4\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^5}-$$

$$\left(144\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\right.$$

$$\left.\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^4+$$

$$\left(144\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\right.$$

$$\left.\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^4\right)-$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^3\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$

$$\left(\left(4\,\pi\,\theta-\theta^2\right)^2\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^4\right)+$$

$$\frac{24\,\pi^3\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{24\,\pi^5\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)^2\,\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\,\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}+$$

$$\left(32\,\pi^3\,(-48\,\pi+24\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3-$$

$$\left(32\,\pi^5\,(-48\,\pi+24\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/\left(\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)+$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)\,\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/\left(\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)-$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)^2\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/\left(\left(4\,\pi\,\theta-\theta^2\right)^3\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3\right)-$$

$$\frac{96\,\pi^5\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^3}-$$

$$\frac{96\,\pi^3\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

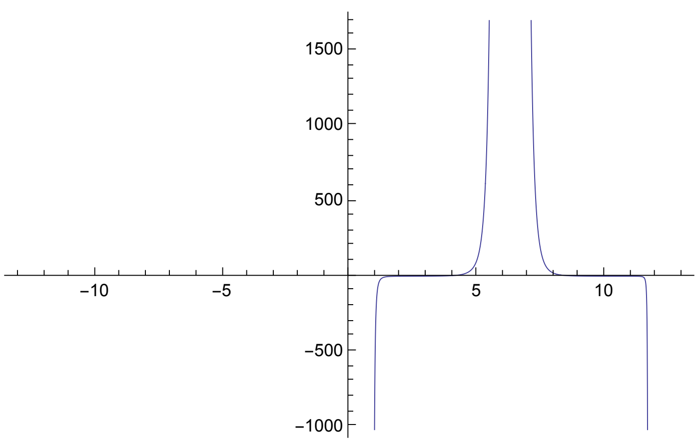
$$\frac{16\,\pi^5\,(4\,\pi-2\,\theta)\,(-48\,\pi+24\,\theta)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{96\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{48\,\pi^5\,(4\,\pi-2\,\theta)^2\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}+$$

$$\frac{48\,\pi^5\left(48\,\pi^2-48\,\pi\,\theta+12\,\theta^2\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^2\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2}-$$

$$\left(96\,\pi^5\,(4\,\pi-2\,\theta)^3\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$
$$\left(\left(4\,\pi\,\theta-\theta^2\right)^4\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$
$$\left(192\,\pi^5\,(4\,\pi-2\,\theta)\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)\right)\Big/$$
$$\left(\left(4\,\pi\,\theta-\theta^2\right)^3\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^2\right)-$$
$$\frac{96\,\pi^5\,(4\,\pi-2\,\theta)^4\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^5\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$
$$\frac{288\,\pi^5\,(4\,\pi-2\,\theta)^2\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^4\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}-$$
$$\left.\frac{96\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)^3\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\Big/$$
$$\left(2\sqrt{\left(\frac{4\,\pi^3\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}-\right.}\right.$$
$$\left.\left.\frac{4\,\pi^5\left(-\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^3}+\frac{4\,\sqrt{(4\,\pi-\theta)\,\theta}}{\pi^2\,\theta}\right)}{\left(4\,\pi\,\theta-\theta^2\right)\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)}\right)\right),\ \{\theta,-13,13\}\Big]$$

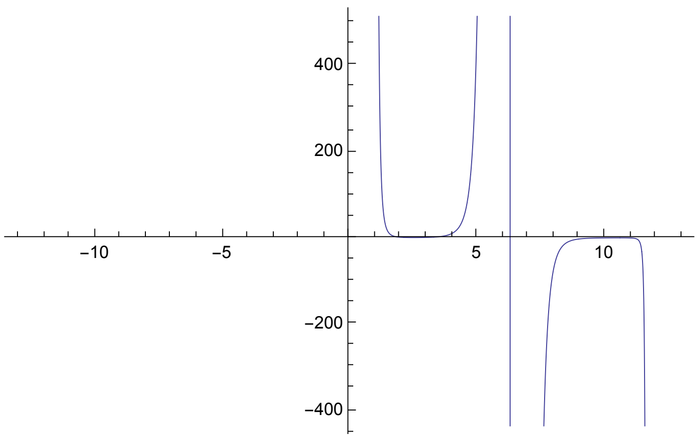


A very large output was generated. Showing a sample of it.

$$\text{Plot}\Big[\frac{105\left(\ll 6 \gg+\frac{\ll 1 \gg}{\ll 1 \gg^2 \ll 1 \gg}\right)^5}{32\left(\frac{4\pi^3\left(-\frac{\sqrt{\ll 1 \gg}}{\pi^3}+\frac{\ll 1 \gg}{\ll 1 \gg}\right)}{16\pi^4-32\pi^3\theta+\ll 1 \gg-\ll 1 \gg+\theta^4}-\frac{\ll 1 \gg}{\ll 1 \gg}\right)^{9/2}}-\frac{75\,(\ll 1 \gg)\,(\ll 1 \gg)^3}{8\left(\frac{\ll 1 \gg}{\ll 1 \gg}-\frac{\ll 1 \gg}{\ll 1 \gg}\right)^{7/2}}+\frac{\ll 1 \gg}{8 \ll 1 \gg^{\ll 1 \gg}}+$$

$$\ll 1 \gg-\frac{\ll 1 \gg}{2 \ll 1 \gg \ll 1 \gg}-\frac{5\,(\ll 1 \gg)\left(\ll 6 \gg+\frac{\ll 1 \gg}{\ll 1 \gg}\right)}{4\,(\ll 1 \gg-\ll 1 \gg)^{3/2}}+\frac{\ll 115 \gg+\frac{\ll 1 \gg}{\ll 1 \gg \ll 1 \gg}}{2\sqrt{\frac{4\pi^3\left(-\frac{\sqrt{(\ll 1 \gg)\,\theta}}{\pi^3}+\frac{4\sqrt{\ll 1 \gg}}{\ll 1 \gg\,\theta}\right)}{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}-\frac{\ll 1 \gg}{(\ll 1 \gg)\ll 1 \gg}}}$$

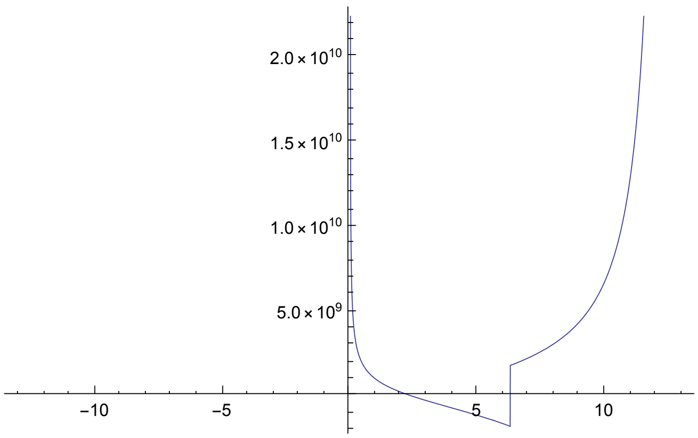
show less | show more | show all | set size limit...



$$\text{D}\left[\sqrt{\left(\left(\frac{2\,(2.99792*10^{\wedge}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\pi\theta-\theta^2}}\right)^{\wedge}2-\left(\frac{\sqrt{\left(\frac{2\,(2.99792*10^{\wedge}8)\,(6)\,(\theta)\,\pi}{\sqrt{4\pi\theta-\theta^2}}\right)^2(4\pi-\theta)\,\theta}}{2\pi}\right)^{\wedge}2\right)},\theta\right]$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\Bigg/\left(2\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right)$$

```
Plot[(-(1.2773276589129854`*^20 (4 π - 2 θ) θ^2)/(4 π θ - θ^2)^2 +
    (3.235508757504`*^18 (4 π - 2 θ) (4 π - θ) θ^3)/(4 π θ - θ^2)^2 + (2.5546553178259708`*^20 θ)/(4 π θ - θ^2) -
    (9.706526272512`*^18 (4 π - θ) θ^2)/(4 π θ - θ^2) + (3.235508757504`*^18 θ^3)/(4 π θ - θ^2))/
  (2 Sqrt[(1.2773276589129854`*^20 θ^2)/(4 π θ - θ^2) - (3.235508757504`*^18 (4 π - θ) θ^3)/(4 π θ - θ^2)]), {θ, -13, 13}]
```

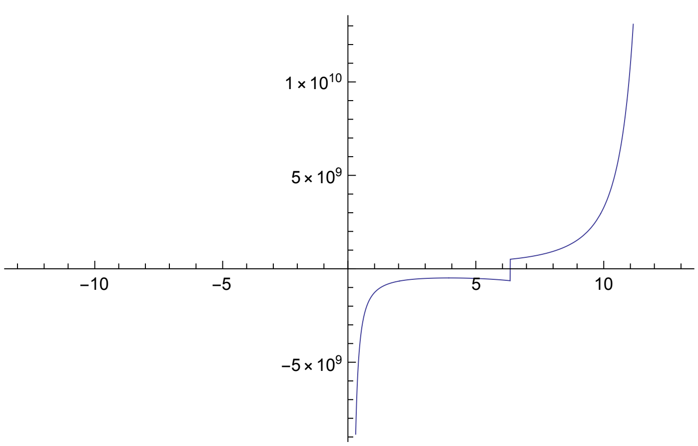


$$\text{D}\Big[\Big(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\Big)\Big/\left(2\,\sqrt{\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\theta\Big]$$

$$-\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\Big/\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\Big(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\Big)\Big/\left(2\,\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right)$$

$$
\begin{aligned}
&\mathtt{Plot}\Bigg[\\
&-\Bigg(-\frac{1.2773276589129854\text{`*\^{}}20\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.235508757504\text{`*\^{}}18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\\
&\qquad\frac{2.5546553178259708\text{`*\^{}}20\,\theta}{4\pi\theta-\theta^2}-\\
&\qquad\frac{9.706526272512\text{`*\^{}}18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504\text{`*\^{}}18\,\theta^3}{4\pi\theta-\theta^2}\Bigg)^2\Bigg/\\
&\quad\left(4\left(\frac{1.2773276589129854\text{`*\^{}}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\text{`*\^{}}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)+\\
&\quad\Bigg(\frac{2.5546553178259708\text{`*\^{}}20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.471017515008\text{`*\^{}}18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\\
&\qquad\frac{5.1093106356519417\text{`*\^{}}20\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*\^{}}20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\\
&\qquad\frac{1.9413052545024\text{`*\^{}}19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008\text{`*\^{}}18\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\\
&\qquad\frac{6.471017515008\text{`*\^{}}18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*\^{}}20}{4\pi\theta-\theta^2}-\\
&\qquad\frac{1.9413052545024\text{`*\^{}}19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024\text{`*\^{}}19\,\theta^2}{4\pi\theta-\theta^2}\Bigg)\Bigg/\\
&\quad\left(2\sqrt{\frac{1.2773276589129854\text{`*\^{}}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\text{`*\^{}}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right),\ \{\theta,-13,13\}\Bigg]
\end{aligned}
$$



$$\mathrm{D}\Big[-\Big(-\frac{\texttt{1.2773276589129854`*\^{}20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta}{4\pi\theta-\theta^2}-\frac{\texttt{9.706526272512`*\^{}18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{\texttt{3.235508757504`*\^{}18}\,\theta^3}{4\pi\theta-\theta^2}\Big)^2\Big/$$

$$\Big(4\Big(\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\Big)^{3/2}\Big)+$$

$$\Big(\frac{\texttt{2.5546553178259708`*\^{}20}\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{\texttt{5.1093106356519417`*\^{}20}\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta^2}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}}{4\pi\theta-\theta^2}-$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{\texttt{1.9413052545024`*\^{}19}\,\theta^2}{4\pi\theta-\theta^2}\Big)\Big/$$

$$\Big(2\sqrt{\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\Big),\theta\Big]$$

$$\Big(3\Big(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\Big)^3\Big)\Big/$$

$$\Big(8\Big(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\Big)^{5/2}\Big)-$$

$$\Big(3\Big(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+\frac{2.55466\times10^{20}\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{6.47102\times10^{18}\ (4\,\pi-2\,\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\ (4\,\pi-\theta)\ \theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\ \theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\ \theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\ (4\,\pi-\theta)\ \theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\ \theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\ \theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\,\pi-\theta)\ \theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{7.66397\times10^{20}\ (4\,\pi-2\,\theta)^3\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.53279\times10^{21}\ (4\,\pi-2\,\theta)^2\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\ (4\,\pi-2\,\theta)^2\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\ (4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\ \theta}{4\,\pi\,\theta-\theta^2}\right)\Big/$$

$$\left(2\sqrt{\frac{1.27733\times10^{20}\ \theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\,\pi-\theta)\ \theta^3}{4\,\pi\,\theta-\theta^2}}\right)$$

Plot[

$$\left(3\left(-\frac{1.2773276589129854`*^{\wedge}20\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.235508757504`*^{\wedge}18\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.\right.$$

$$\frac{2.5546553178259708`*^{\wedge}20\ \theta}{4\,\pi\,\theta-\theta^2}-\frac{9.706526272512`*^{\wedge}18\ (4\,\pi-\theta)\ \theta^2}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\left.\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(3\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.8239157635072`*^19}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{\text{1.9413052545024`*^19}\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{\text{3.8826105090048`*^19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

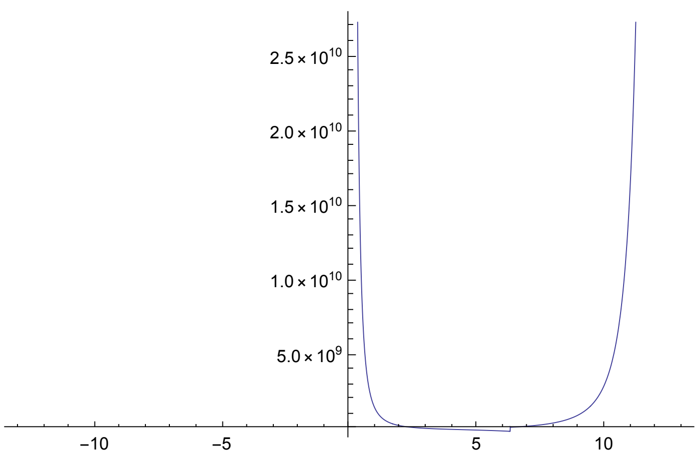
$$\frac{\text{7.663965953477913`*^20}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\text{1.5327931906955826`*^21}\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{\text{5.8239157635072`*^19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{\text{5.8239157635072`*^19}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{\text{5.8239157635072`*^19}\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\text{1.9413052545024`*^19}\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{\text{1.9413052545024`*^19}\ (4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{\text{5.8239157635072`*^19}\ \theta}{4\pi\theta-\theta^2}\right)\Big/$$

$$\left.\left(2\ \sqrt{\frac{\text{1.2773276589129854`*^20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}}\right),\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{D}\Big[$$

$$\left(3\left(-\frac{\text{1.2773276589129854`*^20}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\text{3.235508757504`*^18}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.\right.$$

$$\frac{\text{2.5546553178259708`*^20}\ \theta}{4\pi\theta-\theta^2}-\frac{\text{9.706526272512`*^18}\ (4\pi-\theta)\ \theta^2}{4\pi\theta-\theta^2}+$$

$$\left.\left.\frac{\text{3.235508757504`*^18}\ \theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{\text{1.2773276589129854`*^20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(3\left(\frac{2.5546553178259708`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.471017515008`*^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.1093106356519417`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.8826105090048`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{7.663965953477913`*^20\,(4\pi-2\theta)}{(4\pi\theta-\theta^2)^2}+\frac{1.5327931906955826`*^21\,\theta}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{(4\pi\theta-\theta^2)^2}-\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{1.9413052545024`*^19\,\theta^3}{(4\pi\theta-\theta^2)^2}-$$

$$\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.8239157635072`*^19\,\theta}{4\pi\theta-\theta^2}\right)\bigg/$$

$$\left(2\sqrt{\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right),\theta]$$

$$-\left(15\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\right.\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^4\right)\bigg/$$

$$\left(16\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(9\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-\right.\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+\frac{2.55466\times10^{20}\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}-\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\bigg/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(3\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(\left(-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}+$$

$$\left(\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.$$

$$\frac{6.13117\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\,\pi\,\theta-\theta^2}\right)\Big/$$

$$\left(2\,\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right)$$

$$\text{Plot}\Big[-\left(15\left(-\frac{1.2773276589129854\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.\right.$$

$$\frac{3.235508757504\grave{}*\hat{}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\hat{}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\grave{}*\hat{}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\grave{}*\hat{}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854\grave{}*\hat{}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*\hat{}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(9\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-\frac{5.1093106356519417`*^{\wedge}20\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\pi\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{3.235508757504`*^{\wedge}18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\pi\theta-\theta^2}-\frac{9.706526272512`*^{\wedge}18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(3\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-\frac{5.1093106356519417`*^{\wedge}20\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}-\right.\right.$$

$$\frac{6.471017515008`*^18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^19\,\theta^2}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(\left(-\frac{7.663965953477913`*^20\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^21\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^21\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^19\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^20\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^19\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^19\,\theta}{4\pi\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^20\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}+$$

$$\left(\frac{3.065586381391165`*^21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.$$

$$\frac{6.13117276278233`*^21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

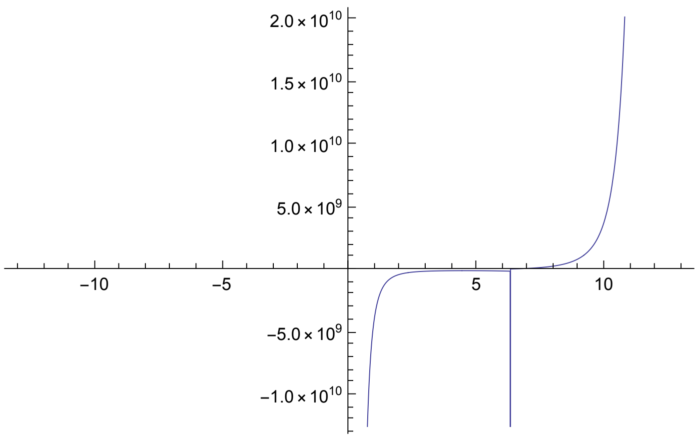
$$\frac{1.55304420360192`*^20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19}{4\,\pi\,\theta-\theta^2}\right)\Big/$$

$$\left(2\,\sqrt{\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\ \{\theta,\ -13,\ 13\}]$$



$$\text{D}\Big[-\Bigg(15\,\Bigg(-\frac{\text{1.2773276589129854`*^20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{3.235508757504`*^18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{\text{9.706526272512`*^18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{\text{3.235508757504`*^18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)^4\Bigg)\Big/$$

$$\left(16\,\left(\frac{\text{1.2773276589129854`*^20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\Bigg(9\,\Bigg(\frac{\text{2.5546553178259708`*^20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.1093106356519417`*^20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{\text{1.9413052545024`*^19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{\text{1.2773276589129854`*^20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504\text{`}*\text{^}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`}*\text{^}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\text{`}*\text{^}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\text{`}*\text{^}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854\text{`}*\text{^}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\text{`}*\text{^}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(3\left(\frac{2.5546553178259708\text{`}*\text{^}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008\text{`}*\text{^}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\text{`}*\text{^}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`}*\text{^}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`}*\text{^}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`}*\text{^}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`}*\text{^}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024\text{`}*\text{^}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854\text{`}*\text{^}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\text{`}*\text{^}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(\left(-\frac{7.663965953477913\text{`}*\text{^}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826\text{`}*\text{^}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826\text{`}*\text{^}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072\text{`}*\text{^}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{(4\,\pi\,\theta-\theta^2)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{(4\,\pi\,\theta-\theta^2)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{(4\,\pi\,\theta-\theta^2)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{(4\,\pi\,\theta-\theta^2)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{(4\,\pi\,\theta-\theta^2)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{(4\,\pi\,\theta-\theta^2)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{(4\,\pi\,\theta-\theta^2)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{(4\,\pi\,\theta-\theta^2)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{(4\,\pi\,\theta-\theta^2)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{(4\,\pi\,\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}+$$

$$\left(\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{(4\,\pi\,\theta-\theta^2)^5}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{(4\,\pi\,\theta-\theta^2)^5}-\right.$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{(4\,\pi\,\theta-\theta^2)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{(4\,\pi\,\theta-\theta^2)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{(4\,\pi\,\theta-\theta^2)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{(4\,\pi\,\theta-\theta^2)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{(4\,\pi\,\theta-\theta^2)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{(4\,\pi\,\theta-\theta^2)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{(4\,\pi\,\theta-\theta^2)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{(4\,\pi\,\theta-\theta^2)^3}+$$

$$\frac{3.065586381391165`*^21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19}{4\,\pi\,\theta-\theta^2}\right)\Bigg/$$

$$\left(2\,\sqrt{\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\,\theta\Bigg]$$

$$\left(105\,\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\Theta)\,\Theta^2}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\Theta)\,(4\,\pi-\Theta)\,\Theta^3}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\right.\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\Theta}{4\,\pi\,\Theta-\Theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\Theta)\,\Theta^2}{4\,\pi\,\Theta-\Theta^2}+\frac{3.23551\times10^{18}\,\Theta^3}{4\,\pi\,\Theta-\Theta^2}\right)^5\right)\Bigg/$$

$$\left(32\,\left(\frac{1.27733\times10^{20}\,\Theta^2}{4\,\pi\,\Theta-\Theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\Theta)\,\Theta^3}{4\,\pi\,\Theta-\Theta^2}\right)^{9/2}\right)-$$

$$\left(75\,\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\Theta)^2\,\Theta^2}{\left(4\,\pi\,\Theta-\Theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\Theta)^2\,(4\,\pi-\Theta)\,\Theta^3}{\left(4\,\pi\,\Theta-\Theta^2\right)^3}-\right.\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\Theta)\,\Theta}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\frac{2.55466\times10^{20}\,\Theta^2}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\Theta)\,(4\,\pi-\Theta)\,\Theta^2}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\Theta)\,\Theta^3}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\Theta)\,\Theta^3}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\,\pi\,\Theta-\Theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\Theta)\,\Theta}{4\,\pi\,\Theta-\Theta^2}+\frac{1.94131\times10^{19}\,\Theta^2}{4\,\pi\,\Theta-\Theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\Theta)\,\Theta^2}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\Theta)\,(4\,\pi-\Theta)\,\Theta^3}{\left(4\,\pi\,\Theta-\Theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(15\left(-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(2\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\Bigg(5\,\Bigg(\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\Bigg(-\frac{1.53279\times10^{22}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.06559\times10^{22}\,(4\pi-2\theta)^4\,\theta}{(4\pi\theta-\theta^2)^5}-\frac{6.13117\times10^{22}\,(4\pi-2\theta)^3\,\theta^2}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{1.16478\times10^{21}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^5}+\frac{3.88261\times10^{20}\,(4\pi-2\theta)^4\,\theta^3}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{1.55304\times10^{21}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^5}-\frac{1.53279\times10^{22}\,(4\pi-2\theta)^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{9.19676\times10^{22}\,(4\pi-2\theta)^2\,\theta}{(4\pi\theta-\theta^2)^4}+\frac{1.16478\times10^{21}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{4.59838\times10^{22}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^4}-\frac{1.16478\times10^{21}\,(4\pi-2\theta)^3\,\theta^2}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{3.49435\times10^{21}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^4}+\frac{1.16478\times10^{21}\,(4\pi-2\theta)^2\,\theta^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{1.16478\times10^{21}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^4}-\frac{3.06559\times10^{22}\,(4\pi-2\theta)}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{3.88261\times10^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)}{(4\pi\theta-\theta^2)^3}+\frac{3.06559\times10^{22}\,\theta}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{1.16478\times10^{21}\,(4\pi-2\theta)^2\,\theta}{(4\pi\theta-\theta^2)^3}+\frac{2.32957\times10^{21}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{2.32957\times10^{21}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^3}-\frac{1.16478\times10^{21}\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^3}+\frac{3.88261\times10^{20}\,\theta^3}{(4\pi\theta-\theta^2)^3}-$$

$$\left.\frac{3.88261\times10^{20}\,(4\pi-2\theta)}{(4\pi\theta-\theta^2)^2}-\frac{3.88261\times10^{20}\,(4\pi-\theta)}{(4\pi\theta-\theta^2)^2}+\frac{1.16478\times10^{21}\,\theta}{(4\pi\theta-\theta^2)^2}\right)\Big/$$

$$\left(2\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right)$$

```
Plot[(105 (-(1.2773276589129854`*^20 (4 π - 2 θ) θ^2)/(4 π θ - θ^2)^2 +
      (3.235508757504`*^18 (4 π - 2 θ) (4 π - θ) θ^3)/(4 π θ - θ^2)^2 + (2.5546553178259708`*^20 θ)/(4 π θ - θ^2) -
      (9.706526272512`*^18 (4 π - θ) θ^2)/(4 π θ - θ^2) + (3.235508757504`*^18 θ^3)/(4 π θ - θ^2))^5)/
```

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(75\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$
$$\frac{2.5546553178259708`*^20}{4\,\pi\,\theta-\theta^2}-\frac{1.9413052545024`*^19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+$$
$$\left.\frac{1.9413052545024`*^19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$
$$\frac{3.235508757504`*^18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\,\pi\,\theta-\theta^2}-$$
$$\left.\left.\frac{9.706526272512`*^18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$
$$\left(8\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$
$$\left(15\left(-\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$
$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$
$$\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$
$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$
$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$
$$\frac{3.8826105090048`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$
$$\frac{1.5327931906955826`*^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$
$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$
$$\frac{1.9413052545024`*^19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$
$$\left.\frac{5.8239157635072`*^19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{\text{3.235508757504`*^18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{\text{9.706526272512`*^18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{\text{3.235508757504`*^18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{\text{1.2773276589129854`*^20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{\text{7.663965953477913`*^20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{1.5327931906955826`*^21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{\text{1.5327931906955826`*^21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.8239157635072`*^19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{\text{3.8826105090048`*^19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{\text{7.663965953477913`*^20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{1.5327931906955826`*^21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{5.8239157635072`*^19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{\text{5.8239157635072`*^19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{5.8239157635072`*^19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{1.9413052545024`*^19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{1.9413052545024`*^19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{\text{5.8239157635072`*^19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{\text{2.5546553178259708`*^20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.1093106356519417`*^20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$
$$\frac{6.471017515008`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\pi\theta-\theta^2}-$$
$$\left.\left.\frac{1.9413052545024`*^{\wedge}19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\pi\theta-\theta^2}\right)\right)\Big/$$
$$\left(2\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$
$$\left(5\left(\frac{3.065586381391165`*^{\wedge}21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$
$$\frac{7.7652210180096`*^{\wedge}19\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$
$$\frac{6.13117276278233`*^{\wedge}21\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$
$$\frac{2.32956630540288`*^{\wedge}20\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$
$$\frac{7.7652210180096`*^{\wedge}19\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$
$$\frac{2.32956630540288`*^{\wedge}20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$
$$\frac{3.065586381391165`*^{\wedge}21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\frac{2.32956630540288`*^{\wedge}20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\frac{4.65913261080576`*^{\wedge}20\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\frac{1.55304420360192`*^{\wedge}20\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^20\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^20\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^5\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}+\right.$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^5\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^22\,(4\pi-2\theta)^4\,\theta}{\left(4\pi\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^22\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^4\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^22\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^22\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432\grave{}*\wedge 21\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\wedge 21\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\wedge 21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165\grave{}*\wedge 22\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\wedge 20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\grave{}*\wedge 22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144\grave{}*\wedge 21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

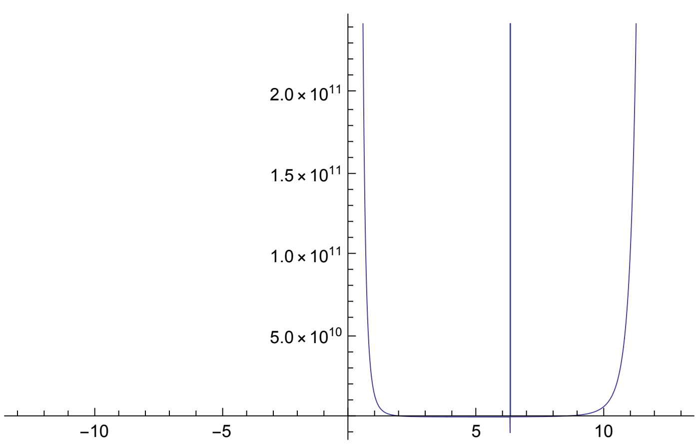
$$\frac{2.32956630540288\grave{}*\wedge 21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\grave{}*\wedge 21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144\grave{}*\wedge 21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\grave{}*\wedge 20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\wedge 20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048\grave{}*\wedge 20\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144\grave{}*\wedge 21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)\Big/$$

$$\left(2\,\sqrt{\frac{1.2773276589129854\grave{}*\wedge 20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*\wedge 18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\ \{\theta,\ -13,\ 13\}\Big]$$



$$\text{D}\Big[\Big(105\,\Big(-\frac{1.2773276589129854\grave{}*\wedge 20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^5\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(75\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(15\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^20\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^18\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^19\,\theta^2}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(5\left(\frac{3.065586381391165`*^21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^21\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^20\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\right.$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^{\wedge}22\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^{\wedge}22\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^22\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^21\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^22\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^22\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^21\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^21\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^21\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^21\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^20\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^20\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048`*^20\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}\right)\Big/$$

$$\left(2\sqrt{\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right),\theta\Big]$$

$$-\left(945\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^6\right)\Big/$$

$$\left(64\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{11/2}\right)+$$

$$\left(1575\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{5.10931\times 10^{20}\ (4\,\pi-2\,\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{2.55466\times 10^{20}\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{1.94131\times 10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}-$$

$$\frac{6.47102\times 10^{18}\ (4\,\pi-2\,\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}-\frac{6.47102\times 10^{18}\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+$$

$$\left.\frac{2.55466\times 10^{20}}{4\,\pi\,\theta-\theta^{2}}-\frac{1.94131\times 10^{19}\ (4\,\pi-\theta)\ \theta}{4\,\pi\,\theta-\theta^{2}}+\frac{1.94131\times 10^{19}\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}\right)$$

$$\left(-\frac{1.27733\times 10^{20}\ (4\,\pi-2\,\theta)\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{3.23551\times 10^{18}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\right.$$

$$\left.\left.\frac{2.55466\times 10^{20}\ \theta}{4\,\pi\,\theta-\theta^{2}}-\frac{9.70653\times 10^{18}\ (4\,\pi-\theta)\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}+\frac{3.23551\times 10^{18}\ \theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{4}\right)\Big/$$

$$\left(32\ \left(\frac{1.27733\times 10^{20}\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}-\frac{3.23551\times 10^{18}\ (4\,\pi-\theta)\ \theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{9/2}\right)-$$

$$\left(675\ \left(\frac{2.55466\times 10^{20}\ (4\,\pi-2\,\theta)^{2}\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}-\right.\right.$$

$$\frac{6.47102\times 10^{18}\ (4\,\pi-2\,\theta)^{2}\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}-\frac{5.10931\times 10^{20}\ (4\,\pi-2\,\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+$$

$$\frac{2.55466\times 10^{20}\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{1.94131\times 10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}-$$

$$\frac{6.47102\times 10^{18}\ (4\,\pi-2\,\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}-\frac{6.47102\times 10^{18}\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+$$

$$\left.\frac{2.55466\times 10^{20}}{4\,\pi\,\theta-\theta^{2}}-\frac{1.94131\times 10^{19}\ (4\,\pi-\theta)\ \theta}{4\,\pi\,\theta-\theta^{2}}+\frac{1.94131\times 10^{19}\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}\right)^{2}$$

$$\left(-\frac{1.27733\times 10^{20}\ (4\,\pi-2\,\theta)\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{3.23551\times 10^{18}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\right.$$

$$\left.\left.\frac{2.55466\times 10^{20}\ \theta}{4\,\pi\,\theta-\theta^{2}}-\frac{9.70653\times 10^{18}\ (4\,\pi-\theta)\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}+\frac{3.23551\times 10^{18}\ \theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{2}\right)\Big/$$

$$\left(16\ \left(\frac{1.27733\times 10^{20}\ \theta^{2}}{4\,\pi\,\theta-\theta^{2}}-\frac{3.23551\times 10^{18}\ (4\,\pi-\theta)\ \theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{7/2}\right)-$$

$$\left(75\ \left(-\frac{7.66397\times 10^{20}\ (4\,\pi-2\,\theta)^{3}\ \theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+\frac{1.94131\times 10^{19}\ (4\,\pi-2\,\theta)^{3}\ (4\,\pi-\theta)\ \theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(-\frac{7.66397\times10^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\pi\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(\frac{3.06559\times10^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117\times10^{21}\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{7.66397\times10^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(2\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(15\left(\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\left.\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)\right)\Bigg/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(3\left(-\frac{1.53279\times10^{22}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\right.\right.$$

$$\frac{3.06559\times10^{22}\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117\times10^{22}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304\times10^{21}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{1.53279\times10^{22}\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{9.19676\times10^{22}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.59838\times10^{22}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49435\times10^{21}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{3.06559\times10^{22}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{22}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478\times10^{21}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.88261\times10^{20}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\left.\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{3.88261\times10^{20}\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\Theta)\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\Theta)\,(4\pi-\Theta)\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\Theta}{4\pi\Theta-\Theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\Theta)\,\Theta^2}{4\pi\Theta-\Theta^2}+\frac{3.23551\times10^{18}\,\Theta^3}{4\pi\Theta-\Theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.27733\times10^{20}\,\Theta^2}{4\pi\Theta-\Theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\Theta)\,\Theta^3}{4\pi\Theta-\Theta^2}\right)^{3/2}\right)+$$

$$\left(\frac{9.19676\times10^{22}\,(4\pi-2\Theta)^6\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^7}-\frac{2.32957\times10^{21}\,(4\pi-2\Theta)^6\,(4\pi-\Theta)\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^7}-\right.$$

$$\frac{1.83935\times10^{23}\,(4\pi-2\Theta)^5\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^6}+\frac{4.59838\times10^{23}\,(4\pi-2\Theta)^4\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^6}+$$

$$\frac{6.9887\times10^{21}\,(4\pi-2\Theta)^5\,(4\pi-\Theta)\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^6}-\frac{2.32957\times10^{21}\,(4\pi-2\Theta)^5\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^6}-$$

$$\frac{1.16478\times10^{22}\,(4\pi-2\Theta)^4\,(4\pi-\Theta)\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^6}+\frac{9.19676\times10^{22}\,(4\pi-2\Theta)^4}{\left(4\pi\Theta-\Theta^2\right)^5}-$$

$$\frac{7.35741\times10^{23}\,(4\pi-2\Theta)^3\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^5}-\frac{6.9887\times10^{21}\,(4\pi-2\Theta)^4\,(4\pi-\Theta)\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^5}+$$

$$\frac{5.51806\times10^{23}\,(4\pi-2\Theta)^2\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^5}+\frac{6.9887\times10^{21}\,(4\pi-2\Theta)^4\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^5}+$$

$$\frac{2.79548\times10^{22}\,(4\pi-2\Theta)^3\,(4\pi-\Theta)\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^5}-$$

$$\frac{9.31827\times10^{21}\,(4\pi-2\Theta)^3\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^5}-\frac{1.39774\times10^{22}\,(4\pi-2\Theta)^2\,(4\pi-\Theta)\,\Theta^3}{\left(4\pi\Theta-\Theta^2\right)^5}+$$

$$\frac{2.75903\times10^{23}\,(4\pi-2\Theta)^2}{\left(4\pi\Theta-\Theta^2\right)^4}+\frac{2.32957\times10^{21}\,(4\pi-2\Theta)^3\,(4\pi-\Theta)}{\left(4\pi\Theta-\Theta^2\right)^4}-$$

$$\frac{5.51806\times10^{23}\,(4\pi-2\Theta)\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^4}-\frac{6.9887\times10^{21}\,(4\pi-2\Theta)^3\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^4}-$$

$$\frac{2.09661\times10^{22}\,(4\pi-2\Theta)^2\,(4\pi-\Theta)\,\Theta}{\left(4\pi\Theta-\Theta^2\right)^4}+\frac{9.19676\times10^{22}\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^4}+$$

$$\frac{2.09661\times10^{22}\,(4\pi-2\Theta)^2\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^4}+\frac{2.09661\times10^{22}\,(4\pi-2\Theta)\,(4\pi-\Theta)\,\Theta^2}{\left(4\pi\Theta-\Theta^2\right)^4}-$$

$$\frac{6.9887\times10^{21}\ (4\pi-2\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-\frac{2.32957\times10^{21}\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$
$$\frac{9.19676\times10^{22}}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32957\times10^{21}\ (4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\frac{4.65913\times10^{21}\ (4\pi-2\theta)\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.39774\times10^{22}\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\left.\frac{6.9887\times10^{21}\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{6.9887\times10^{21}\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32957\times10^{21}}{\left(4\pi\theta-\theta^2\right)^2}\right)\Big/$$
$$\left(2\sqrt{\frac{1.27733\times10^{20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}}\right)$$

$$\text{Plot}\Big[-\Bigg(945\left(-\frac{1.2773276589129854\text{`*^}20\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$
$$\frac{3.235508757504\text{`*^}18\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20\ \theta}{4\pi\theta-\theta^2}-$$
$$\left.\frac{9.706526272512\text{`*^}18\ (4\pi-\theta)\ \theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504\text{`*^}18\ \theta^3}{4\pi\theta-\theta^2}\right)^6\Bigg)\Big/$$
$$\left(64\left(\frac{1.2773276589129854\text{`*^}20\ \theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\text{`*^}18\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}\right)^{11/2}\right)+$$
$$\Bigg(1575\left(\frac{2.5546553178259708\text{`*^}20\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$
$$\frac{6.471017515008\text{`*^}18\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\frac{5.1093106356519417\text{`*^}20\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$
$$\frac{1.9413052545024\text{`*^}19\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008\text{`*^}18\ (4\pi-2\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$
$$\frac{6.471017515008\text{`*^}18\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20}{4\pi\theta-\theta^2}-$$
$$\left.\frac{1.9413052545024\text{`*^}19\ (4\pi-\theta)\ \theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024\text{`*^}19\ \theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20} (4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18} (4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18} (4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18} (4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(675\left(\frac{2.5546553178259708`*^{20} (4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{18} (4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20} (4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19} (4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18} (4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18} (4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19} (4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20} (4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18} (4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18} (4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18} (4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(75\left(-\frac{7.663965953477913`*^{20} (4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\right)\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\right/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.8239157635072`*^19\,\theta}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(2\,\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(15\,\left(\frac{3.065586381391165`*^21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^21 (4\pi - 2\theta)^2}{(4\pi\theta - \theta^2)^3} - \frac{1.226234552556466`*^22 (4\pi - 2\theta)\theta}{(4\pi\theta - \theta^2)^3} -$$

$$\frac{2.32956630540288`*^20 (4\pi - 2\theta)^2 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{3.065586381391165`*^21 \theta^2}{(4\pi\theta - \theta^2)^3} + \frac{2.32956630540288`*^20 (4\pi - 2\theta)^2 \theta^2}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{4.65913261080576`*^20 (4\pi - 2\theta)(4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^3} -$$

$$\frac{1.55304420360192`*^20 (4\pi - 2\theta)\theta^3}{(4\pi\theta - \theta^2)^3} - \frac{7.7652210180096`*^19 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{3.065586381391165`*^21}{(4\pi\theta - \theta^2)^2} + \frac{7.7652210180096`*^19 (4\pi - 2\theta)(4\pi - \theta)}{(4\pi\theta - \theta^2)^2} -$$

$$\frac{2.32956630540288`*^20 (4\pi - 2\theta)\theta}{(4\pi\theta - \theta^2)^2} - \frac{2.32956630540288`*^20 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^2} +$$

$$\left.\frac{2.32956630540288`*^20 \theta^2}{(4\pi\theta - \theta^2)^2} + \frac{7.7652210180096`*^19}{4\pi\theta - \theta^2}\right)$$

$$\left(\frac{2.5546553178259708`*^20 (4\pi - 2\theta)^2 \theta^2}{(4\pi\theta - \theta^2)^3} -\right.$$

$$\frac{6.471017515008`*^18 (4\pi - 2\theta)^2 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^3} -$$

$$\frac{5.1093106356519417`*^20 (4\pi - 2\theta)\theta}{(4\pi\theta - \theta^2)^2} + \frac{2.5546553178259708`*^20 \theta^2}{(4\pi\theta - \theta^2)^2} +$$

$$\frac{1.9413052545024`*^19 (4\pi - 2\theta)(4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^2} - \frac{6.471017515008`*^18 (4\pi - 2\theta)\theta^3}{(4\pi\theta - \theta^2)^2} -$$

$$\frac{6.471017515008`*^18 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^2} + \frac{2.5546553178259708`*^20}{4\pi\theta - \theta^2} -$$

$$\left.\left.\frac{1.9413052545024`*^19 (4\pi - \theta)\theta}{4\pi\theta - \theta^2} + \frac{1.9413052545024`*^19 \theta^2}{4\pi\theta - \theta^2}\right)\right) \Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20 \theta^2}{4\pi\theta - \theta^2} - \frac{3.235508757504`*^18 (4\pi - \theta)\theta^3}{4\pi\theta - \theta^2}\right)^{3/2}\right) -$$

$$\left(3\left(-\frac{1.5327931906955825`*^22 (4\pi - 2\theta)^5 \theta^2}{(4\pi\theta - \theta^2)^6} +\right.\right.$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^{\wedge}22\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^{\wedge}22\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{3.8826105090048`*^{20}\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\Bigg)$$

$$\Bigg(-\frac{1.2773276589129854`*^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)\Bigg)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\Bigg(\frac{9.196759144173494`*^{22}\,(4\,\pi-2\,\theta)^6\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{2.32956630540288`*^{21}\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{1.839351828834699`*^{23}\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{4.598379572086748`*^{23}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.988698916208639`*^{21}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.32956630540288`*^{21}\,(4\,\pi-2\,\theta)^5\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.16478315270144`*^{22}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{9.196759144173494`*^{22}\,(4\,\pi-2\,\theta)^4}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{7.357407315338796`*^{23}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.98869891620864`*^{21}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.518055486504097`*^{\wedge}23\ (4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{6.98869891620864`*^{\wedge}21\ (4\pi-2\theta)^4\,\theta^2}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{2.795479566483456`*^{\wedge}22\ (4\pi-2\theta)^3\ (4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{9.31826522161152`*^{\wedge}21\ (4\pi-2\theta)^3\,\theta^3}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{1.397739783241728`*^{\wedge}22\ (4\pi-2\theta)^2\ (4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{2.7590277432520485`*^{\wedge}23\ (4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}21\ (4\pi-2\theta)^3\ (4\pi-\theta)}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{5.518055486504097`*^{\wedge}23\ (4\pi-2\theta)\ \theta}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{6.988698916208639`*^{\wedge}21\ (4\pi-2\theta)^3\,\theta}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{2.096609674862592`*^{\wedge}22\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{9.196759144173496`*^{\wedge}22\,\theta^2}{(4\pi\theta-\theta^2)^4}+\frac{2.096609674862592`*^{\wedge}22\ (4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{2.096609674862592`*^{\wedge}22\ (4\pi-2\theta)\ (4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{6.988698916208639`*^{\wedge}21\ (4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}21\ (4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{9.196759144173494`*^{\wedge}22}{(4\pi\theta-\theta^2)^3}+\frac{2.32956630540288`*^{\wedge}21\ (4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}21\ (4\pi-2\theta)\ (4\pi-\theta)}{(4\pi\theta-\theta^2)^3}-$$

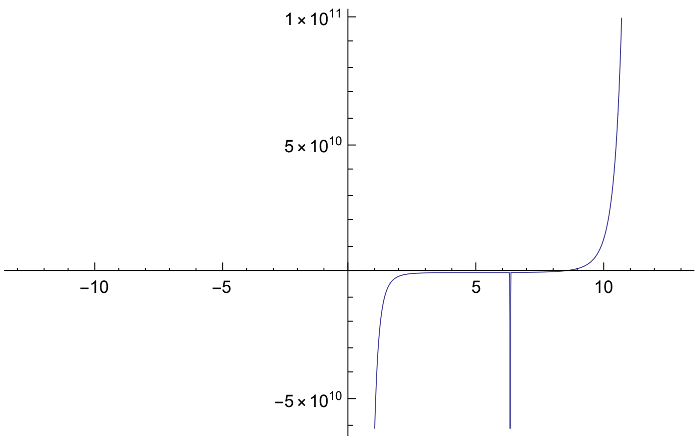
$$\frac{1.3977397832417278`*^{\wedge}22\ (4\,\pi - 2\,\theta)\,\theta}{\left(4\,\pi\,\theta - \theta^2\right)^3} -$$

$$\frac{6.98869891620864`*^{\wedge}21\ (4\,\pi - \theta)\,\theta}{\left(4\,\pi\,\theta - \theta^2\right)^3} +$$

$$\left.\left.\frac{6.98869891620864`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta - \theta^2\right)^3} + \frac{2.32956630540288`*^{\wedge}21}{\left(4\,\pi\,\theta - \theta^2\right)^2}\right)\right/$$

$$\left(2\,\sqrt{\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta - \theta^2} - \frac{3.235508757504`*^{\wedge}18\ (4\,\pi - \theta)\,\theta^3}{4\,\pi\,\theta - \theta^2}}\right),\ \{\theta,$$

$$-13,\ 13\}\Big]$$



$$\text{D}\Big[-\left(945\,\left(-\frac{1.2773276589129854`*^{\wedge}20\ (4\,\pi - 2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta - \theta^2\right)^2} +\right.\right.$$

$$\frac{3.235508757504`*^{\wedge}18\ (4\,\pi - 2\,\theta)\ (4\,\pi - \theta)\,\theta^3}{\left(4\,\pi\,\theta - \theta^2\right)^2} + \frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta - \theta^2} -$$

$$\left.\left.\left.\frac{9.706526272512`*^{\wedge}18\ (4\,\pi - \theta)\,\theta^2}{4\,\pi\,\theta - \theta^2} + \frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta - \theta^2}\right)^6\right)\right/$$

$$\left(64\,\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta - \theta^2} - \frac{3.235508757504`*^{\wedge}18\ (4\,\pi - \theta)\,\theta^3}{4\,\pi\,\theta - \theta^2}\right)^{11/2}\right) +$$

$$\left(1575\,\left(\frac{2.5546553178259708`*^{\wedge}20\ (4\,\pi - 2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta - \theta^2\right)^3} -\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\ (4\,\pi - 2\,\theta)^2\ (4\,\pi - \theta)\,\theta^3}{\left(4\,\pi\,\theta - \theta^2\right)^3} -$$

$$\frac{5.1093106356519417`*^{\wedge}20\ (4\,\pi - 2\,\theta)\,\theta}{\left(4\,\pi\,\theta - \theta^2\right)^2} + \frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta - \theta^2\right)^2} +$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(675\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{\texttt{9.706526272512`*\^{}18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{\texttt{3.235508757504`*\^{}18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(16\left(\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(75\left(-\frac{\texttt{7.663965953477913`*\^{}20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\texttt{1.5327931906955826`*\^{}21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{\texttt{1.5327931906955826`*\^{}21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\texttt{5.8239157635072`*\^{}19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{\texttt{3.8826105090048`*\^{}19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{\texttt{7.663965953477913`*\^{}20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\texttt{1.5327931906955826`*\^{}21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\texttt{5.8239157635072`*\^{}19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{\texttt{5.8239157635072`*\^{}19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\texttt{5.8239157635072`*\^{}19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\texttt{1.9413052545024`*\^{}19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{\texttt{5.8239157635072`*\^{}19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{\texttt{1.2773276589129854`*\^{}20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{\texttt{3.235508757504`*\^{}18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{\texttt{9.706526272512`*\^{}18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{\texttt{3.235508757504`*\^{}18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(4\left(\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(45\left(\frac{2.5546553178259708`*^20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^20\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^18\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^19\,\theta^2}{4\pi\theta-\theta^2}\right)^3\right)\Bigg/$$

$$\left(8\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(-\frac{7.663965953477913`*^20\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^21\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^21\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^19\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^19\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^20\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(45\left(\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(5\left(-\frac{7.663965953477913`*^20\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.9413052545024`*^19\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.5327931906955826`*^21\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^21\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.8239157635072`*^19\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.9413052545024`*^19\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.8826105090048`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^20\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^19\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.8239157635072`*^19\,\theta}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(2\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(15\left(\frac{3.065586381391165`*^21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{7.7652210180096`*^19\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117276278233\grave{}*\hat{}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495\grave{}*\hat{}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096\grave{}*\hat{}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165\grave{}*\hat{}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466\grave{}*\hat{}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\grave{}*\hat{}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096\grave{}*\hat{}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\grave{}*\hat{}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096\grave{}*\hat{}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288\grave{}*\hat{}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288\grave{}*\hat{}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096\grave{}*\hat{}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(\frac{2.5546553178259708\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008\grave{}*\hat{}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.109310635651941 7\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\hat{}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\grave{}*\hat{}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008\grave{}*\hat{}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^19\,\theta^2}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(3\left(-\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^5\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}+\right.\right.$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^5\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^22\,(4\pi-2\theta)^4\,\theta}{\left(4\pi\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^22\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^4\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^22\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^22\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^21\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^22\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048`*^20\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(\frac{9.196759144173494`*^22\,(4\,\pi-2\,\theta)^6\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-\right.$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{1.839351828834699`*^23\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{4.598379572086748`*^23\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.988698916208639`*^21\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)^5\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.16478315270144`*^22\ (4\pi-2\theta)^4\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{9.196759144173494`*^22\ (4\pi-2\theta)^4}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{7.357407315338796`*^23\ (4\pi-2\theta)^3\ \theta}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.98869891620864`*^21\ (4\pi-2\theta)^4\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{5.518055486504097`*^23\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{6.98869891620864`*^21\ (4\pi-2\theta)^4\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{2.795479566483456`*^22\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{9.31826522161152`*^21\ (4\pi-2\theta)^3\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.397739783241728`*^22\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{2.7590277432520485`*^23\ (4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^21\ (4\pi-2\theta)^3\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{5.518055486504097`*^23\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{6.988698916208639`*^21\ (4\pi-2\theta)^3\ \theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.096609674862592`*^22\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{9.196759144173496`*^22\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{2.096609674862592`*^22\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.096609674862592`*^22\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{6.988698916208639`*^21\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$
$$\frac{2.32956630540288`*^21\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$
$$\frac{9.196759144173494`*^22}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\frac{4.65913261080576`*^21\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\frac{1.3977397832417278`*^22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$
$$\frac{6.98869891620864`*^21\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$
$$\left.\frac{6.98869891620864`*^21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^21}{\left(4\pi\theta-\theta^2\right)^2}\right)\Bigg/$$
$$\left(2\sqrt{\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right),\theta\Big]$$

$$\Bigg(10\,395\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$
$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^7\right)\Bigg/$$
$$\left(128\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{13/2}\right)-$$
$$\Bigg(19\,845\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$
$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$
$$\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$
$$\left.\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times 10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times 10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times 10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times 10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times 10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^5\right)\Big/$$

$$\left(64\left(\frac{1.27733\times 10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times 10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{11/2}\right)+$$

$$\left(11\,025\left(\frac{2.55466\times 10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.47102\times 10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.10931\times 10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times 10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.94131\times 10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times 10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times 10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.55466\times 10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times 10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times 10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2$$

$$\left(-\frac{1.27733\times 10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times 10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times 10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times 10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times 10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(32\left(\frac{1.27733\times 10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times 10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{9/2}\right)+$$

$$\left(3675\left(-\frac{7.66397\times 10^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times 10^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times 10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times 10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times 10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times 10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times 10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times 10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(32\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(1575\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^3$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(16\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(1575\left(-\frac{7.66397\times10^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\pi\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(525\left(\frac{3.06559\times10^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117\times10^{21}\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\ (4\pi-2\theta)^3\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\ (4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\ (4\pi-2\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\ (4\pi-2\theta)\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\ \theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\ (4\pi-\theta)\ \theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\ \theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(16\left(\frac{1.27733\times10^{20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(315\left(-\frac{7.66397\times10^{20}\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\pi\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(105\left(-\frac{7.66397\times10^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.53279\times10^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{1.94131\times10^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.82392\times10^{19}\,\theta}{4\pi\theta-\theta^2}\right)^2$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(315\left(\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times10^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.23551\times10^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(8\left(\frac{1.27733\times10^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\Bigg(63\,\Bigg(-\frac{1.53279\times10^{22}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.06559\times10^{22}\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117\times10^{22}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304\times10^{21}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{1.53279\times10^{22}\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{9.19676\times10^{22}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.59838\times10^{22}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49435\times10^{21}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{3.06559\times10^{22}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{3.88261\times10^{20}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{22}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.16478\times10^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478\times10^{21}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.88261\times10^{20}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\left.\frac{3.88261\times10^{20}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-\frac{3.88261\times10^{20}\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478\times10^{21}\ \theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.27733\times10^{20}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{3.23551\times10^{18}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\ \theta}{4\pi\theta-\theta^2}-\frac{9.70653\times10^{18}\ (4\pi-\theta)\ \theta^2}{4\pi\theta-\theta^2}+\frac{3.23551\times10^{18}\ \theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.27733\times10^{20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(35\left(\frac{3.06559\times10^{21}\ (4\pi-2\theta)^4\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{7.76522\times10^{19}\ (4\pi-2\theta)^4\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{6.13117\times10^{21}\ (4\pi-2\theta)^3\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.19676\times10^{21}\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{7.76522\times10^{19}\ (4\pi-2\theta)^3\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{3.06559\times10^{21}\ (4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.22623\times10^{22}\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32957\times10^{20}\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{4.65913\times10^{20}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304\times10^{20}\ (4\pi-2\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.76522\times10^{19}\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.06559\times10^{21}}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{7.76522\times10^{19}\ (4\pi-2\theta)\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32957\times10^{20}\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{2.32957\times10^{20}\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.32957\times10^{20}\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.76522\times10^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{7.66397\times10^{20}\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.94131\times10^{19}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.53279\times10^{21}\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.53279\times10^{21}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.94131\times10^{19}\ (4\,\pi-2\,\theta)^2\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.88261\times10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.66397\times10^{20}\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.53279\times10^{21}\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.82392\times10^{19}\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.82392\times10^{19}\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\left.\frac{1.94131\times10^{19}\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.94131\times10^{19}\ (4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.82392\times10^{19}\ \theta}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\ \theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.23551\times10^{18}\ (4\,\pi-\theta)\ \theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(21\left(-\frac{1.53279\times10^{22}\ (4\,\pi-2\,\theta)^5\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{3.88261\times10^{20}\ (4\,\pi-2\,\theta)^5\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\right.\right.$$

$$\frac{3.06559\times10^{22}\ (4\,\pi-2\,\theta)^4\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117\times10^{22}\ (4\,\pi-2\,\theta)^3\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)^4\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+\frac{3.88261\times10^{20}\ (4\,\pi-2\,\theta)^4\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304\times10^{21}\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{1.53279\times10^{22}\ (4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{9.19676\times10^{22}\ (4\,\pi-2\,\theta)^2\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.59838\times10^{22}\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)^3\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49435\times10^{21}\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)^2\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{3.06559\times10^{22}\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{3.88261\times10^{20}\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{3.06559\times10^{22}\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.16478\times10^{21}\ (4\,\pi-2\,\theta)^2\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32957\times10^{21}\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32957\times10^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478\times10^{21}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.88261\times10^{20}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\left.\frac{3.88261\times10^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-\frac{3.88261\times10^{20}\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478\times10^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(\frac{2.55466\times10^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.47102\times10^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{5.10931\times10^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.55466\times10^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.94131\times10^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.47102\times10^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.47102\times10^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\left.\frac{2.55466\times10^{20}}{4\pi\theta-\theta^2}-\frac{1.94131\times10^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.94131\times10^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(7\left(\frac{9.19676\times10^{22}\,(4\pi-2\theta)^6\,\theta^2}{\left(4\pi\theta-\theta^2\right)^7}-\frac{2.32957\times10^{21}\,(4\pi-2\theta)^6\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^7}-\right.\right.$$

$$\frac{1.83935\times10^{23}\,(4\pi-2\theta)^5\,\theta}{\left(4\pi\theta-\theta^2\right)^6}+\frac{4.59838\times10^{23}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{6.9887\times10^{21}\,(4\pi-2\theta)^5\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}-\frac{2.32957\times10^{21}\,(4\pi-2\theta)^5\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}-$$

$$\frac{1.16478\times10^{22}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}+\frac{9.19676\times10^{22}\,(4\pi-2\theta)^4}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{7.35741\times10^{23}\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^5}-\frac{6.9887\times10^{21}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{5.51806\times10^{23}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+\frac{6.9887\times10^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{2.79548\times10^{22}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{9.31827\times10^{21}\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.39774\times10^{22}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+\frac{2.75903\times10^{23}\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)^{3}\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-\frac{5.51806\times10^{23}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-$$

$$\frac{6.9887\times10^{21}\,(4\,\pi-2\,\theta)^{3}\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-\frac{2.09661\times10^{22}\,(4\,\pi-2\,\theta)^{2}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+$$

$$\frac{9.19676\times10^{22}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+\frac{2.09661\times10^{22}\,(4\,\pi-2\,\theta)^{2}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+$$

$$\frac{2.09661\times10^{22}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-\frac{6.9887\times10^{21}\,(4\,\pi-2\,\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-$$

$$\frac{2.32957\times10^{21}\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+\frac{9.19676\times10^{22}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}+\frac{2.32957\times10^{21}\,(4\,\pi-2\,\theta)^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}+$$

$$\frac{4.65913\times10^{21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}-\frac{1.39774\times10^{22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}-$$

$$\left.\frac{6.9887\times10^{21}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}+\frac{6.9887\times10^{21}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{3}}+\frac{2.32957\times10^{21}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}\right)$$

$$\left(-\frac{1.27733\times10^{20}\,(4\,\pi-2\,\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{3.23551\times10^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\right.$$

$$\left.\left.\frac{2.55466\times10^{20}\,\theta}{4\,\pi\,\theta-\theta^{2}}-\frac{9.70653\times10^{18}\,(4\,\pi-\theta)\,\theta^{2}}{4\,\pi\,\theta-\theta^{2}}+\frac{3.23551\times10^{18}\,\theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)\right)\Bigg/$$

$$\left(4\left(\frac{1.27733\times10^{20}\,\theta^{2}}{4\,\pi\,\theta-\theta^{2}}-\frac{3.23551\times10^{18}\,(4\,\pi-\theta)\,\theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{3/2}\right)+$$

$$\left(-\frac{6.43773\times10^{23}\,(4\,\pi-2\,\theta)^{7}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{8}}+\frac{1.6307\times10^{22}\,(4\,\pi-2\,\theta)^{7}\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{8}}+\right.$$

$$\frac{1.28755\times10^{24}\,(4\,\pi-2\,\theta)^{6}\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{7}}-\frac{3.86264\times10^{24}\,(4\,\pi-2\,\theta)^{5}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{7}}-$$

$$\frac{4.89209\times10^{22}\,(4\,\pi-2\,\theta)^{6}\,(4\,\pi-\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{7}}+$$

$$\frac{1.6307\times10^{22}\,(4\,\pi-2\,\theta)^{6}\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{7}}+\frac{9.78418\times10^{22}\,(4\,\pi-2\,\theta)^{5}\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{7}}-$$

$$\frac{6.43773\times10^{23}\,(4\,\pi-2\,\theta)^{5}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{6}}+\frac{6.43773\times10^{24}\,(4\,\pi-2\,\theta)^{4}\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{6}}+$$

$$\frac{4.89209\times10^{22}\ (4\pi-2\theta)^5\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^6}-$$

$$\frac{6.43773\times10^{24}\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^6}-\frac{4.89209\times10^{22}\ (4\pi-2\theta)^5\ \theta^2}{\left(4\pi\theta-\theta^2\right)^6}-$$

$$\frac{2.44604\times10^{23}\ (4\pi-2\theta)^4\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{8.15348\times10^{22}\ (4\pi-2\theta)^4\ \theta^3}{\left(4\pi\theta-\theta^2\right)^6}+\frac{1.6307\times10^{23}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^6}-$$

$$\frac{2.57509\times10^{24}\ (4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^5}-\frac{1.6307\times10^{22}\ (4\pi-2\theta)^4\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{7.72528\times10^{24}\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^5}+\frac{4.89209\times10^{22}\ (4\pi-2\theta)^4\ \theta}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.95684\times10^{23}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{2.57509\times10^{24}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\frac{1.95684\times10^{23}\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{2.93525\times10^{23}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{9.78418\times10^{22}\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}+\frac{6.52279\times10^{22}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.93132\times10^{24}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.6307\times10^{22}\ (4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.89209\times10^{22}\ (4\pi-2\theta)^2\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.28755\times10^{24}\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.46763\times10^{23}\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.46763\times10^{23}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{1.46763\times10^{23}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{4.89209\times10^{22}\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.6307\times10^{22}\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-\frac{3.26139\times10^{22}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\left.\frac{1.6307\times10^{22}\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+\frac{4.89209\times10^{22}\ \theta}{\left(4\pi\theta-\theta^2\right)^3}\right)\bigg/$$

$$\left(2\sqrt{\frac{1.27733\times10^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.23551\times10^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right)$$

$$\texttt{Plot}\Bigg[\Bigg(10\,395\,\Bigg(-\frac{\texttt{1.2773276589129854`*\^{}20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\frac{\texttt{9.706526272512`*\^{}18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{\texttt{3.235508757504`*\^{}18}\,\theta^3}{4\pi\theta-\theta^2}\Bigg)^7\Bigg)\Bigg/$$

$$\left(128\left(\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{13/2}\right)-$$

$$\Bigg(19\,845\,\Bigg(\frac{\texttt{2.5546553178259708`*\^{}20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{\texttt{5.1093106356519417`*\^{}20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{\texttt{6.471017515008`*\^{}18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}}{4\pi\theta-\theta^2}-$$

$$\frac{\texttt{1.9413052545024`*\^{}19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{\texttt{1.9413052545024`*\^{}19}\,\theta^2}{4\pi\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{\texttt{1.2773276589129854`*\^{}20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{\texttt{2.5546553178259708`*\^{}20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\frac{\texttt{9.706526272512`*\^{}18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{\texttt{3.235508757504`*\^{}18}\,\theta^3}{4\pi\theta-\theta^2}\Bigg)^5\Bigg)\Bigg/$$

$$\left(64\left(\frac{\texttt{1.2773276589129854`*\^{}20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{\texttt{3.235508757504`*\^{}18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{11/2}\right)+$$

$$\left(11025\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{\wedge}20}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\pi\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{9/2}\right)+$$

$$\left(3675\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\,\theta}{4\pi\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^4\right)\Bigg/$$

$$\left(32\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(1575\left(\frac{2.5546553178259708`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^3\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Bigg/$$

$$\left(16\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(1575\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19} (4\pi - 2\theta)(4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^2} - \frac{6.471017515008`*^{18} (4\pi - 2\theta)\theta^3}{(4\pi\theta - \theta^2)^2} -$$

$$\frac{6.471017515008`*^{18} (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^2} + \frac{2.5546553178259708`*^{20}}{4\pi\theta - \theta^2} -$$

$$\left.\frac{1.9413052545024`*^{19} (4\pi - \theta)\theta}{4\pi\theta - \theta^2} + \frac{1.9413052545024`*^{19}\theta^2}{4\pi\theta - \theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20} (4\pi - 2\theta)\theta^2}{(4\pi\theta - \theta^2)^2} + \right.$$

$$\frac{3.235508757504`*^{18} (4\pi - 2\theta)(4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^2} + \frac{2.5546553178259708`*^{20}\theta}{4\pi\theta - \theta^2} -$$

$$\left.\left.\frac{9.706526272512`*^{18} (4\pi - \theta)\theta^2}{4\pi\theta - \theta^2} + \frac{3.235508757504`*^{18}\theta^3}{4\pi\theta - \theta^2}\right)^2\right) \Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{20}\theta^2}{4\pi\theta - \theta^2} - \frac{3.235508757504`*^{18} (4\pi - \theta)\theta^3}{4\pi\theta - \theta^2}\right)^{7/2}\right) -$$

$$\left(525\left(\frac{3.065586381391165`*^{21} (4\pi - 2\theta)^4\theta^2}{(4\pi\theta - \theta^2)^5} - \right.\right.$$

$$\frac{7.7652210180096`*^{19} (4\pi - 2\theta)^4 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{6.13117276278233`*^{21} (4\pi - 2\theta)^3\theta}{(4\pi\theta - \theta^2)^4} + \frac{9.196759144173495`*^{21} (4\pi - 2\theta)^2\theta^2}{(4\pi\theta - \theta^2)^4} +$$

$$\frac{2.32956630540288`*^{20} (4\pi - 2\theta)^3 (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^4} -$$

$$\frac{7.7652210180096`*^{19} (4\pi - 2\theta)^3\theta^3}{(4\pi\theta - \theta^2)^4} -$$

$$\frac{2.32956630540288`*^{20} (4\pi - 2\theta)^2 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^4} +$$

$$\frac{3.065586381391165`*^{21} (4\pi - 2\theta)^2}{(4\pi\theta - \theta^2)^3} - \frac{1.226234552556466`*^{22} (4\pi - 2\theta)\theta}{(4\pi\theta - \theta^2)^3} -$$

$$\frac{2.32956630540288`*^{20} (4\pi - 2\theta)^2 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{3.065586381391165`*^{21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{20}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{20}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{19}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(315\left(-\frac{7.663965953477913`*^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\,\theta}{4\pi\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(105\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.5327931906955826`*^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$
$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$
$$\frac{1.9413052545024`*^19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$
$$\frac{3.8826105090048`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$
$$\frac{7.663965953477913`*^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$
$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$
$$\frac{5.8239157635072`*^19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$
$$\frac{1.9413052545024`*^19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$
$$\left.\frac{5.8239157635072`*^19\,\theta}{4\,\pi\,\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$
$$\frac{3.235508757504`*^18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\,\pi\,\theta-\theta^2}-$$
$$\left.\left.\frac{9.706526272512`*^18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$
$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$
$$\left(315\left(\frac{3.065586381391165`*^21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$
$$\frac{7.7652210180096`*^19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$
$$\frac{6.13117276278233`*^21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20 (4\pi-2\theta)^3 (4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^4} -$$

$$\frac{7.7652210180096`*^19 (4\pi-2\theta)^3 \theta^3}{(4\pi\theta-\theta^2)^4} -$$

$$\frac{2.32956630540288`*^20 (4\pi-2\theta)^2 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^4} +$$

$$\frac{3.065586381391165`*^21 (4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^3} - \frac{1.226234552556466`*^22 (4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^3} -$$

$$\frac{2.32956630540288`*^20 (4\pi-2\theta)^2 (4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^3} +$$

$$\frac{3.065586381391165`*^21 \theta^2}{(4\pi\theta-\theta^2)^3} + \frac{2.32956630540288`*^20 (4\pi-2\theta)^2 \theta^2}{(4\pi\theta-\theta^2)^3} +$$

$$\frac{4.65913261080576`*^20 (4\pi-2\theta)(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^3} -$$

$$\frac{1.55304420360192`*^20 (4\pi-2\theta)\theta^3}{(4\pi\theta-\theta^2)^3} - \frac{7.7652210180096`*^19 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^3} +$$

$$\frac{3.065586381391165`*^21}{(4\pi\theta-\theta^2)^2} + \frac{7.7652210180096`*^19 (4\pi-2\theta)(4\pi-\theta)}{(4\pi\theta-\theta^2)^2} -$$

$$\frac{2.32956630540288`*^20 (4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^2} - \frac{2.32956630540288`*^20 (4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^2} +$$

$$\left.\frac{2.32956630540288`*^20 \theta^2}{(4\pi\theta-\theta^2)^2} + \frac{7.7652210180096`*^19}{4\pi\theta-\theta^2}\right)$$

$$\left(\frac{2.5546553178259708`*^20 (4\pi-2\theta)^2 \theta^2}{(4\pi\theta-\theta^2)^3} -\right.$$

$$\frac{6.471017515008`*^18 (4\pi-2\theta)^2 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^3} -$$

$$\frac{5.1093106356519417`*^20 (4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^2} + \frac{2.5546553178259708`*^20 \theta^2}{(4\pi\theta-\theta^2)^2} +$$

$$\frac{1.9413052545024`*^19 (4\pi-2\theta)(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^2} - \frac{6.471017515008`*^18 (4\pi-2\theta)\theta^3}{(4\pi\theta-\theta^2)^2} -$$

$$\frac{6.471017515008`*^18 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^2} + \frac{2.5546553178259708`*^20}{4\pi\theta-\theta^2} -$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)\Bigg)\Bigg/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\Bigg(63\,\Bigg(-\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^{\wedge}22\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^{\wedge}22\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(35\left(\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913`*^20\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^19\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^19\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^19\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.8239157635072`*^19\,\theta}{4\pi\theta-\theta^2}\right)\right)\bigg/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(21\left(-\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^5\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}+\right.\right.$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^5\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^22\,(4\pi-2\theta)^4\,\theta}{\left(4\pi\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^22\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^20\,(4\pi-2\theta)^4\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^22\,(4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^22\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^22\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^21\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^21\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\text{`}*\wedge 21\ (4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\text{`}*\wedge 21\ (4\pi-2\theta)\ (4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165\text{`}*\wedge 22\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048\text{`}*\wedge 20\ (4\pi-2\theta)^2\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\text{`}*\wedge 22\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.16478315270144\text{`}*\wedge 21\ (4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288\text{`}*\wedge 21\ (4\pi-2\theta)\ (4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\text{`}*\wedge 21\ (4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478315270144\text{`}*\wedge 21\ (4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\text{`}*\wedge 20\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048\text{`}*\wedge 20\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048\text{`}*\wedge 20\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478315270144\text{`}*\wedge 21\,\theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(\frac{2.5546553178259708\text{`}*\wedge 20\ (4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008\text{`}*\wedge 18\ (4\pi-2\theta)^2\ (4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\text{`}*\wedge 20\ (4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`}*\wedge 20\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\text{`}*\wedge 19\ (4\pi-2\theta)\ (4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008\text{`}*\wedge 18\ (4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`}*\wedge 18\ (4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`}*\wedge 20}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024\text{`}*\wedge 19\ (4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024\text{`}*\wedge 19\,\theta^2}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854\text{`}*\wedge 20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\text{`}*\wedge 18\ (4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(7\left(\frac{9.196759144173494`*^{22}(4\pi-2\theta)^6\theta^2}{(4\pi\theta-\theta^2)^7}-\right.\right.$$

$$\frac{2.32956630540288`*^{21}(4\pi-2\theta)^6(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^7}-$$

$$\frac{1.839351828834699`*^{23}(4\pi-2\theta)^5\theta}{(4\pi\theta-\theta^2)^6}+\frac{4.598379572086748`*^{23}(4\pi-2\theta)^4\theta^2}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{6.988698916208639`*^{21}(4\pi-2\theta)^5(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{2.32956630540288`*^{21}(4\pi-2\theta)^5\theta^3}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{1.16478315270144`*^{22}(4\pi-2\theta)^4(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{9.196759144173494`*^{22}(4\pi-2\theta)^4}{(4\pi\theta-\theta^2)^5}-\frac{7.357407315338796`*^{23}(4\pi-2\theta)^3\theta}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{6.98869891620864`*^{21}(4\pi-2\theta)^4(4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{5.518055486504097`*^{23}(4\pi-2\theta)^2\theta^2}{(4\pi\theta-\theta^2)^5}+\frac{6.98869891620864`*^{21}(4\pi-2\theta)^4\theta^2}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{2.795479566483456`*^{22}(4\pi-2\theta)^3(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{9.31826522161152`*^{21}(4\pi-2\theta)^3\theta^3}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{1.397739783241728`*^{22}(4\pi-2\theta)^2(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{2.7590277432520485`*^{23}(4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{2.32956630540288`*^{21}(4\pi-2\theta)^3(4\pi-\theta)}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{5.518055486504097`*^{23}(4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^4}-\frac{6.988698916208639`*^{21}(4\pi-2\theta)^3\theta}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{2.096609674862592`*^{\wedge}22\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{9.196759144173496`*^{\wedge}22\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{2.096609674862592`*^{\wedge}22\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.096609674862592`*^{\wedge}22\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{6.988698916208639`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{9.196759144173494`*^{\wedge}22}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.3977397832417278`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{6.98869891620864`*^{\wedge}21\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\left.\frac{6.98869891620864`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{6.437731400921446`*^{\wedge}23\,(4\,\pi-2\,\theta)^7\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^8}+\right.$$

$$\frac{1.630696413782016`*^{\wedge}22\,(4\,\pi-2\,\theta)^7\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^8}+$$

$$\frac{1.2875462801842892`*^{\wedge}24\,(4\,\pi-2\,\theta)^6\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{3.862638840552868`*^{\wedge}24\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{4.892089241346047`*^22 (4\pi-2\theta)^6 (4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^7}+$$

$$\frac{1.630696413782016`*^22 (4\pi-2\theta)^6 \theta^3}{(4\pi\theta-\theta^2)^7}+$$

$$\frac{9.784178482692096`*^22 (4\pi-2\theta)^5 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^7}-$$

$$\frac{6.437731400921446`*^23 (4\pi-2\theta)^5}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{6.437731400921448`*^24 (4\pi-2\theta)^4 \theta}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{4.892089241346048`*^22 (4\pi-2\theta)^5 (4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{6.437731400921447`*^24 (4\pi-2\theta)^3 \theta^2}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{4.892089241346048`*^22 (4\pi-2\theta)^5 \theta^2}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{2.4460446206730243`*^23 (4\pi-2\theta)^4 (4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{8.15348206891008`*^22 (4\pi-2\theta)^4 \theta^3}{(4\pi\theta-\theta^2)^6}+$$

$$\frac{1.630696413782016`*^23 (4\pi-2\theta)^3 (4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^6}-$$

$$\frac{2.5750925603685784`*^24 (4\pi-2\theta)^3}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{1.630696413782016`*^22 (4\pi-2\theta)^4 (4\pi-\theta)}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{7.725277681105736`*^24 (4\pi-2\theta)^2 \theta}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{4.892089241346048`*^22 (4\pi-2\theta)^4 \theta}{(4\pi\theta-\theta^2)^5}+$$

$$\frac{1.956835696538419`*^23 (4\pi-2\theta)^3 (4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^5}-$$

$$\frac{2.5750925603685784\grave{}*^{\wedge}24\ (4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.956835696538419\grave{}*^{\wedge}23\ (4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{2.9352535448076287\grave{}*^{\wedge}23\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{9.784178482692096\grave{}*^{\wedge}22\ (4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{6.522785655128064\grave{}*^{\wedge}22\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.9313194202764338\grave{}*^{\wedge}24\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{1.6306964137820157\grave{}*^{\wedge}22\ (4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.892089241346048\grave{}*^{\wedge}22\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.2875462801842892\grave{}*^{\wedge}24\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.467626772403814\grave{}*^{\wedge}23\ (4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.4676267724038144\grave{}*^{\wedge}23\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{1.4676267724038142\grave{}*^{\wedge}23\ (4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

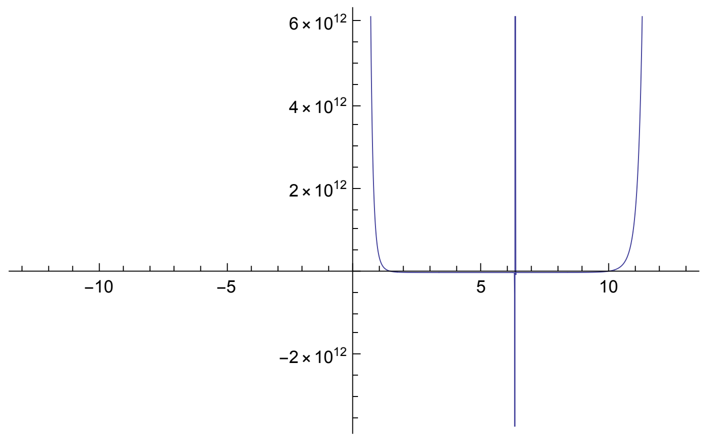
$$\frac{4.892089241346048\grave{}*^{\wedge}22\ (4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.6306964137820157\grave{}*^{\wedge}22\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.2613928275640314\grave{}*^{\wedge}22\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\left.\frac{1.630696413782016\grave{}*^{\wedge}22\ (4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.892089241346048\grave{}*^{\wedge}22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}\right)\Big/$$

$$\left(2\ \sqrt{\frac{1.2773276589129854\grave{}*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*^{\wedge}18\ (4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\ \{\theta,$$

$$-13,\ 13\}\Big]$$



$$\mathrm{D}\Bigg[\Bigg(10\,395\,\Bigg(-\frac{1.2773276589129854\text{`*^}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504\text{`*^}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{9.706526272512\text{`*^}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\text{`*^}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)^7\Bigg)\Bigg/$$

$$\left(128\,\left(\frac{1.2773276589129854\text{`*^}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\text{`*^}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{13/2}\right)-$$

$$\Bigg(19\,845\,\Bigg(\frac{2.5546553178259708\text{`*^}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{6.471017515008\text{`*^}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\text{`*^}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\text{`*^}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008\text{`*^}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`*^}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*^}20}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{1.9413052545024\text{`*^}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024\text{`*^}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{1.2773276589129854\text{`*^}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^5\right)\Big/$$

$$\left(64\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{11/2}\right)+$$

$$\left(11\,025\left(\frac{2.5546553178259708`*^{20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\,\pi\,\theta-\theta^2}-\frac{1.9413052545024`*^{19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)+$$

$$\left(3675\left(-\frac{7.663965953477913`*^{20}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(1575\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\ (4\pi-2\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}\ (4\pi-\theta)\ \theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\ \theta^2}{4\pi\theta-\theta^2}\right)^3\ \left(-\frac{1.2773276589129854`*^{20}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\ \theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\ (4\pi-\theta)\ \theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\ \theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(16\ \left(\frac{1.2773276589129854`*^{20}\ \theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\ (4\pi-\theta)\ \theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(1575\ \left(-\frac{7.663965953477913`*^{20}\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19}\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{19}\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{20}\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{21}\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{19}\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\ \theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}\ (4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\ \theta}{4\pi\theta-\theta^2}\right)\ \left(\frac{2.5546553178259708`*^{20}\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008\grave{}*{}^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\grave{}*{}^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*{}^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\grave{}*{}^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008\grave{}*{}^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\grave{}*{}^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*{}^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024\grave{}*{}^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024\grave{}*{}^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854\grave{}*{}^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504\grave{}*{}^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*{}^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\grave{}*{}^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\grave{}*{}^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854\grave{}*{}^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*{}^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(525\left(\frac{3.065586381391165\grave{}*{}^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096\grave{}*{}^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233\grave{}*{}^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495\grave{}*{}^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288\grave{}*{}^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096\grave{}*{}^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288\grave{}*{}^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^3}-\frac{1.226234552556466`*^{22}\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{3.065586381391165`*^{21}\,\theta^2}{(4\pi\theta-\theta^2)^3}+\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{4.65913261080576`*^{20}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{1.55304420360192`*^{20}\,(4\pi-2\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}-\frac{7.7652210180096`*^{19}\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{3.065586381391165`*^{21}}{(4\pi\theta-\theta^2)^2}+\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)\,\theta}{(4\pi\theta-\theta^2)^2}-\frac{2.32956630540288`*^{20}\,(4\pi-\theta)\,\theta}{(4\pi\theta-\theta^2)^2}+$$

$$\left.\frac{2.32956630540288`*^{20}\,\theta^2}{(4\pi\theta-\theta^2)^2}+\frac{7.7652210180096`*^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(315\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{(4\pi\theta-\theta^2)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{(4\pi\theta-\theta^2)^3}-\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)\,\theta^2}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(105\left(-\frac{7.663965953477913`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.5327931906955826`*^{21}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{19}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913`*^{20}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^{21}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072`*^{19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\,\theta}{4\,\pi\,\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(315\left(\frac{3.065586381391165`*^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}20\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(63\left(-\frac{1.5327931906955825`*^{22}\,(4\pi-2\theta)^5\,\theta^2}{\left(4\pi\theta-\theta^2\right)^6}+\right.\right.$$

$$\frac{3.8826105090048`*^{20}\,(4\pi-2\theta)^5\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^6}+$$

$$\frac{3.065586381391165`*^{22}\,(4\pi-2\theta)^4\,\theta}{\left(4\pi\theta-\theta^2\right)^5}-\frac{6.13117276278233`*^{22}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^{20}\,(4\pi-2\theta)^4\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^{21}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^{22}\,(4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^{22}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^{22}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^{21}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^{22}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{22}\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^{21}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^{21}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{20}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048`*^{20}\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(8\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(35\left(\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\ (4\,\pi-2\,\theta)^4\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\ (4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\ (4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\ (4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\ (4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\ (4\,\pi-2\,\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}20\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{\wedge}20\ (4\,\pi-2\,\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{\wedge}19\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-2\,\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{\wedge}20\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{7.663965953477913`*^{\wedge}20\ (4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.9413052545024`*^{\wedge}19\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{\wedge}21\ (4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{\wedge}21\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19} (4\pi - 2\theta)^2 (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{1.9413052545024`*^{19} (4\pi - 2\theta)^2 \theta^3}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{3.8826105090048`*^{19} (4\pi - 2\theta)(4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^3} -$$

$$\frac{7.663965953477913`*^{20} (4\pi - 2\theta)}{(4\pi\theta - \theta^2)^2} + \frac{1.5327931906955826`*^{21}\theta}{(4\pi\theta - \theta^2)^2} +$$

$$\frac{5.8239157635072`*^{19} (4\pi - 2\theta)(4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^2} - \frac{5.8239157635072`*^{19} (4\pi - 2\theta)\theta^2}{(4\pi\theta - \theta^2)^2} -$$

$$\frac{5.8239157635072`*^{19} (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^2} + \frac{1.9413052545024`*^{19}\theta^3}{(4\pi\theta - \theta^2)^2} -$$

$$\left.\left.\frac{1.9413052545024`*^{19} (4\pi - \theta)}{4\pi\theta - \theta^2} + \frac{5.8239157635072`*^{19}\theta}{4\pi\theta - \theta^2}\right)\right) \Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{20}\theta^2}{4\pi\theta - \theta^2} - \frac{3.235508757504`*^{18} (4\pi - \theta)\theta^3}{4\pi\theta - \theta^2}\right)^{3/2}\right) -$$

$$\left(21\left(-\frac{1.5327931906955825`*^{22} (4\pi - 2\theta)^5 \theta^2}{(4\pi\theta - \theta^2)^6} +\right.\right.$$

$$\frac{3.8826105090048`*^{20} (4\pi - 2\theta)^5 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^6} +$$

$$\frac{3.065586381391165`*^{22} (4\pi - 2\theta)^4 \theta}{(4\pi\theta - \theta^2)^5} - \frac{6.13117276278233`*^{22} (4\pi - 2\theta)^3 \theta^2}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{1.16478315270144`*^{21} (4\pi - 2\theta)^4 (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{3.8826105090048`*^{20} (4\pi - 2\theta)^4 \theta^3}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{1.55304420360192`*^{21} (4\pi - 2\theta)^3 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{1.5327931906955825`*^{22} (4\pi - 2\theta)^3}{(4\pi\theta - \theta^2)^4} + \frac{9.196759144173496`*^{22} (4\pi - 2\theta)^2 \theta}{(4\pi\theta - \theta^2)^4} +$$

$$\frac{1.16478315270144`*^{21} (4\pi - 2\theta)^3 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^4} -$$

$$\frac{4.598379572086748\grave{}*\char`^22\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.16478315270144\grave{}*\char`^21\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432\grave{}*\char`^21\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\char`^21\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\char`^21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165\grave{}*\char`^22\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\char`^20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\grave{}*\char`^22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144\grave{}*\char`^21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288\grave{}*\char`^21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\grave{}*\char`^21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144\grave{}*\char`^21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\grave{}*\char`^20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\char`^20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048\grave{}*\char`^20\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144\grave{}*\char`^21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(\frac{2.5546553178259708\grave{}*\char`^20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008\grave{}*\char`^18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\grave{}*\char`^20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\char`^20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\grave{}*\char`^19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008\grave{}*\char`^18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\grave{}*\char`^18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\char`^20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}\right)-$$

$$\left(7\left(\frac{9.196759144173494`*^22\,(4\,\pi-2\,\theta)^6\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-\right.\right.$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{1.839351828834699`*^23\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{4.598379572086748`*^23\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.988698916208639`*^21\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)^5\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.16478315270144`*^22\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{9.196759144173494`*^22\,(4\,\pi-2\,\theta)^4}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.357407315338796`*^23\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.98869891620864`*^21\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.518055486504097`*^23\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+\frac{6.98869891620864`*^21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{2.795479566483456`*^22\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{9.31826522161152`*^21\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.397739783241728`*^22\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{2.7590277432520485`*^23\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^21\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{5.518055486504097`*^{23}(4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^4}-\frac{6.988698916208639`*^{21}(4\pi-2\theta)^3\theta}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{2.096609674862592`*^{22}(4\pi-2\theta)^2(4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{9.196759144173496`*^{22}\theta^2}{(4\pi\theta-\theta^2)^4}+\frac{2.096609674862592`*^{22}(4\pi-2\theta)^2\theta^2}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{2.096609674862592`*^{22}(4\pi-2\theta)(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^4}-$$

$$\frac{6.988698916208639`*^{21}(4\pi-2\theta)\theta^3}{(4\pi\theta-\theta^2)^4}-\frac{2.32956630540288`*^{21}(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{9.196759144173494`*^{22}}{(4\pi\theta-\theta^2)^3}+\frac{2.32956630540288`*^{21}(4\pi-2\theta)^2}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{4.65913261080576`*^{21}(4\pi-2\theta)(4\pi-\theta)}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{1.3977397832417278`*^{22}(4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^3}-\frac{6.98869891620864`*^{21}(4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^3}+$$

$$\left.\frac{6.98869891620864`*^{21}\theta^2}{(4\pi\theta-\theta^2)^3}+\frac{2.32956630540288`*^{21}}{(4\pi\theta-\theta^2)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}(4\pi-2\theta)\theta^2}{(4\pi\theta-\theta^2)^2}+\right.$$

$$\frac{3.235508757504`*^{18}(4\pi-2\theta)(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{20}\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}(4\pi-\theta)\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{20}\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}(4\pi-\theta)\theta^3}{4\pi\theta-\theta^2}\right)^{3/2}\right)+$$

$$\left(-\frac{6.437731400921446`*^{23}(4\pi-2\theta)^7\theta^2}{(4\pi\theta-\theta^2)^8}+\right.$$

$$\frac{1.630696413782016`*^{22}(4\pi-2\theta)^7(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^8}+$$

$$\frac{1.2875462801842892`*^{24}(4\pi-2\theta)^6\theta}{(4\pi\theta-\theta^2)^7}-$$

$$\frac{3.862638840552868`*^{24}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{4.892089241346047`*^{22}\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}+$$

$$\frac{1.630696413782016`*^{22}\,(4\,\pi-2\,\theta)^6\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}+$$

$$\frac{9.784178482692096`*^{22}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{6.437731400921446`*^{23}\,(4\,\pi-2\,\theta)^5}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.437731400921448`*^{24}\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{4.892089241346048`*^{22}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{6.437731400921447`*^{24}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{4.892089241346048`*^{22}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.4460446206730243`*^{23}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{8.15348206891008`*^{22}\,(4\,\pi-2\,\theta)^4\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{1.630696413782016`*^{23}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.5750925603685784`*^{24}\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.630696413782016`*^{22}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{7.725277681105736`*^{24}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{4.892089241346048`*^{22}\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{\text{1.956835696538419`*^23}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{\text{2.5750925603685784`*^24}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{\text{1.956835696538419`*^23}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{\text{2.9352535448076287`*^23}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{\text{9.784178482692096`*^22}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{\text{6.522785655128064`*^22}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{\text{1.9313194202764338`*^24}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{1.6306964137820157`*^22}\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{4.892089241346048`*^22}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{1.2875462801842892`*^24}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{\text{1.467626772403814`*^23}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{1.4676267724038144`*^23}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{1.4676267724038142`*^23}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{4.892089241346048`*^22}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{\text{1.6306964137820157`*^22}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{3.2613928275640314`*^22}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\left.\frac{\text{1.630696413782016`*^22}\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{\text{4.892089241346048`*^22}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}\right)\Big/$$

$$\left(2\,\sqrt{\frac{\text{1.2773276589129854`*^20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}}\right),\theta\Big]$$

$$\text{Simplify}\Big[-\Bigg(135\,135\,\Bigg(-\frac{\text{1.2773276589129854`*^20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^8\right)\Bigg/$$

$$\left(256\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{15/2}\right)+$$

$$\left(72\,765\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^6\right)\Bigg/$$

$$\left(32\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{13/2}\right)-$$

$$\left(99\,225\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\grave{}*\hat{}20\ (4\,\pi-2\,\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\hat{}20\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\grave{}*\hat{}19\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\grave{}*\hat{}18\ (4\,\pi-2\,\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008\grave{}*\hat{}18\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708\grave{}*\hat{}20}{4\,\pi\,\theta-\theta^2}-\frac{1.9413052545024\grave{}*\hat{}19\ (4\,\pi-\theta)\ \theta}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024\grave{}*\hat{}19\ \theta^2}{4\,\pi\,\theta-\theta^2}\right)^2\ \left(-\frac{1.2773276589129854\grave{}*\hat{}20\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504\grave{}*\hat{}18\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\hat{}20\ \theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\grave{}*\hat{}18\ (4\,\pi-\theta)\ \theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\grave{}*\hat{}18\ \theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(32\ \left(\frac{1.2773276589129854\grave{}*\hat{}20\ \theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*\hat{}18\ (4\,\pi-\theta)\ \theta^3}{4\,\pi\,\theta-\theta^2}\right)^{11/2}\right)-$$

$$\left(6615\ \left(-\frac{7.663965953477913\grave{}*\hat{}20\ (4\,\pi-2\,\theta)^3\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024\grave{}*\hat{}19\ (4\,\pi-2\,\theta)^3\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826\grave{}*\hat{}21\ (4\,\pi-2\,\theta)^2\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826\grave{}*\hat{}21\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072\grave{}*\hat{}19\ (4\,\pi-2\,\theta)^2\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024\grave{}*\hat{}19\ (4\,\pi-2\,\theta)^2\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\grave{}*\hat{}19\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{7.663965953477913\grave{}*\hat{}20\ (4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.5327931906955826\grave{}*\hat{}21\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{5.8239157635072\grave{}*\hat{}19\ (4\,\pi-2\,\theta)\ (4\,\pi-\theta)\ \theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072\grave{}*\hat{}19\ (4\,\pi-2\,\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072\grave{}*\hat{}19\ (4\,\pi-\theta)\ \theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^5\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{11/2}\right)+$$

$$\left(11\,025\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^3\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(8\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)+$$

$$\left(3675\left(-\frac{7.663965953477913`*^{20}(4\pi-2\theta)^3\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.9413052545024`*^{19}(4\pi-2\theta)^3(4\pi-\theta)\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.5327931906955826`*^{21}(4\pi-2\theta)^2\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}(4\pi-2\theta)\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.8239157635072`*^{19}(4\pi-2\theta)^2(4\pi-\theta)\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.9413052545024`*^{19}(4\pi-2\theta)^2\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+\frac{3.8826105090048`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.663965953477913`*^{20}(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^{21}\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{5.8239157635072`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}(4\pi-2\theta)\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}(4\pi-\theta)\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^{19}\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}(4\pi-\theta)}{4\pi\theta-\theta^2}+\frac{5.8239157635072`*^{19}\theta}{4\pi\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{20}(4\pi-2\theta)^2\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.471017515008`*^{18}(4\pi-2\theta)^2(4\pi-\theta)\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{5.1093106356519417`*^{20}(4\pi-2\theta)\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.9413052545024`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}(4\pi-2\theta)\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{18}(4\pi-\theta)\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}(4\pi-\theta)\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{19}\theta^2}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{9/2}\right)+$$

$$\left(3675\left(\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{21}\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{21}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{22}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{20}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{20}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{19}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\text{`*\textasciicircum}21}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096\text{`*\textasciicircum}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288\text{`*\textasciicircum}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{2.32956630540288\text{`*\textasciicircum}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288\text{`*\textasciicircum}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{7.7652210180096\text{`*\textasciicircum}19}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854\text{`*\textasciicircum}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504\text{`*\textasciicircum}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*\textasciicircum}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\text{`*\textasciicircum}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\text{`*\textasciicircum}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854\text{`*\textasciicircum}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\text{`*\textasciicircum}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{9/2}\right)-$$

$$\left(1575\left(\frac{2.5546553178259708\text{`*\textasciicircum}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.\right.$$

$$\frac{6.471017515008\text{`*\textasciicircum}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\text{`*\textasciicircum}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*\textasciicircum}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\text{`*\textasciicircum}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`*\textasciicircum}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008\text{`*\textasciicircum}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\text{`*\textasciicircum}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024\text{`*\textasciicircum}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024\text{`*\textasciicircum}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)^4\right)\Big/$$

$$\left(16\left(\frac{1.2773276589129854\text{`*\textasciicircum}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\text{`*\textasciicircum}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(1575\left(-\frac{7.663965953477913`*^{20}(4\pi-2\theta)^3\theta^2}{(4\pi\theta-\theta^2)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}(4\pi-2\theta)^3(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^4}+$$

$$\frac{1.5327931906955826`*^{21}(4\pi-2\theta)^2\theta}{(4\pi\theta-\theta^2)^3}-\frac{1.5327931906955826`*^{21}(4\pi-2\theta)\theta^2}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{5.8239157635072`*^{19}(4\pi-2\theta)^2(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{1.9413052545024`*^{19}(4\pi-2\theta)^2\theta^3}{(4\pi\theta-\theta^2)^3}+$$

$$\frac{3.8826105090048`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^3}-\frac{7.663965953477913`*^{20}(4\pi-2\theta)}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{1.5327931906955826`*^{21}\theta}{(4\pi\theta-\theta^2)^2}+\frac{5.8239157635072`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{5.8239157635072`*^{19}(4\pi-2\theta)\theta^2}{(4\pi\theta-\theta^2)^2}-\frac{5.8239157635072`*^{19}(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{1.9413052545024`*^{19}\theta^3}{(4\pi\theta-\theta^2)^2}-\frac{1.9413052545024`*^{19}(4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\theta}{4\pi\theta-\theta^2}\right)\left(\frac{2.5546553178259708`*^{20}(4\pi-2\theta)^2\theta^2}{(4\pi\theta-\theta^2)^3}-\right.$$

$$\frac{6.471017515008`*^{18}(4\pi-2\theta)^2(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^3}-$$

$$\frac{5.1093106356519417`*^{20}(4\pi-2\theta)\theta}{(4\pi\theta-\theta^2)^2}+\frac{2.5546553178259708`*^{20}\theta^2}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{1.9413052545024`*^{19}(4\pi-2\theta)(4\pi-\theta)\theta^2}{(4\pi\theta-\theta^2)^2}-$$

$$\frac{6.471017515008`*^{18}(4\pi-2\theta)\theta^3}{(4\pi\theta-\theta^2)^2}-\frac{6.471017515008`*^{18}(4\pi-\theta)\theta^3}{(4\pi\theta-\theta^2)^2}+$$

$$\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-\frac{1.9413052545024`*^{19}(4\pi-\theta)\theta}{4\pi\theta-\theta^2}+$$

$$\left.\frac{1.9413052545024`*^{19}\theta^2}{4\pi\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20}(4\pi-2\theta)\theta^2}{(4\pi\theta-\theta^2)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta-\theta^2}\right)\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(525\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^2\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.5327931906955826`*^{21}\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072`*^{19}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-\frac{5.8239157635072`*^{19}\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-\frac{1.9413052545024`*^{19}\,(4\pi-\theta)}{4\pi\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{19}\,\theta}{4\pi\theta-\theta^2}\right)^2\left(-\frac{1.2773276589129854`*^{20}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(2\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{7/2}\right)-$$

$$\left(1575\left(\frac{3.065586381391165`*^21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^21\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^20\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^20\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^19\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{\text{2.32956630540288`*^20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{2.32956630540288`*^20}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{2.32956630540288`*^20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{7.7652210180096`*^19}}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(\frac{\text{2.5546553178259708`*^20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.1093106356519417`*^20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{\text{1.9413052545024`*^19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\Bigg)$$

$$\Bigg(-\frac{\text{1.2773276589129854`*^20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{3.235508757504`*^18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\frac{\text{9.706526272512`*^18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{\text{3.235508757504`*^18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\Bigg)^2\Bigg)\Bigg/$$

$$\left(4\left(\frac{\text{1.2773276589129854`*^20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)-$$

$$\Bigg(105\,\Bigg(-\frac{\text{1.5327931906955825`*^22}\,(4\,\pi-2\,\theta)^5\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{\text{3.8826105090048`*^20}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{\text{3.065586381391165`*^22}\,(4\,\pi-2\,\theta)^4\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{\text{6.13117276278233`*^22}\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)^4\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{3.8826105090048`*^{\wedge}20\ (4\pi-2\theta)^4\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{1.55304420360192`*^{\wedge}21\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.5327931906955825`*^{\wedge}22\ (4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496`*^{\wedge}22\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748`*^{\wedge}22\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432`*^{\wedge}21\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165`*^{\wedge}22\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\ (4\pi-2\theta)^2\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{\wedge}22\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.16478315270144`*^{\wedge}21\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288`*^{\wedge}21\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}21\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478315270144`*^{\wedge}21\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048`*^{\wedge}20\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048`*^{\wedge}20\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048`*^{\wedge}20\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478315270144`*^{\wedge}21\ \theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854\grave{}*\hat{}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504\grave{}*\hat{}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\hat{}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512\grave{}*\hat{}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504\grave{}*\hat{}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^3\right)\Big/$$

$$\left(2\left(\frac{1.2773276589129854\grave{}*\hat{}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504\grave{}*\hat{}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{7/2}\right)+$$

$$\left(105\left(-\frac{7.663965953477913\grave{}*\hat{}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.\right.$$

$$\frac{1.9413052545024\grave{}*\hat{}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826\grave{}*\hat{}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{1.5327931906955826\grave{}*\hat{}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072\grave{}*\hat{}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024\grave{}*\hat{}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\grave{}*\hat{}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913\grave{}*\hat{}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.5327931906955826\grave{}*\hat{}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072\grave{}*\hat{}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072\grave{}*\hat{}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072\grave{}*\hat{}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024\grave{}*\hat{}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{1.9413052545024\grave{}*\hat{}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+$$

$$\left.\frac{5.8239157635072`*^{\wedge}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)^2\left(\frac{2.5546553178259708`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}+$$

$$\left(315\left(\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{\wedge}21\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{\wedge}21\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{\wedge}19\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{\wedge}21\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{20}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{20}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{19}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{20}\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(\frac{2.5546553178259708`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{18}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{1.9413052545024`*^{19}\,(4\pi-\theta)\,\theta}{4\pi\theta-\theta^2}+\frac{1.9413052545024`*^{19}\,\theta^2}{4\pi\theta-\theta^2}\right)^2\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)+$$

$$\left(105\left(\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^{21}\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^{21}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^{21}\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^{22}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{20}\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^{20}\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^{19}\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^{21}}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{20}\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}-\frac{2.32956630540288`*^{20}\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\left.\frac{2.32956630540288`*^{20}\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^{19}}{4\pi\theta-\theta^2}\right)$$

$$\left(-\frac{7.663965953477913`*^{20}\,(4\pi-2\theta)^3\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.9413052545024`*^{19}\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)^2\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.5327931906955826`*^{21}\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072`*^{19} (4\pi - 2\theta)^2 (4\pi - \theta)\,\theta^2}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{1.9413052545024`*^{19} (4\pi - 2\theta)^2 \theta^3}{(4\pi\theta - \theta^2)^3} +$$

$$\frac{3.8826105090048`*^{19} (4\pi - 2\theta) (4\pi - \theta)\,\theta^3}{(4\pi\theta - \theta^2)^3} - \frac{7.663965953477913`*^{20} (4\pi - 2\theta)}{(4\pi\theta - \theta^2)^2} +$$

$$\frac{1.5327931906955826`*^{21}\,\theta}{(4\pi\theta - \theta^2)^2} + \frac{5.8239157635072`*^{19} (4\pi - 2\theta) (4\pi - \theta)\,\theta}{(4\pi\theta - \theta^2)^2} -$$

$$\frac{5.8239157635072`*^{19} (4\pi - 2\theta)\,\theta^2}{(4\pi\theta - \theta^2)^2} - \frac{5.8239157635072`*^{19} (4\pi - \theta)\,\theta^2}{(4\pi\theta - \theta^2)^2} +$$

$$\frac{1.9413052545024`*^{19}\,\theta^3}{(4\pi\theta - \theta^2)^2} - \frac{1.9413052545024`*^{19} (4\pi - \theta)}{4\pi\theta - \theta^2} +$$

$$\left.\frac{5.8239157635072`*^{19}\,\theta}{4\pi\theta - \theta^2}\right) \left(-\frac{1.2773276589129854`*^{20} (4\pi - 2\theta)\,\theta^2}{(4\pi\theta - \theta^2)^2} +\right.$$

$$\frac{3.235508757504`*^{18} (4\pi - 2\theta) (4\pi - \theta)\,\theta^3}{(4\pi\theta - \theta^2)^2} + \frac{2.5546553178259708`*^{20}\,\theta}{4\pi\theta - \theta^2} -$$

$$\left.\left.\frac{9.706526272512`*^{18} (4\pi - \theta)\,\theta^2}{4\pi\theta - \theta^2} + \frac{3.235508757504`*^{18}\,\theta^3}{4\pi\theta - \theta^2}\right)\right) \Big/$$

$$\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\pi\theta - \theta^2} - \frac{3.235508757504`*^{18} (4\pi - \theta)\,\theta^3}{4\pi\theta - \theta^2}\right)^{5/2} +$$

$$\left(63 \left(-\frac{1.5327931906955825`*^{22} (4\pi - 2\theta)^5 \theta^2}{(4\pi\theta - \theta^2)^6} +\right.\right.$$

$$\frac{3.8826105090048`*^{20} (4\pi - 2\theta)^5 (4\pi - \theta)\,\theta^3}{(4\pi\theta - \theta^2)^6} +$$

$$\frac{3.065586381391165`*^{22} (4\pi - 2\theta)^4 \theta}{(4\pi\theta - \theta^2)^5} - \frac{6.13117276278233`*^{22} (4\pi - 2\theta)^3 \theta^2}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{1.16478315270144`*^{21} (4\pi - 2\theta)^4 (4\pi - \theta)\,\theta^2}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{3.8826105090048`*^{20} (4\pi - 2\theta)^4 \theta^3}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{1.55304420360192`*^{21} (4\pi - 2\theta)^3 (4\pi - \theta)\,\theta^3}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{1.5327931906955825\grave{}*\wedge 22\ (4\pi-2\theta)^3}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173496\grave{}*\wedge 22\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-2\theta)^3\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{4.598379572086748\grave{}*\wedge 22\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-2\theta)^3\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.49434945810432\grave{}*\wedge 21\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-2\theta)^2\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.065586381391165\grave{}*\wedge 22\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\wedge 20\ (4\pi-2\theta)^2\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\grave{}*\wedge 22\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-2\theta)^2\ \theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288\grave{}*\wedge 21\ (4\pi-2\theta)\ (4\pi-\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\grave{}*\wedge 21\ (4\pi-2\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.16478315270144\grave{}*\wedge 21\ (4\pi-\theta)\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\grave{}*\wedge 20\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{3.8826105090048\grave{}*\wedge 20\ (4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048\grave{}*\wedge 20\ (4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}+\frac{1.16478315270144\grave{}*\wedge 21\ \theta}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(\frac{2.5546553178259708\grave{}*\wedge 20\ (4\pi-2\theta)^2\ \theta^2}{\left(4\pi\theta-\theta^2\right)^3}-\right.$$

$$\frac{6.471017515008\grave{}*\wedge 18\ (4\pi-2\theta)^2\ (4\pi-\theta)\ \theta^3}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{5.1093106356519417\grave{}*\wedge 20\ (4\pi-2\theta)\ \theta}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708\grave{}*\wedge 20\ \theta^2}{\left(4\pi\theta-\theta^2\right)^2}+$$

$$\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{6.471017515008`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\frac{1.9413052545024`*^{\wedge}19\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{1.9413052545024`*^{\wedge}19\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{\wedge}20\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{\wedge}18\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{5/2}+$$

$$\left(21\left(\frac{9.196759144173494`*^{\wedge}22\,(4\,\pi-2\,\theta)^6\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-\right.\right.$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{1.839351828834699`*^{\wedge}23\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{4.598379572086748`*^{\wedge}23\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.988698916208639`*^{\wedge}21\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\,\pi-2\,\theta)^5\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.16478315270144`*^{\wedge}22\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{9.196759144173494`*^{\wedge}22\,(4\,\pi-2\,\theta)^4}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.357407315338796`*^{\wedge}23\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.98869891620864`*^{\wedge}21\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.518055486504097`*^{\wedge}23\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+\frac{6.98869891620864`*^{\wedge}21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{2.795479566483456`*^{\wedge}22\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{9.31826522161152`*^{\wedge}21\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.397739783241728`*^{\wedge}22\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{2.7590277432520485`*^{\wedge}23\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{\wedge}21\,(4\pi-2\theta)^3\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{5.518055486504097`*^{\wedge}23\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-\frac{6.988698916208639`*^{\wedge}21\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.096609674862592`*^{\wedge}22\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{9.196759144173496`*^{\wedge}22\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{2.096609674862592`*^{\wedge}22\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.096609674862592`*^{\wedge}22\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{6.988698916208639`*^{\wedge}21\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-\frac{2.32956630540288`*^{\wedge}21\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{9.196759144173494`*^{\wedge}22}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^{\wedge}21\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.3977397832417278`*^{\wedge}22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-\frac{6.98869891620864`*^{\wedge}21\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\left.\frac{6.98869891620864`*^{\wedge}21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^{\wedge}21}{\left(4\pi\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{1.2773276589129854`*^{\wedge}20\,(4\pi-2\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^18\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^20\,\theta}{4\pi\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^18\,(4\pi-\theta)\,\theta^2}{4\pi\theta-\theta^2}+\frac{3.235508757504`*^18\,\theta^3}{4\pi\theta-\theta^2}\right)^2\right)\Bigg/$$

$$\left(2\left(\frac{1.2773276589129854`*^20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504`*^18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}\right)^{5/2}\right)-$$

$$\left(35\left(\frac{3.065586381391165`*^21\,(4\pi-2\theta)^4\,\theta^2}{\left(4\pi\theta-\theta^2\right)^5}-\right.\right.$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^4\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{6.13117276278233`*^21\,(4\pi-2\theta)^3\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+\frac{9.196759144173495`*^21\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^3\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{7.7652210180096`*^19\,(4\pi-2\theta)^3\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.065586381391165`*^21\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^3}-\frac{1.226234552556466`*^22\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+\frac{2.32956630540288`*^20\,(4\pi-2\theta)^2\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{4.65913261080576`*^20\,(4\pi-2\theta)\,(4\pi-\theta)\,\theta^2}{\left(4\pi\theta-\theta^2\right)^3}-$$

$$\frac{1.55304420360192`*^20\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}-\frac{7.7652210180096`*^19\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165`*^21}{\left(4\pi\theta-\theta^2\right)^2}+\frac{7.7652210180096`*^19\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^2}-$$

$$\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}-\frac{2.32956630540288`*^{\wedge}20\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+$$

$$\left.\left.\frac{2.32956630540288`*^{\wedge}20\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{2}}+\frac{7.7652210180096`*^{\wedge}19}{4\,\pi\,\theta-\theta^{2}}\right)^{2}\right)\Big/$$

$$\left(4\left(\frac{1.2773276589129854`*^{\wedge}20\,\theta^{2}}{4\,\pi\,\theta-\theta^{2}}-\frac{3.235508757504`*^{\wedge}18\,(4\,\pi-\theta)\,\theta^{3}}{4\,\pi\,\theta-\theta^{2}}\right)^{3/2}\right)-$$

$$\left(14\left(-\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^{5}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{6}}+\right.\right.$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^{5}\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{6}}+$$

$$\frac{3.065586381391165`*^{\wedge}22\,(4\,\pi-2\,\theta)^{4}\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{5}}-\frac{6.13117276278233`*^{\wedge}22\,(4\,\pi-2\,\theta)^{3}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{5}}-$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^{4}\,(4\,\pi-\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{5}}+$$

$$\frac{3.8826105090048`*^{\wedge}20\,(4\,\pi-2\,\theta)^{4}\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{5}}+$$

$$\frac{1.55304420360192`*^{\wedge}21\,(4\,\pi-2\,\theta)^{3}\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{5}}-$$

$$\frac{1.5327931906955825`*^{\wedge}22\,(4\,\pi-2\,\theta)^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+\frac{9.196759144173496`*^{\wedge}22\,(4\,\pi-2\,\theta)^{2}\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^{3}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-$$

$$\frac{4.598379572086748`*^{\wedge}22\,(4\,\pi-2\,\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^{3}\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-$$

$$\frac{3.49434945810432`*^{\wedge}21\,(4\,\pi-2\,\theta)^{2}\,(4\,\pi-\theta)\,\theta^{2}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)^{2}\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}+$$

$$\frac{1.16478315270144`*^{\wedge}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^{3}}{\left(4\,\pi\,\theta-\theta^{2}\right)^{4}}-$$

$$\frac{3.065586381391165\text{`}*\text{^}22\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\text{`}*\text{^}20\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.065586381391165\text{`}*\text{^}22\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{1.16478315270144\text{`}*\text{^}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{2.32956630540288\text{`}*\text{^}21\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{2.32956630540288\text{`}*\text{^}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.16478315270144\text{`}*\text{^}21\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\text{`}*\text{^}20\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{3.8826105090048\text{`}*\text{^}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\frac{3.8826105090048\text{`}*\text{^}20\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.16478315270144\text{`}*\text{^}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(-\frac{7.663965953477913\text{`}*\text{^}20\,(4\,\pi-2\,\theta)^3\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\right.$$

$$\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.5327931906955826\text{`}*\text{^}21\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{1.5327931906955826\text{`}*\text{^}21\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{5.8239157635072\text{`}*\text{^}19\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{3.8826105090048\text{`}*\text{^}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{7.663965953477913\text{`}*\text{^}20\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.5327931906955826\text{`}*\text{^}21\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{5.8239157635072\text{`}*\text{^}19\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{5.8239157635072\text{`}*\text{^}19\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{5.8239157635072\text{`}*\text{^}19\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{1.9413052545024\text{`}*\text{^}19\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\left.\left.\frac{1.9413052545024\text{`}*\text{^}19\,(4\,\pi-\theta)}{4\,\pi\,\theta-\theta^2}+\frac{5.8239157635072\text{`}*\text{^}19\,\theta}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}-$$

$$\left(7\left(\frac{9.196759144173494`*^{22}\,(4\,\pi-2\,\theta)^6\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^7}-\right.\right.$$

$$\frac{2.32956630540288`*^{21}\,(4\,\pi-2\,\theta)^6\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^7}-$$

$$\frac{1.839351828834699`*^{23}\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+\frac{4.598379572086748`*^{23}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{6.988698916208639`*^{21}\,(4\,\pi-2\,\theta)^5\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{2.32956630540288`*^{21}\,(4\,\pi-2\,\theta)^5\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.16478315270144`*^{22}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{9.196759144173494`*^{22}\,(4\,\pi-2\,\theta)^4}{\left(4\,\pi\,\theta-\theta^2\right)^5}-\frac{7.357407315338796`*^{23}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{6.98869891620864`*^{21}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.518055486504097`*^{23}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+\frac{6.98869891620864`*^{21}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{2.795479566483456`*^{22}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{9.31826522161152`*^{21}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.397739783241728`*^{22}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{2.7590277432520485`*^{23}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{2.32956630540288`*^{21}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{5.518055486504097`*^{23}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{6.988698916208639`*^{21}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{2.096609674862592`*^22}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{9.196759144173496`*^22}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{\text{2.096609674862592`*^22}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{2.096609674862592`*^22}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{\text{6.988698916208639`*^21}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{\text{2.32956630540288`*^21}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{\text{9.196759144173494`*^22}}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{\text{2.32956630540288`*^21}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\frac{\text{4.65913261080576`*^21}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{1.3977397832417278`*^22}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\frac{\text{6.98869891620864`*^21}\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}+$$

$$\left.\frac{\text{6.98869891620864`*^21}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{\text{2.32956630540288`*^21}}{\left(4\,\pi\,\theta-\theta^2\right)^2}\right)$$

$$\left(\frac{\text{2.5546553178259708`*^20}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^3}-\right.$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\frac{\text{5.1093106356519417`*^20}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+$$

$$\frac{\text{1.9413052545024`*^19}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}-\frac{\text{6.471017515008`*^18}\,(4\,\pi-2\,\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}-$$

$$\frac{\text{6.471017515008`*^18}\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{\text{2.5546553178259708`*^20}}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{\text{1.9413052545024`*^19}\,(4\,\pi-\theta)\,\theta}{4\,\pi\,\theta-\theta^2}+\frac{\text{1.9413052545024`*^19}\,\theta^2}{4\,\pi\,\theta-\theta^2}\right)\right)\Big/$$

$$\left(\frac{\text{1.2773276589129854`*^20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{\text{3.235508757504`*^18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}-$$

$$\left(2\left(-\frac{\text{6.437731400921446`*^23}\,(4\,\pi-2\,\theta)^7\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^8}+\right.\right.$$

$$\frac{1.630696413782016`*^22 (4\pi - 2\theta)^7 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^8} +$$

$$\frac{1.2875462801842892`*^24 (4\pi - 2\theta)^6 \theta}{(4\pi\theta - \theta^2)^7} - \frac{3.862638840552868`*^24 (4\pi - 2\theta)^5 \theta^2}{(4\pi\theta - \theta^2)^7} -$$

$$\frac{4.892089241346047`*^22 (4\pi - 2\theta)^6 (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^7} +$$

$$\frac{1.630696413782016`*^22 (4\pi - 2\theta)^6 \theta^3}{(4\pi\theta - \theta^2)^7} +$$

$$\frac{9.784178482692096`*^22 (4\pi - 2\theta)^5 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^7} -$$

$$\frac{6.437731400921446`*^23 (4\pi - 2\theta)^5}{(4\pi\theta - \theta^2)^6} + \frac{6.437731400921448`*^24 (4\pi - 2\theta)^4 \theta}{(4\pi\theta - \theta^2)^6} +$$

$$\frac{4.892089241346048`*^22 (4\pi - 2\theta)^5 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^6} -$$

$$\frac{6.437731400921447`*^24 (4\pi - 2\theta)^3 \theta^2}{(4\pi\theta - \theta^2)^6} - \frac{4.892089241346048`*^22 (4\pi - 2\theta)^5 \theta^2}{(4\pi\theta - \theta^2)^6} -$$

$$\frac{2.4460446206730243`*^23 (4\pi - 2\theta)^4 (4\pi - \theta)\theta^2}{(4\pi\theta - \theta^2)^6} +$$

$$\frac{8.15348206891008`*^22 (4\pi - 2\theta)^4 \theta^3}{(4\pi\theta - \theta^2)^6} +$$

$$\frac{1.630696413782016`*^23 (4\pi - 2\theta)^3 (4\pi - \theta)\theta^3}{(4\pi\theta - \theta^2)^6} -$$

$$\frac{2.5750925603685784`*^24 (4\pi - 2\theta)^3}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{1.630696413782016`*^22 (4\pi - 2\theta)^4 (4\pi - \theta)}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{7.725277681105736`*^24 (4\pi - 2\theta)^2 \theta}{(4\pi\theta - \theta^2)^5} + \frac{4.892089241346048`*^22 (4\pi - 2\theta)^4 \theta}{(4\pi\theta - \theta^2)^5} +$$

$$\frac{1.956835696538419`*^23 (4\pi - 2\theta)^3 (4\pi - \theta)\theta}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{2.5750925603685784`*^24 (4\pi - 2\theta)\theta^2}{(4\pi\theta - \theta^2)^5} - \frac{1.956835696538419`*^23 (4\pi - 2\theta)^3 \theta^2}{(4\pi\theta - \theta^2)^5} -$$

$$\frac{2.9352535448076287`*^{23}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{9.784178482692096`*^{22}\,(4\,\pi-2\,\theta)^2\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{6.522785655128064`*^{22}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.9313194202764338`*^{24}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{1.6306964137820157`*^{22}\,(4\,\pi-2\,\theta)^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{4.892089241346048`*^{22}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.2875462801842892`*^{24}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+\frac{1.467626772403814`*^{23}\,(4\,\pi-2\,\theta)^2\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.4676267724038144`*^{23}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^4}-$$

$$\frac{1.4676267724038142`*^{23}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{4.892089241346048`*^{22}\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^4}+$$

$$\frac{1.6306964137820157`*^{22}\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^4}-\frac{3.2613928275640314`*^{22}\,(4\,\pi-2\,\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}-$$

$$\left.\frac{1.630696413782016`*^{22}\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^3}+\frac{4.892089241346048`*^{22}\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^3}\right)$$

$$\left(-\frac{1.2773276589129854`*^{20}\,(4\,\pi-2\,\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\right.$$

$$\frac{3.235508757504`*^{18}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^2}+\frac{2.5546553178259708`*^{20}\,\theta}{4\,\pi\,\theta-\theta^2}-$$

$$\left.\left.\frac{9.706526272512`*^{18}\,(4\,\pi-\theta)\,\theta^2}{4\,\pi\,\theta-\theta^2}+\frac{3.235508757504`*^{18}\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)\right)\bigg/$$

$$\left(\frac{1.2773276589129854`*^{20}\,\theta^2}{4\,\pi\,\theta-\theta^2}-\frac{3.235508757504`*^{18}\,(4\,\pi-\theta)\,\theta^3}{4\,\pi\,\theta-\theta^2}\right)^{3/2}+$$

$$\left(\frac{5.150185120737157`*^{24}\,(4\,\pi-2\,\theta)^8\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^9}-\right.$$

$$\frac{1.3045571310256129`*^{23}\,(4\,\pi-2\,\theta)^8\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^9}-$$

$$\frac{1.0300370241474314`*^{25} (4\pi - 2\theta)^7 \theta}{\left(4\pi\theta - \theta^2\right)^8} +$$

$$\frac{3.60512958451601`*^{25} (4\pi - 2\theta)^6 \theta^2}{\left(4\pi\theta - \theta^2\right)^8} +$$

$$\frac{3.913671393076838`*^{23} (4\pi - 2\theta)^7 (4\pi - \theta) \theta^2}{\left(4\pi\theta - \theta^2\right)^8} -$$

$$\frac{1.3045571310256129`*^{23} (4\pi - 2\theta)^7 \theta^3}{\left(4\pi\theta - \theta^2\right)^8} -$$

$$\frac{9.131899917179289`*^{23} (4\pi - 2\theta)^6 (4\pi - \theta) \theta^3}{\left(4\pi\theta - \theta^2\right)^8} +$$

$$\frac{5.150185120737157`*^{24} (4\pi - 2\theta)^6}{\left(4\pi\theta - \theta^2\right)^7} -$$

$$\frac{6.180222144884589`*^{25} (4\pi - 2\theta)^5 \theta}{\left(4\pi\theta - \theta^2\right)^7} -$$

$$\frac{3.913671393076838`*^{23} (4\pi - 2\theta)^6 (4\pi - \theta) \theta}{\left(4\pi\theta - \theta^2\right)^7} +$$

$$\frac{7.725277681105736`*^{25} (4\pi - 2\theta)^4 \theta^2}{\left(4\pi\theta - \theta^2\right)^7} +$$

$$\frac{3.913671393076838`*^{23} (4\pi - 2\theta)^6 \theta^2}{\left(4\pi\theta - \theta^2\right)^7} +$$

$$\frac{2.348202835846103`*^{24} (4\pi - 2\theta)^5 (4\pi - \theta) \theta^2}{\left(4\pi\theta - \theta^2\right)^7} -$$

$$\frac{7.827342786153677`*^{23} (4\pi - 2\theta)^5 \theta^3}{\left(4\pi\theta - \theta^2\right)^7} -$$

$$\frac{1.956835696538419`*^{24} (4\pi - 2\theta)^4 (4\pi - \theta) \theta^3}{\left(4\pi\theta - \theta^2\right)^7} +$$

$$\frac{2.5750925603685782`*^{25} (4\pi - 2\theta)^4}{\left(4\pi\theta - \theta^2\right)^6} +$$

$$\frac{1.3045571310256129`*^{23} (4\pi - 2\theta)^5 (4\pi - \theta)}{\left(4\pi\theta - \theta^2\right)^6} -$$

$$\frac{1.0300370241474316`*^{26} (4\pi - 2\theta)^3 \theta}{\left(4\pi\theta - \theta^2\right)^6} -$$

$$\frac{3.913671393076838`*^{23}\,(4\,\pi-2\,\theta)^5\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.9568356965384194`*^{24}\,(4\,\pi-2\,\theta)^4\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{5.150185120737157`*^{25}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{1.9568356965384192`*^{24}\,(4\,\pi-2\,\theta)^4\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.9136713930768383`*^{24}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.3045571310256127`*^{24}\,(4\,\pi-2\,\theta)^3\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}-$$

$$\frac{1.3045571310256127`*^{24}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta^3}{\left(4\,\pi\,\theta-\theta^2\right)^6}+$$

$$\frac{3.0901110724422945`*^{25}\,(4\,\pi-2\,\theta)^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.3045571310256127`*^{23}\,(4\,\pi-2\,\theta)^4}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.2182285241024515`*^{23}\,(4\,\pi-2\,\theta)^3\,(4\,\pi-\theta)}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{4.1201480965897255`*^{25}\,(4\,\pi-2\,\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{1.5654685572307353`*^{24}\,(4\,\pi-2\,\theta)^3\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{2.348202835846103`*^{24}\,(4\,\pi-2\,\theta)^2\,(4\,\pi-\theta)\,\theta}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{5.150185120737157`*^{24}\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{2.348202835846103`*^{24}\,(4\,\pi-2\,\theta)^2\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}+$$

$$\frac{1.5654685572307353`*^{24}\,(4\,\pi-2\,\theta)\,(4\,\pi-\theta)\,\theta^2}{\left(4\,\pi\,\theta-\theta^2\right)^5}-$$

$$\frac{5.2182285241024515\grave{}*\hat{}23\,(4\pi-2\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}-$$

$$\frac{1.3045571310256129\grave{}*\hat{}23\,(4\pi-\theta)\,\theta^3}{\left(4\pi\theta-\theta^2\right)^5}+$$

$$\frac{5.150185120737157\grave{}*\hat{}24}{\left(4\pi\theta-\theta^2\right)^4}+\frac{3.9136713930768376\grave{}*\hat{}23\,(4\pi-2\theta)^2}{\left(4\pi\theta-\theta^2\right)^4}+$$

$$\frac{3.913671393076838\grave{}*\hat{}23\,(4\pi-2\theta)\,(4\pi-\theta)}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{1.1741014179230512\grave{}*\hat{}24\,(4\pi-2\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}-$$

$$\frac{3.913671393076838\grave{}*\hat{}23\,(4\pi-\theta)\,\theta}{\left(4\pi\theta-\theta^2\right)^4}+$$

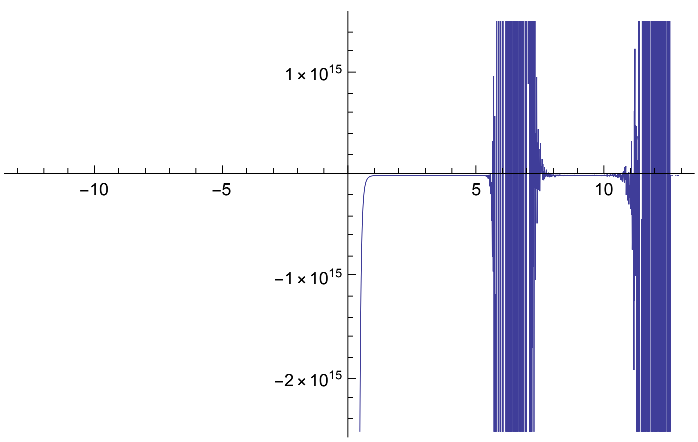
$$\left.\frac{3.913671393076838\grave{}*\hat{}23\,\theta^2}{\left(4\pi\theta-\theta^2\right)^4}+\frac{1.3045571310256127\grave{}*\hat{}23}{\left(4\pi\theta-\theta^2\right)^3}\right)\Big/$$

$$\left(2\sqrt{\frac{1.2773276589129854\grave{}*\hat{}20\,\theta^2}{4\pi\theta-\theta^2}-\frac{3.235508757504\grave{}*\hat{}18\,(4\pi-\theta)\,\theta^3}{4\pi\theta-\theta^2}}\right)]$$

$$\left(-1.72395\times10^{41}+6.19455\times10^{41}\,\theta-1.07157\times10^{42}\,\theta^2+1.18834\times10^{42}\,\theta^3-\right.$$
$$9.49099\times10^{41}\,\theta^4+5.81452\times10^{41}\,\theta^5-2.84161\times10^{41}\,\theta^6+1.13742\times10^{41}\,\theta^7-$$
$$3.79913\times10^{40}\,\theta^8+1.07334\times10^{40}\,\theta^9-2.59064\times10^{39}\,\theta^{10}+5.38068\times10^{38}\,\theta^{11}-$$
$$9.66543\times10^{37}\,\theta^{12}+1.50635\times10^{37}\,\theta^{13}-2.03957\times10^{36}\,\theta^{14}+2.39796\times10^{35}\,\theta^{15}-$$
$$2.44178\times10^{34}\,\theta^{16}+2.14222\times10^{33}\,\theta^{17}-1.60499\times10^{32}\,\theta^{18}+1.0121\times10^{31}\,\theta^{19}-$$
$$5.24014\times10^{29}\,\theta^{20}+2.12338\times10^{28}\,\theta^{21}-5.96777\times10^{26}\,\theta^{22}+6.0287\times10^{24}\,\theta^{23}+$$
$$4.31663\times10^{23}\,\theta^{24}-2.91795\times10^{22}\,\theta^{25}+9.78147\times10^{20}\,\theta^{26}-2.03604\times10^{19}\,\theta^{27}+$$
$$\left.2.5186\times10^{17}\,\theta^{28}-1.4316\times10^{15}\,\theta^{29}+1232.34\,\theta^{30}-6.40418\,\theta^{31}\right)\Big/$$

$$\left((-12.5664+\theta)^{16}\,(-6.28319+\theta)^7\,(-6.28319+\theta)^7\,\theta^7\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right)$$

```
Plot[
 (-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ - 1.0715733419821407`*^42 θ^2 +
    1.1883364566689056`*^42 θ^3 - 9.490987783531211`*^41 θ^4 +
    5.814515984234418`*^41 θ^5 - 2.841610189077518`*^41 θ^6 +
    1.1374222079829315`*^41 θ^7 - 3.7991255503643`*^40 θ^8 +
    1.073339972987572`*^40 θ^9 - 2.5906381973931337`*^39 θ^10 +
    5.3806768122609554`*^38 θ^11 - 9.66542766147963`*^37 θ^12 +
    1.5063504106448067`*^37 θ^13 - 2.0395706143447065`*^36 θ^14 +
    2.3979597145679737`*^35 θ^15 - 2.441779100246113`*^34 θ^16 +
    2.1422234658979708`*^33 θ^17 - 1.6049917252445308`*^32 θ^18 +
    1.012102378536468`*^31 θ^19 - 5.2401443148533675`*^29 θ^20 +
    2.1233801883418154`*^28 θ^21 - 5.9677657472719257`*^26 θ^22 +
    6.028703874008091`*^24 θ^23 + 4.316628659608773`*^23 θ^24 -
    2.9179524450579636`*^22 θ^25 + 9.781465694388629`*^20 θ^26 -
    2.036035192946051`*^19 θ^27 + 2.518601478855538`*^17 θ^28 -
    1.4315995537848782`*^15 θ^29 + 1232.3437759904039` θ^30 - 6.404175164653097` θ^31) /
  ((-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^7
    θ^7 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ)]), {θ, -13, 13}]
```



```
D[(-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ -
    1.0715733419821407`*^42 θ^2 + 1.1883364566689056`*^42 θ^3 -
    9.490987783531211`*^41 θ^4 + 5.814515984234418`*^41 θ^5 -
    2.841610189077518`*^41 θ^6 + 1.1374222079829315`*^41 θ^7 - 3.7991255503643`*^40 θ^8 +
    1.073339972987572`*^40 θ^9 - 2.5906381973931337`*^39 θ^10 +
    5.3806768122609554`*^38 θ^11 - 9.66542766147963`*^37 θ^12 +
    1.5063504106448067`*^37 θ^13 - 2.0395706143447065`*^36 θ^14 +
    2.3979597145679737`*^35 θ^15 - 2.441779100246113`*^34 θ^16 +
    2.1422234658979708`*^33 θ^17 - 1.6049917252445308`*^32 θ^18 +
    1.012102378536468`*^31 θ^19 - 5.2401443148533675`*^29 θ^20 +
    2.1233801883418154`*^28 θ^21 - 5.9677657472719257`*^26 θ^22 +
    6.028703874008091`*^24 θ^23 + 4.316628659608773`*^23 θ^24 -
    2.9179524450579636`*^22 θ^25 + 9.781465694388629`*^20 θ^26 -
    2.036035192946051`*^19 θ^27 + 2.518601478855538`*^17 θ^28 -
    1.4315995537848782`*^15 θ^29 + 1232.3437759904039` θ^30 - 6.404175164653097` θ^31) /
  ((-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^7
    θ^7 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/
      (12.566370614359172` - 1.` θ)]), θ]
```

$$
\Big(6.19455\times10^{41} - 2.14315\times10^{42}\,\theta + 3.56501\times10^{42}\,\theta^2 - 3.7964\times10^{42}\,\theta^3 + 2.90726\times10^{42}\,\theta^4 - 1.70497\times10^{42}\,\theta^5 + 7.96196\times10^{41}\,\theta^6 - 3.0393\times10^{41}\,\theta^7 + 9.66006\times10^{40}\,\theta^8 - 2.59064\times10^{40}\,\theta^9 + 5.91874\times10^{39}\,\theta^{10} - 1.15985\times10^{39}\,\theta^{11} + 1.95826\times10^{38}\,\theta^{12} - 2.8554\times10^{37}\,\theta^{13} + 3.59694\times10^{36}\,\theta^{14} - 3.90685\times10^{35}\,\theta^{15} + 3.64178\times10^{34}\,\theta^{16} - 2.88899\times10^{33}\,\theta^{17} + 1.92299\times10^{32}\,\theta^{18} - 1.04803\times10^{31}\,\theta^{19} + 4.4591\times10^{29}\,\theta^{20} - 1.31291\times10^{28}\,\theta^{21} + 1.3866\times10^{26}\,\theta^{22} + 1.03599\times10^{25}\,\theta^{23} - 7.29488\times10^{23}\,\theta^{24} + 2.54318\times10^{22}\,\theta^{25} - 5.4973\times10^{20}\,\theta^{26} + 7.05208\times10^{18}\,\theta^{27} - 4.15164\times10^{16}\,\theta^{28} + 36\,970.3\,\theta^{29} - 198.529\,\theta^{30}\Big) \Big/ \left((-12.5664+\theta)^{16}\,(-6.28319+\theta)^7\,(-6.28319+\theta)^7\,\theta^7\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right) -
$$

$$
\Big(7\,\big(-1.72395\times10^{41} + 6.19455\times10^{41}\,\theta - 1.07157\times10^{42}\,\theta^2 + 1.18834\times10^{42}\,\theta^3 - 9.49099\times10^{41}\,\theta^4 + 5.81452\times10^{41}\,\theta^5 - 2.84161\times10^{41}\,\theta^6 + 1.13742\times10^{41}\,\theta^7 - 3.79913\times10^{40}\,\theta^8 + 1.07334\times10^{40}\,\theta^9 - 2.59064\times10^{39}\,\theta^{10} + 5.38068\times10^{38}\,\theta^{11} - 9.66543\times10^{37}\,\theta^{12} + 1.50635\times10^{37}\,\theta^{13} - 2.03957\times10^{36}\,\theta^{14} + 2.39796\times10^{35}\,\theta^{15} - 2.44178\times10^{34}\,\theta^{16} + 2.14222\times10^{33}\,\theta^{17} - 1.60499\times10^{32}\,\theta^{18} + 1.0121\times10^{31}\,\theta^{19} - 5.24014\times10^{29}\,\theta^{20} + 2.12338\times10^{28}\,\theta^{21} - 5.96777\times10^{26}\,\theta^{22} + 6.0287\times10^{24}\,\theta^{23} + 4.31663\times10^{23}\,\theta^{24} - 2.91795\times10^{22}\,\theta^{25} + 9.78147\times10^{20}\,\theta^{26} - 2.03604\times10^{19}\,\theta^{27} + 2.5186\times10^{17}\,\theta^{28} - 1.4316\times10^{15}\,\theta^{29} + 1232.34\,\theta^{30} - 6.40418\,\theta^{31}\big)\Big) \Big/
$$

$$\left((-12.5664+\theta)^{16}\,(-6.28319+\theta)^{7}\,(-6.28319+\theta)^{7}\,\theta^{8}\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right)-$$

$$\left(7\,\left(-1.72395\times10^{41}+6.19455\times10^{41}\,\theta-1.07157\times10^{42}\,\theta^{2}+1.18834\times10^{42}\,\theta^{3}-9.49099\times10^{41}\,\theta^{4}+5.81452\times10^{41}\,\theta^{5}-2.84161\times10^{41}\,\theta^{6}+1.13742\times10^{41}\,\theta^{7}-3.79913\times10^{40}\,\theta^{8}+1.07334\times10^{40}\,\theta^{9}-2.59064\times10^{39}\,\theta^{10}+5.38068\times10^{38}\,\theta^{11}-9.66543\times10^{37}\,\theta^{12}+1.50635\times10^{37}\,\theta^{13}-2.03957\times10^{36}\,\theta^{14}+2.39796\times10^{35}\,\theta^{15}-2.44178\times10^{34}\,\theta^{16}+2.14222\times10^{33}\,\theta^{17}-1.60499\times10^{32}\,\theta^{18}+1.0121\times10^{31}\,\theta^{19}-5.24014\times10^{29}\,\theta^{20}+2.12338\times10^{28}\,\theta^{21}-5.96777\times10^{26}\,\theta^{22}+6.0287\times10^{24}\,\theta^{23}+4.31663\times10^{23}\,\theta^{24}-2.91795\times10^{22}\,\theta^{25}+9.78147\times10^{20}\,\theta^{26}-2.03604\times10^{19}\,\theta^{27}+2.5186\times10^{17}\,\theta^{28}-1.4316\times10^{15}\,\theta^{29}+1232.34\,\theta^{30}-6.40418\,\theta^{31}\right)\right)\Big/$$

$$\left((-12.5664+\theta)^{16}\,(-6.28319+\theta)^{7}\,(-6.28319+\theta)^{8}\,\theta^{7}\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right)-$$

$$\left(7\,\left(-1.72395\times10^{41}+6.19455\times10^{41}\,\theta-1.07157\times10^{42}\,\theta^{2}+1.18834\times10^{42}\,\theta^{3}-9.49099\times10^{41}\,\theta^{4}+5.81452\times10^{41}\,\theta^{5}-2.84161\times10^{41}\,\theta^{6}+1.13742\times10^{41}\,\theta^{7}-3.79913\times10^{40}\,\theta^{8}+1.07334\times10^{40}\,\theta^{9}-2.59064\times10^{39}\,\theta^{10}+5.38068\times10^{38}\,\theta^{11}-9.66543\times10^{37}\,\theta^{12}+1.50635\times10^{37}\,\theta^{13}-2.03957\times10^{36}\,\theta^{14}+2.39796\times10^{35}\,\theta^{15}-2.44178\times10^{34}\,\theta^{16}+2.14222\times10^{33}\,\theta^{17}-1.60499\times10^{32}\,\theta^{18}+1.0121\times10^{31}\,\theta^{19}-5.24014\times10^{29}\,\theta^{20}+2.12338\times10^{28}\,\theta^{21}-5.96777\times10^{26}\,\theta^{22}+6.0287\times10^{24}\,\theta^{23}+4.31663\times10^{23}\,\theta^{24}-2.91795\times10^{22}\,\theta^{25}+9.78147\times10^{20}\,\theta^{26}-2.03604\times10^{19}\,\theta^{27}+2.5186\times10^{17}\,\theta^{28}-1.4316\times10^{15}\,\theta^{29}+1232.34\,\theta^{30}-6.40418\,\theta^{31}\right)\right)\Big/$$

$$\left((-12.5664+\theta)^{16}\,(-6.28319+\theta)^{8}\,(-6.28319+\theta)^{7}\,\theta^{7}\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right)-$$

$$\left(16\,\left(-1.72395\times10^{41}+6.19455\times10^{41}\,\theta-1.07157\times10^{42}\,\theta^{2}+1.18834\times10^{42}\,\theta^{3}-9.49099\times10^{41}\,\theta^{4}+5.81452\times10^{41}\,\theta^{5}-2.84161\times10^{41}\,\theta^{6}+1.13742\times10^{41}\,\theta^{7}-3.79913\times10^{40}\,\theta^{8}+1.07334\times10^{40}\,\theta^{9}-2.59064\times10^{39}\,\theta^{10}+5.38068\times10^{38}\,\theta^{11}-9.66543\times10^{37}\,\theta^{12}+1.50635\times10^{37}\,\theta^{13}-2.03957\times10^{36}\,\theta^{14}+2.39796\times10^{35}\,\theta^{15}-2.44178\times10^{34}\,\theta^{16}+2.14222\times10^{33}\,\theta^{17}-1.60499\times10^{32}\,\theta^{18}+1.0121\times10^{31}\,\theta^{19}-5.24014\times10^{29}\,\theta^{20}+2.12338\times10^{28}\,\theta^{21}-5.96777\times10^{26}\,\theta^{22}+6.0287\times10^{24}\,\theta^{23}+4.31663\times10^{23}\,\theta^{24}-2.91795\times10^{22}\,\theta^{25}+9.78147\times10^{20}\,\theta^{26}-2.03604\times10^{19}\,\theta^{27}+2.5186\times10^{17}\,\theta^{28}-1.4316\times10^{15}\,\theta^{29}+1232.34\,\theta^{30}-6.40418\,\theta^{31}\right)\right)\Big/$$

$$\left((-12.5664+\theta)^{17}\,(-6.28319+\theta)^{7}\,(-6.28319+\theta)^{7}\,\theta^{7}\,\sqrt{\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}}\right)-$$

$$\left(\left(\frac{(-6.28319+\theta)\,(-6.28319+\theta)}{12.5664-1.\,\theta}+\frac{(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}+\frac{(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}+\frac{1.\,(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{(12.5664-1.\,\theta)^{2}}\right)\right.$$

$$\left(-1.72395\times10^{41}+6.19455\times10^{41}\,\theta-1.07157\times10^{42}\,\theta^{2}+1.18834\times10^{42}\,\theta^{3}-9.49099\times10^{41}\,\theta^{4}+5.81452\times10^{41}\,\theta^{5}-2.84161\times10^{41}\,\theta^{6}+1.13742\times10^{41}\,\theta^{7}-\right.$$

$$3.79913\times10^{40}\,\theta^{8}+1.07334\times10^{40}\,\theta^{9}-2.59064\times10^{39}\,\theta^{10}+5.38068\times10^{38}\,\theta^{11}-9.66543\times10^{37}\,\theta^{12}+1.50635\times10^{37}\,\theta^{13}-2.03957\times10^{36}\,\theta^{14}+2.39796\times10^{35}\,\theta^{15}-2.44178\times10^{34}\,\theta^{16}+2.14222\times10^{33}\,\theta^{17}-1.60499\times10^{32}\,\theta^{18}+1.0121\times10^{31}\,\theta^{19}-5.24014\times10^{29}\,\theta^{20}+2.12338\times10^{28}\,\theta^{21}-5.96777\times10^{26}\,\theta^{22}+6.0287\times10^{24}\,\theta^{23}+4.31663\times10^{23}\,\theta^{24}-2.91795\times10^{22}\,\theta^{25}+9.78147\times10^{20}\,\theta^{26}-2.03604\times10^{19}\,\theta^{27}+2.5186\times10^{17}\,\theta^{28}-1.4316\times10^{15}\,\theta^{29}+1232.34\,\theta^{30}-6.40418\,\theta^{31}\Big)\Bigg)\Big/$$

$$\left(2\,(-12.5664+\theta)^{16}\,(-6.28319+\theta)^{7}\,(-6.28319+\theta)^{7}\,\theta^{7}\left(\frac{(-6.28319+\theta)\,(-6.28319+\theta)\,\theta}{12.5664-1.\,\theta}\right)^{3/2}\right)$$

```
Plot[(6.19455209273797`*^41 - 2.1431466839642813`*^42 θ + 3.565009370006717`*^42 θ^2 -
    3.7963951134124844`*^42 θ^3 + 2.9072579921172094`*^42 θ^4 -
    1.704966113446511`*^42 θ^5 + 7.96195545588052`*^41 θ^6 - 3.03930044029144`*^41 θ^7 +
    9.660059756888149`*^40 θ^8 - 2.5906381973931335`*^40 θ^9 +
    5.91874449348705`*^39 θ^10 - 1.1598513193775556`*^39 θ^11 +
    1.9582555338382487`*^38 θ^12 - 2.8553988600825893`*^37 θ^13 +
    3.596939571851961`*^36 θ^14 - 3.906846560393781`*^35 θ^15 +
    3.64177989202655`*^34 θ^16 - 2.8889851054401554`*^33 θ^17 +
    1.9229945192192892`*^32 θ^18 - 1.0480288629706734`*^31 θ^19 +
    4.459098395517812`*^29 θ^20 - 1.3129084643998237`*^28 θ^21 +
    1.386601891021861`*^26 θ^22 + 1.0359908783061054`*^25 θ^23 -
    7.29488111264491`*^23 θ^24 + 2.5431810805410436`*^22 θ^25 -
    5.497295020954338`*^20 θ^26 + 7.052084140795507`*^18 θ^27 -
    4.151638705976147`*^16 θ^28 + 36970.313279712114` θ^29 - 198.529430104246` θ^30) /
  ((-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^7
    θ^7 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ)]) -
 (7 (-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ - 1.0715733419821407`*^42 θ^2 +
      1.1883364566689056`*^42 θ^3 - 9.490987783531211`*^41 θ^4 +
      5.814515984234418`*^41 θ^5 - 2.841610189077518`*^41 θ^6 +
      1.1374222079829315`*^41 θ^7 - 3.7991255503643`*^40 θ^8 + 1.073339972987572`*^40
       θ^9 - 2.5906381973931337`*^39 θ^10 + 5.3806768122609554`*^38 θ^11 -
      9.66542766147963`*^37 θ^12 + 1.5063504106448067`*^37 θ^13 -
      2.0395706143447065`*^36 θ^14 + 2.3979597145679737`*^35 θ^15 -
      2.441779100246113`*^34 θ^16 + 2.1422234658979708`*^33 θ^17 -
      1.6049917252445308`*^32 θ^18 + 1.012102378536468`*^31 θ^19 -
      5.2401443148533675`*^29 θ^20 + 2.1233801883418154`*^28 θ^21 -
      5.9677657472719257`*^26 θ^22 + 6.028703874008091`*^24 θ^23 +
```

```
4.316628659608773`*^23 θ^24 - 2.9179524450579636`*^22 θ^25 +
9.781465694388629`*^20 θ^26 - 2.036035192946051`*^19 θ^27 +
2.518601478855538`*^17 θ^28 - 1.4315995537848782`*^15 θ^29 +
1232.3437759904039` θ^30 - 6.404175164653097` θ^31)) /

((-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^7

θ^8 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ) / (12.566370614359172` - 1.` θ)]) -

(7 (-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ - 1.0715733419821407`*^42 θ^2 +
1.1883364566689056`*^42 θ^3 - 9.490987783531211`*^41 θ^4 +
5.814515984234418`*^41 θ^5 - 2.841610189077518`*^41 θ^6 +
1.1374222079829315`*^41 θ^7 - 3.7991255503643`*^40 θ^8 + 1.073339972987572`*^40
θ^9 - 2.5906381973931337`*^39 θ^10 + 5.3806768122609554`*^38 θ^11 -
9.66542766147963`*^37 θ^12 + 1.5063504106448067`*^37 θ^13 -
2.0395706143447065`*^36 θ^14 + 2.3979597145679737`*^35 θ^15 -
2.441779100246113`*^34 θ^16 + 2.1422234658979708`*^33 θ^17 -
1.6049917252445308`*^32 θ^18 + 1.012102378536468`*^31 θ^19 -
5.2401443148533675`*^29 θ^20 + 2.1233801883418154`*^28 θ^21 -
5.9677657472719257`*^26 θ^22 + 6.028703874008091`*^24 θ^23 +
4.316628659608773`*^23 θ^24 - 2.9179524450579636`*^22 θ^25 +
9.781465694388629`*^20 θ^26 - 2.036035192946051`*^19 θ^27 +
2.518601478855538`*^17 θ^28 - 1.4315995537848782`*^15 θ^29 +
1232.3437759904039` θ^30 - 6.404175164653097` θ^31)) /

((-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^8

θ^7 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ) / (12.566370614359172` - 1.` θ)]) -

(7 (-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ - 1.0715733419821407`*^42 θ^2 +
1.1883364566689056`*^42 θ^3 - 9.490987783531211`*^41 θ^4 +
5.814515984234418`*^41 θ^5 - 2.841610189077518`*^41 θ^6 +
1.1374222079829315`*^41 θ^7 - 3.7991255503643`*^40 θ^8 + 1.073339972987572`*^40
θ^9 - 2.5906381973931337`*^39 θ^10 + 5.3806768122609554`*^38 θ^11 -
9.66542766147963`*^37 θ^12 + 1.5063504106448067`*^37 θ^13 -
2.0395706143447065`*^36 θ^14 + 2.3979597145679737`*^35 θ^15 -
2.441779100246113`*^34 θ^16 + 2.1422234658979708`*^33 θ^17 -
1.6049917252445308`*^32 θ^18 + 1.012102378536468`*^31 θ^19 -
5.2401443148533675`*^29 θ^20 + 2.1233801883418154`*^28 θ^21 -
5.9677657472719257`*^26 θ^22 + 6.028703874008091`*^24 θ^23 +
```

$$4.316628659608773\text{`*^}23\,\theta^{24}-2.9179524450579636\text{`*^}22\,\theta^{25}+$$
$$9.781465694388629\text{`*^}20\,\theta^{26}-2.036035192946051\text{`*^}19\,\theta^{27}+$$
$$2.518601478855538\text{`*^}17\,\theta^{28}-1.4315995537848782\text{`*^}15\,\theta^{29}+$$
$$1232.3437759904039\text{`}\,\theta^{30}-6.404175164653097\text{`}\,\theta^{31}\Big)\Big)\Big/$$

$$\Bigg((-12.566370614359172\text{`}+\theta)^{16}\,(-6.283185388010722\text{`}+\theta)^{8}\,(-6.283185226348451\text{`}+\theta)^{7}$$
$$\theta^{7}\sqrt{\frac{(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}}\Bigg)-$$

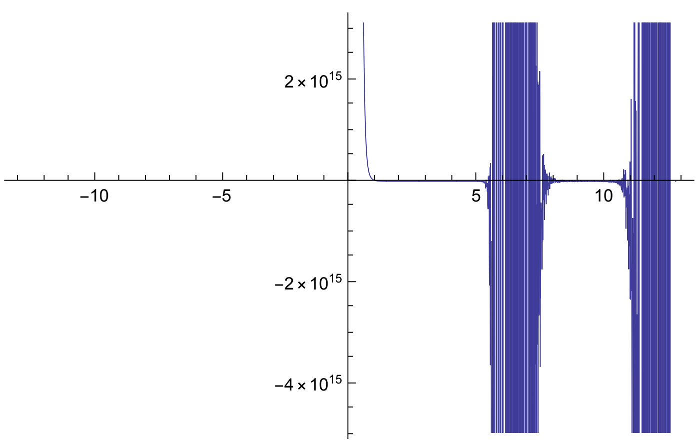
$$\Big(16\,\Big(-1.7239514242502465\text{`*^}41+6.19455209273797\text{`*^}41\,\theta-$$
$$1.0715733419821407\text{`*^}42\,\theta^{2}+1.1883364566689056\text{`*^}42\,\theta^{3}-$$
$$9.490987783531211\text{`*^}41\,\theta^{4}+5.814515984234418\text{`*^}41\,\theta^{5}-$$
$$2.841610189077518\text{`*^}41\,\theta^{6}+1.1374222079829315\text{`*^}41\,\theta^{7}-$$
$$3.7991255503643\text{`*^}40\,\theta^{8}+1.073339972987572\text{`*^}40\,\theta^{9}-$$
$$2.5906381973931337\text{`*^}39\,\theta^{10}+5.3806768122609554\text{`*^}38\,\theta^{11}-$$
$$9.66542766147963\text{`*^}37\,\theta^{12}+1.5063504106448067\text{`*^}37\,\theta^{13}-$$
$$2.0395706143447065\text{`*^}36\,\theta^{14}+2.3979597145679737\text{`*^}35\,\theta^{15}-$$
$$2.441779100246113\text{`*^}34\,\theta^{16}+2.1422234658979708\text{`*^}33\,\theta^{17}-$$
$$1.6049917252445308\text{`*^}32\,\theta^{18}+1.012102378536468\text{`*^}31\,\theta^{19}-$$
$$5.2401443148533675\text{`*^}29\,\theta^{20}+2.1233801883418154\text{`*^}28\,\theta^{21}-$$
$$5.9677657472719257\text{`*^}26\,\theta^{22}+6.028703874008091\text{`*^}24\,\theta^{23}+$$
$$4.316628659608773\text{`*^}23\,\theta^{24}-2.9179524450579636\text{`*^}22\,\theta^{25}+$$
$$9.781465694388629\text{`*^}20\,\theta^{26}-2.036035192946051\text{`*^}19\,\theta^{27}+$$
$$2.518601478855538\text{`*^}17\,\theta^{28}-1.4315995537848782\text{`*^}15\,\theta^{29}+$$
$$1232.3437759904039\text{`}\,\theta^{30}-6.404175164653097\text{`}\,\theta^{31}\Big)\Big)\Big/$$

$$\Bigg((-12.566370614359172\text{`}+\theta)^{17}\,(-6.283185388010722\text{`}+\theta)^{7}\,(-6.283185226348451\text{`}+\theta)^{7}$$
$$\theta^{7}\sqrt{\frac{(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}}\Bigg)-$$

$$\Bigg(\Bigg(\frac{(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)}{12.566370614359172\text{`}-1.\text{`}\,\theta}+$$
$$\frac{(-6.283185388010722\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}+\frac{(-6.283185226348451\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}+$$
$$\frac{1.\text{`}\,(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)\,\theta}{(12.566370614359172\text{`}-1.\text{`}\,\theta)^{2}}\Bigg)$$

$$\Big(-1.7239514242502465\text{`*^}41+6.19455209273797\text{`*^}41\,\theta-$$
$$1.0715733419821407\text{`*^}42\,\theta^{2}+1.1883364566689056\text{`*^}42\,\theta^{3}-$$
$$9.490987783531211\text{`*^}41\,\theta^{4}+5.814515984234418\text{`*^}41\,\theta^{5}-$$
$$2.841610189077518\text{`*^}41\,\theta^{6}+1.1374222079829315\text{`*^}41\,\theta^{7}-$$

```
3.7991255503643`*^40 θ^8 + 1.073339972987572`*^40 θ^9 -
2.5906381973931337`*^39 θ^10 + 5.3806768122609554`*^38 θ^11 -
9.66542766147963`*^37 θ^12 + 1.5063504106448067`*^37 θ^13 -
2.0395706143447065`*^36 θ^14 + 2.3979597145679737`*^35 θ^15 -
2.441779100246113`*^34 θ^16 + 2.1422234658979708`*^33 θ^17 -
1.6049917252445308`*^32 θ^18 + 1.012102378536468`*^31 θ^19 -
5.2401443148533675`*^29 θ^20 + 2.1233801883418154`*^28 θ^21 -
5.9677657472719257`*^26 θ^22 + 6.028703874008091`*^24 θ^23 +
4.316628659608773`*^23 θ^24 - 2.9179524450579636`*^22 θ^25 +
9.781465694388629`*^20 θ^26 - 2.036035192946051`*^19 θ^27 +
2.518601478855538`*^17 θ^28 - 1.4315995537848782`*^15 θ^29 +
1232.3437759904039` θ^30 - 6.404175164653097` θ^31)) /
(2 (-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7
(-6.283185226348451` + θ)^7 θ^7
(((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ) / (12.566370614359172` - 1.` θ))^(3/2)), {θ, -13, 13}]
```




```
D[(6.19455209273797`*^41 - 2.1431466839642813`*^42 θ + 3.565009370006717`*^42 θ^2 -
3.7963951134124844`*^42 θ^3 + 2.9072579921172094`*^42 θ^4 -
1.704966113446511`*^42 θ^5 + 7.96195545588052`*^41 θ^6 - 3.03930044029144`*^41 θ^7 +
9.660059756888149`*^40 θ^8 - 2.5906381973931335`*^40 θ^9 +
5.91874449348705`*^39 θ^10 - 1.1598513193775556`*^39 θ^11 +
1.9582555338382487`*^38 θ^12 - 2.8553988600825893`*^37 θ^13 +
3.596939571851961`*^36 θ^14 - 3.906846560393781`*^35 θ^15 +
3.64177989202655`*^34 θ^16 - 2.8889851054401554`*^33 θ^17 +
1.9229945192192892`*^32 θ^18 - 1.0480288629706734`*^31 θ^19 +
4.459098395517812`*^29 θ^20 - 1.3129084643998237`*^28 θ^21 +
1.386601891021861`*^26 θ^22 + 1.0359908783061054`*^25 θ^23 -
7.29488111264491`*^23 θ^24 + 2.5431810805410436`*^22 θ^25 -
5.497295020954338`*^20 θ^26 + 7.052084140795507`*^18 θ^27 -
```

$$4.151638705976147`*^{\wedge}16\,\theta^{28} + 36970.313279712114`\,\theta^{29} - 198.529430104246`\,\theta^{30}\Big) \Big/$$

$$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}\,(-6.283185226348451` + \theta)^{7}$$

$$\theta^{7}\,\sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) -$$

$$\Big(7\,\Big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^{2} +$$
$$1.1883364566689056`*^{\wedge}42\,\theta^{3} - 9.490987783531211`*^{\wedge}41\,\theta^{4} +$$
$$5.814515984234418`*^{\wedge}41\,\theta^{5} - 2.841610189077518`*^{\wedge}41\,\theta^{6} +$$
$$1.1374222079829315`*^{\wedge}41\,\theta^{7} - 3.7991255503643`*^{\wedge}40\,\theta^{8} + 1.073339972987572`*^{\wedge}40$$
$$\theta^{9} - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} -$$
$$9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} -$$
$$2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} -$$
$$2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} -$$
$$1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} -$$
$$5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} -$$
$$5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} +$$
$$4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} +$$
$$9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} +$$
$$2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} +$$
$$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\Big)\Big) \Big/$$

$$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}\,(-6.283185226348451` + \theta)^{7}$$

$$\theta^{8}\,\sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) -$$

$$\Big(7\,\Big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^{2} +$$
$$1.1883364566689056`*^{\wedge}42\,\theta^{3} - 9.490987783531211`*^{\wedge}41\,\theta^{4} +$$
$$5.814515984234418`*^{\wedge}41\,\theta^{5} - 2.841610189077518`*^{\wedge}41\,\theta^{6} +$$
$$1.1374222079829315`*^{\wedge}41\,\theta^{7} - 3.7991255503643`*^{\wedge}40\,\theta^{8} + 1.073339972987572`*^{\wedge}40$$
$$\theta^{9} - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} -$$
$$9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} -$$
$$2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} -$$
$$2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} -$$
$$1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} -$$
$$5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} -$$
$$5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} +$$
$$4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} +$$
$$9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} +$$
$$2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} +$$

$$1232.3437759904039\text{`}\,\theta^{30}-6.404175164653097\text{`}\,\theta^{31})\Big)\Big/$$

$$\Bigg((-12.566370614359172\text{`}+\theta)^{16}\,(-6.283185388010722\text{`}+\theta)^{7}\,(-6.283185226348451\text{`}+\theta)^{8}$$

$$\theta^{7}\,\sqrt{\frac{(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}}\Bigg)-$$

$$\Big(7\,\big(-1.7239514242502465\text{`*^}41+6.19455209273797\text{`*^}41\,\theta-1.0715733419821407\text{`*^}42\,\theta^{2}+$$
$$1.1883364566689056\text{`*^}42\,\theta^{3}-9.490987783531211\text{`*^}41\,\theta^{4}+$$
$$5.814515984234418\text{`*^}41\,\theta^{5}-2.841610189077518\text{`*^}41\,\theta^{6}+$$
$$1.1374222079829315\text{`*^}41\,\theta^{7}-3.7991255503643\text{`*^}40\,\theta^{8}+1.073339972987572\text{`*^}40$$
$$\theta^{9}-2.5906381973931337\text{`*^}39\,\theta^{10}+5.3806768122609554\text{`*^}38\,\theta^{11}-$$
$$9.66542766147963\text{`*^}37\,\theta^{12}+1.5063504106448067\text{`*^}37\,\theta^{13}-$$
$$2.0395706143447065\text{`*^}36\,\theta^{14}+2.3979597145679737\text{`*^}35\,\theta^{15}-$$
$$2.441779100246113\text{`*^}34\,\theta^{16}+2.1422234658979708\text{`*^}33\,\theta^{17}-$$
$$1.6049917252445308\text{`*^}32\,\theta^{18}+1.012102378536468\text{`*^}31\,\theta^{19}-$$
$$5.2401443148533675\text{`*^}29\,\theta^{20}+2.1233801883418154\text{`*^}28\,\theta^{21}-$$
$$5.9677657472719257\text{`*^}26\,\theta^{22}+6.028703874008091\text{`*^}24\,\theta^{23}+$$
$$4.316628659608773\text{`*^}23\,\theta^{24}-2.9179524450579636\text{`*^}22\,\theta^{25}+$$
$$9.781465694388629\text{`*^}20\,\theta^{26}-2.036035192946051\text{`*^}19\,\theta^{27}+$$
$$2.518601478855538\text{`*^}17\,\theta^{28}-1.4315995537848782\text{`*^}15\,\theta^{29}+$$
$$1232.3437759904039\text{`}\,\theta^{30}-6.404175164653097\text{`}\,\theta^{31}\big)\Big)\Big/$$

$$\Bigg((-12.566370614359172\text{`}+\theta)^{16}\,(-6.283185388010722\text{`}+\theta)^{8}\,(-6.283185226348451\text{`}+\theta)^{7}$$

$$\theta^{7}\,\sqrt{\frac{(-6.283185388010722\text{`}+\theta)\,(-6.283185226348451\text{`}+\theta)\,\theta}{12.566370614359172\text{`}-1.\text{`}\,\theta}}\Bigg)-$$

$$\Big(16\,\big(-1.7239514242502465\text{`*^}41+6.19455209273797\text{`*^}41\,\theta-$$
$$1.0715733419821407\text{`*^}42\,\theta^{2}+1.1883364566689056\text{`*^}42\,\theta^{3}-$$
$$9.490987783531211\text{`*^}41\,\theta^{4}+5.814515984234418\text{`*^}41\,\theta^{5}-$$
$$2.841610189077518\text{`*^}41\,\theta^{6}+1.1374222079829315\text{`*^}41\,\theta^{7}-$$
$$3.7991255503643\text{`*^}40\,\theta^{8}+1.073339972987572\text{`*^}40\,\theta^{9}-$$
$$2.5906381973931337\text{`*^}39\,\theta^{10}+5.3806768122609554\text{`*^}38\,\theta^{11}-$$
$$9.66542766147963\text{`*^}37\,\theta^{12}+1.5063504106448067\text{`*^}37\,\theta^{13}-$$
$$2.0395706143447065\text{`*^}36\,\theta^{14}+2.3979597145679737\text{`*^}35\,\theta^{15}-$$
$$2.441779100246113\text{`*^}34\,\theta^{16}+2.1422234658979708\text{`*^}33\,\theta^{17}-$$
$$1.6049917252445308\text{`*^}32\,\theta^{18}+1.012102378536468\text{`*^}31\,\theta^{19}-$$
$$5.2401443148533675\text{`*^}29\,\theta^{20}+2.1233801883418154\text{`*^}28\,\theta^{21}-$$
$$5.9677657472719257\text{`*^}26\,\theta^{22}+6.028703874008091\text{`*^}24\,\theta^{23}+$$
$$4.316628659608773\text{`*^}23\,\theta^{24}-2.9179524450579636\text{`*^}22\,\theta^{25}+$$
$$9.781465694388629\text{`*^}20\,\theta^{26}-2.036035192946051\text{`*^}19\,\theta^{27}+$$

```
      2.518601478855538`*^17 θ^28 - 1.4315995537848782`*^15 θ^29 +
      1232.3437759904039` θ^30 - 6.404175164653097` θ^31)) /
  ((-12.566370614359172` + θ)^17 (-6.283185388010722` + θ)^7 (-6.283185226348451` + θ)^7
    θ^7 Sqrt[((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ)]) -
  ((((-6.283185388010722` + θ) (-6.283185226348451` + θ))/(12.566370614359172` - 1.` θ) +
      ((-6.283185388010722` + θ) θ)/(12.566370614359172` - 1.` θ) + ((-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ) +
      (1.` (-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ)^2)
    (-1.7239514242502465`*^41 + 6.19455209273797`*^41 θ -
      1.0715733419821407`*^42 θ^2 + 1.1883364566689056`*^42 θ^3 -
      9.490987783531211`*^41 θ^4 + 5.814515984234418`*^41 θ^5 -
      2.841610189077518`*^41 θ^6 + 1.1374222079829315`*^41 θ^7 -
      3.7991255503643`*^40 θ^8 + 1.073339972987572`*^40 θ^9 -
      2.5906381973931337`*^39 θ^10 + 5.3806768122609554`*^38 θ^11 -
      9.66542766147963`*^37 θ^12 + 1.5063504106448067`*^37 θ^13 -
      2.0395706143447065`*^36 θ^14 + 2.3979597145679737`*^35 θ^15 -
      2.441779100246113`*^34 θ^16 + 2.1422234658979708`*^33 θ^17 -
      1.6049917252445308`*^32 θ^18 + 1.012102378536468`*^31 θ^19 -
      5.2401443148533675`*^29 θ^20 + 2.1233801883418154`*^28 θ^21 -
      5.9677657472719257`*^26 θ^22 + 6.028703874008091`*^24 θ^23 +
      4.316628659608773`*^23 θ^24 - 2.9179524450579636`*^22 θ^25 +
      9.781465694388629`*^20 θ^26 - 2.036035192946051`*^19 θ^27 +
      2.518601478855538`*^17 θ^28 - 1.4315995537848782`*^15 θ^29 +
      1232.3437759904039` θ^30 - 6.404175164653097` θ^31)) /
  (2 (-12.566370614359172` + θ)^16 (-6.283185388010722` + θ)^7
    (-6.283185226348451` + θ)^7 θ^7
    (((-6.283185388010722` + θ) (-6.283185226348451` + θ) θ)/(12.566370614359172` - 1.` θ))^(3/2)), θ]

Plot[
 (-2.1431466839642813`*^42 + 7.130018740013434`*^42 θ - 1.1389185340237452`*^43 θ^2 +
    1.1629031968468838`*^43 θ^3 - 8.524830567232554`*^42 θ^4 +
    4.777173273528312`*^42 θ^5 - 2.127510308204008`*^42 θ^6 +
    7.728047805510519`*^41 θ^7 - 2.3315743776538203`*^41 θ^8 +
```

$5.918744493487051`*^{\wedge}40\,\theta^9 - 1.2758364513153112`*^{\wedge}40\,\theta^{10} +$
$2.3499066406058984`*^{\wedge}39\,\theta^{11} - 3.712018518107366`*^{\wedge}38\,\theta^{12} +$
$5.035715400592745`*^{\wedge}37\,\theta^{13} - 5.860269840590671`*^{\wedge}36\,\theta^{14} +$
$5.82684782724248`*^{\wedge}35\,\theta^{15} - 4.911274679248264`*^{\wedge}34\,\theta^{16} +$
$3.4613901345947207`*^{\wedge}33\,\theta^{17} - 1.9912548396442796`*^{\wedge}32\,\theta^{18} +$
$8.918196791035625`*^{\wedge}30\,\theta^{19} - 2.75710777523963`*^{\wedge}29\,\theta^{20} +$
$3.050524160248094`*^{\wedge}27\,\theta^{21} + 2.3827790201040424`*^{\wedge}26\,\theta^{22} -$
$1.7507714670347782`*^{\wedge}25\,\theta^{23} + 6.35795270135261`*^{\wedge}23\,\theta^{24} - 1.4292967054481279`*^{\wedge}22$
$\theta^{25} + 1.9040627180147868`*^{\wedge}20\,\theta^{26} - 1.1624588376733212`*^{\wedge}18\,\theta^{27} +$
$1.0721390851116513`*^{\wedge}6\,\theta^{28} - 5955.88290312738`\,\theta^{29}\Big) \Big/$

$$\left((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^7\,(-6.283185226348451` + \theta)^7\,\theta^7\,\sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) -$$

$\Big(14\,\Big(6.19455209273797`*^{\wedge}41 - 2.1431466839642813`*^{\wedge}42\,\theta + 3.565009370006717`*^{\wedge}42\,\theta^2 -$
$3.7963951134124844`*^{\wedge}42\,\theta^3 + 2.9072579921172094`*^{\wedge}42\,\theta^4 -$
$1.704966113446511`*^{\wedge}42\,\theta^5 + 7.96195545588052`*^{\wedge}41\,\theta^6 - 3.03930044029144`*^{\wedge}41$
$\theta^7 + 9.660059756888149`*^{\wedge}40\,\theta^8 - 2.5906381973931335`*^{\wedge}40\,\theta^9 +$
$5.91874449348705`*^{\wedge}39\,\theta^{10} - 1.1598513193775556`*^{\wedge}39\,\theta^{11} +$
$1.9582555338382487`*^{\wedge}38\,\theta^{12} - 2.8553988600825893`*^{\wedge}37\,\theta^{13} +$
$3.596939571851961`*^{\wedge}36\,\theta^{14} - 3.906846560393781`*^{\wedge}35\,\theta^{15} +$
$3.64177989202655`*^{\wedge}34\,\theta^{16} - 2.8889851054401554`*^{\wedge}33\,\theta^{17} +$
$1.9229945192192892`*^{\wedge}32\,\theta^{18} - 1.0480288629706734`*^{\wedge}31\,\theta^{19} +$
$4.459098395517812`*^{\wedge}29\,\theta^{20} - 1.3129084643998237`*^{\wedge}28\,\theta^{21} +$
$1.386601891021861`*^{\wedge}26\,\theta^{22} + 1.0359908783061054`*^{\wedge}25\,\theta^{23} -$
$7.29488111264491`*^{\wedge}23\,\theta^{24} + 2.5431810805410436`*^{\wedge}22\,\theta^{25} -$
$5.497295020954338`*^{\wedge}20\,\theta^{26} + 7.052084140795507`*^{\wedge}18\,\theta^{27} -$
$4.151638705976147`*^{\wedge}16\,\theta^{28} + 36970.313279712114`\,\theta^{29} - 198.529430104246`\,\theta^{30}\Big)\Big) \Big/$

$$\left((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^7\,(-6.283185226348451` + \theta)^7\,\theta^8\,\sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) -$$

$\Big(14\,\Big(6.19455209273797`*^{\wedge}41 - 2.1431466839642813`*^{\wedge}42\,\theta + 3.565009370006717`*^{\wedge}42\,\theta^2 -$
$3.7963951134124844`*^{\wedge}42\,\theta^3 + 2.9072579921172094`*^{\wedge}42\,\theta^4 -$
$1.704966113446511`*^{\wedge}42\,\theta^5 + 7.96195545588052`*^{\wedge}41\,\theta^6 - 3.03930044029144`*^{\wedge}41$
$\theta^7 + 9.660059756888149`*^{\wedge}40\,\theta^8 - 2.5906381973931335`*^{\wedge}40\,\theta^9 +$
$5.91874449348705`*^{\wedge}39\,\theta^{10} - 1.1598513193775556`*^{\wedge}39\,\theta^{11} +$
$1.9582555338382487`*^{\wedge}38\,\theta^{12} - 2.8553988600825893`*^{\wedge}37\,\theta^{13} +$

$3.596939571851961`*^{36}\,\theta^{14} - 3.906846560393781`*^{35}\,\theta^{15} +$
$3.64177989202655`*^{34}\,\theta^{16} - 2.8889851054401554`*^{33}\,\theta^{17} +$
$1.9229945192192892`*^{32}\,\theta^{18} - 1.0480288629706734`*^{31}\,\theta^{19} +$
$4.459098395517812`*^{29}\,\theta^{20} - 1.3129084643998237`*^{28}\,\theta^{21} +$
$1.386601891021861`*^{26}\,\theta^{22} + 1.0359908783061054`*^{25}\,\theta^{23} -$
$7.29488111264491`*^{23}\,\theta^{24} + 2.5431810805410436`*^{22}\,\theta^{25} -$
$5.497295020954338`*^{20}\,\theta^{26} + 7.052084140795507`*^{18}\,\theta^{27} -$
$4.151638705976147`*^{16}\,\theta^{28} + 36970.313279712114`\,\theta^{29} - 198.529430104246`\,\theta^{30})) \Big/$

$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}\,(-6.283185226348451` + \theta)^{8}$

$\theta^{7}\,\sqrt{\dfrac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) -$

$\Big(14\,\Big(6.19455209273797`*^{41} - 2.1431466839642813`*^{42}\,\theta + 3.565009370006717`*^{42}\,\theta^{2} -$
$3.7963951134124844`*^{42}\,\theta^{3} + 2.9072579921172094`*^{42}\,\theta^{4} -$
$1.704966113446511`*^{42}\,\theta^{5} + 7.96195545588052`*^{41}\,\theta^{6} - 3.03930044029144`*^{41}$
$\theta^{7} + 9.660059756888149`*^{40}\,\theta^{8} - 2.5906381973931335`*^{40}\,\theta^{9} +$
$5.91874449348705`*^{39}\,\theta^{10} - 1.1598513193775556`*^{39}\,\theta^{11} +$
$1.9582555338382487`*^{38}\,\theta^{12} - 2.8553988600825893`*^{37}\,\theta^{13} +$
$3.596939571851961`*^{36}\,\theta^{14} - 3.906846560393781`*^{35}\,\theta^{15} +$
$3.64177989202655`*^{34}\,\theta^{16} - 2.8889851054401554`*^{33}\,\theta^{17} +$
$1.9229945192192892`*^{32}\,\theta^{18} - 1.0480288629706734`*^{31}\,\theta^{19} +$
$4.459098395517812`*^{29}\,\theta^{20} - 1.3129084643998237`*^{28}\,\theta^{21} +$
$1.386601891021861`*^{26}\,\theta^{22} + 1.0359908783061054`*^{25}\,\theta^{23} -$
$7.29488111264491`*^{23}\,\theta^{24} + 2.5431810805410436`*^{22}\,\theta^{25} -$
$5.497295020954338`*^{20}\,\theta^{26} + 7.052084140795507`*^{18}\,\theta^{27} -$
$4.151638705976147`*^{16}\,\theta^{28} + 36970.313279712114`\,\theta^{29} - 198.529430104246`\,\theta^{30})) \Big/$

$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{8}\,(-6.283185226348451` + \theta)^{7}$

$\theta^{7}\,\sqrt{\dfrac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) -$

$\Big(32\,\Big(6.19455209273797`*^{41} - 2.1431466839642813`*^{42}\,\theta + 3.565009370006717`*^{42}\,\theta^{2} -$
$3.7963951134124844`*^{42}\,\theta^{3} + 2.9072579921172094`*^{42}\,\theta^{4} -$
$1.704966113446511`*^{42}\,\theta^{5} + 7.96195545588052`*^{41}\,\theta^{6} - 3.03930044029144`*^{41}$
$\theta^{7} + 9.660059756888149`*^{40}\,\theta^{8} - 2.5906381973931335`*^{40}\,\theta^{9} +$
$5.91874449348705`*^{39}\,\theta^{10} - 1.1598513193775556`*^{39}\,\theta^{11} +$
$1.9582555338382487`*^{38}\,\theta^{12} - 2.8553988600825893`*^{37}\,\theta^{13} +$
$3.596939571851961`*^{36}\,\theta^{14} - 3.906846560393781`*^{35}\,\theta^{15} +$
$3.64177989202655`*^{34}\,\theta^{16} - 2.8889851054401554`*^{33}\,\theta^{17} +$

$$1.9229945192192892\text{`*^}32\,\theta^{18} - 1.0480288629706734\text{`*^}31\,\theta^{19} +$$
$$4.459098395517812\text{`*^}29\,\theta^{20} - 1.3129084643998237\text{`*^}28\,\theta^{21} +$$
$$1.386601891021861\text{`*^}26\,\theta^{22} + 1.0359908783061054\text{`*^}25\,\theta^{23} -$$
$$7.29488111264491\text{`*^}23\,\theta^{24} + 2.5431810805410436\text{`*^}22\,\theta^{25} -$$
$$5.497295020954338\text{`*^}20\,\theta^{26} + 7.052084140795507\text{`*^}18\,\theta^{27} -$$
$$4.151638705976147\text{`*^}16\,\theta^{28} + 36970.313279712114\text{`}\,\theta^{29} - 198.529430104246\text{`}\,\theta^{30}\Big)\Big)\Big/$$

$$\Bigg((-12.566370614359172\text{`} + \theta)^{17}\,(-6.283185388010722\text{`} + \theta)^{7}\,(-6.283185226348451\text{`} + \theta)^{7}$$
$$\theta^{7}\,\sqrt{\frac{(-6.283185388010722\text{`} + \theta)\,(-6.283185226348451\text{`} + \theta)\,\theta}{12.566370614359172\text{`} - 1.\text{`}\,\theta}}\Bigg) -$$

$$\Bigg(\Bigg(\frac{(-6.283185388010722\text{`} + \theta)\,(-6.283185226348451\text{`} + \theta)}{12.566370614359172\text{`} - 1.\text{`}\,\theta} +$$
$$\frac{(-6.283185388010722\text{`} + \theta)\,\theta}{12.566370614359172\text{`} - 1.\text{`}\,\theta} + \frac{(-6.283185226348451\text{`} + \theta)\,\theta}{12.566370614359172\text{`} - 1.\text{`}\,\theta} +$$
$$\frac{1.\text{`}\,(-6.283185388010722\text{`} + \theta)\,(-6.283185226348451\text{`} + \theta)\,\theta}{(12.566370614359172\text{`} - 1.\text{`}\,\theta)^{2}}\Bigg)$$

$$\Big(6.19455209273797\text{`*^}41 - 2.1431466839642813\text{`*^}42\,\theta + 3.565009370006717\text{`*^}42\,\theta^{2} -$$
$$3.7963951134124844\text{`*^}42\,\theta^{3} + 2.9072579921172094\text{`*^}42\,\theta^{4} -$$
$$1.704966113446511\text{`*^}42\,\theta^{5} + 7.96195545588052\text{`*^}41\,\theta^{6} - 3.03930044029144\text{`*^}41$$
$$\theta^{7} + 9.660059756888149\text{`*^}40\,\theta^{8} - 2.5906381973931335\text{`*^}40\,\theta^{9} +$$
$$5.91874449348705\text{`*^}39\,\theta^{10} - 1.1598513193775556\text{`*^}39\,\theta^{11} +$$
$$1.9582555338382487\text{`*^}38\,\theta^{12} - 2.8553988600825893\text{`*^}37\,\theta^{13} +$$
$$3.596939571851961\text{`*^}36\,\theta^{14} - 3.906846560393781\text{`*^}35\,\theta^{15} +$$
$$3.64177989202655\text{`*^}34\,\theta^{16} - 2.8889851054401554\text{`*^}33\,\theta^{17} +$$
$$1.9229945192192892\text{`*^}32\,\theta^{18} - 1.0480288629706734\text{`*^}31\,\theta^{19} +$$
$$4.459098395517812\text{`*^}29\,\theta^{20} - 1.3129084643998237\text{`*^}28\,\theta^{21} +$$
$$1.386601891021861\text{`*^}26\,\theta^{22} + 1.0359908783061054\text{`*^}25\,\theta^{23} -$$
$$7.29488111264491\text{`*^}23\,\theta^{24} + 2.5431810805410436\text{`*^}22\,\theta^{25} -$$
$$5.497295020954338\text{`*^}20\,\theta^{26} + 7.052084140795507\text{`*^}18\,\theta^{27} -$$
$$4.151638705976147\text{`*^}16\,\theta^{28} + 36970.313279712114\text{`}\,\theta^{29} - 198.529430104246\text{`}\,\theta^{30}\Big)\Bigg)\Big/$$

$$\Bigg((-12.566370614359172\text{`} + \theta)^{16}\,(-6.283185388010722\text{`} + \theta)^{7}\,(-6.283185226348451\text{`} + \theta)^{7}$$
$$\theta^{7}\left(\frac{(-6.283185388010722\text{`} + \theta)\,(-6.283185226348451\text{`} + \theta)\,\theta}{12.566370614359172\text{`} - 1.\text{`}\,\theta}\right)^{3/2}\Bigg) +$$

$$\Big(56\,\Big(-1.7239514242502465\text{`*^}41 + 6.19455209273797\text{`*^}41\,\theta -$$
$$1.0715733419821407\text{`*^}42\,\theta^{2} + 1.1883364566689056\text{`*^}42\,\theta^{3} -$$
$$9.490987783531211\text{`*^}41\,\theta^{4} + 5.814515984234418\text{`*^}41\,\theta^{5} -$$
$$2.841610189077518\text{`*^}41\,\theta^{6} + 1.1374222079829315\text{`*^}41\,\theta^{7} -$$

$3.7991255503643`*^40\,\theta^8 + 1.073339972987572`*^40\,\theta^9 -$
$2.5906381973931337`*^39\,\theta^{10} + 5.3806768122609554`*^38\,\theta^{11} -$
$9.66542766147963`*^37\,\theta^{12} + 1.5063504106448067`*^37\,\theta^{13} -$
$2.0395706143447065`*^36\,\theta^{14} + 2.3979597145679737`*^35\,\theta^{15} -$
$2.441779100246113`*^34\,\theta^{16} + 2.1422234658979708`*^33\,\theta^{17} -$
$1.6049917252445308`*^32\,\theta^{18} + 1.012102378536468`*^31\,\theta^{19} -$
$5.2401443148533675`*^29\,\theta^{20} + 2.1233801883418154`*^28\,\theta^{21} -$
$5.9677657472719257`*^26\,\theta^{22} + 6.028703874008091`*^24\,\theta^{23} +$
$4.316628659608773`*^23\,\theta^{24} - 2.9179524450579636`*^22\,\theta^{25} +$
$9.781465694388629`*^20\,\theta^{26} - 2.036035192946051`*^19\,\theta^{27} +$
$2.518601478855538`*^17\,\theta^{28} - 1.4315995537848782`*^15\,\theta^{29} +$
$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\big)\big) \Big/$

$$\left((-12.566370614359172` + \theta)^{16} (-6.283185388010722` + \theta)^7 (-6.283185226348451` + \theta)^7 \theta^9 \sqrt{\frac{(-6.283185388010722` + \theta)(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) +$$

$\big(98\,\big(-1.7239514242502465`*^41 + 6.19455209273797`*^41\,\theta -$
$1.0715733419821407`*^42\,\theta^2 + 1.1883364566689056`*^42\,\theta^3 -$
$9.490987783531211`*^41\,\theta^4 + 5.814515984234418`*^41\,\theta^5 -$
$2.841610189077518`*^41\,\theta^6 + 1.1374222079829315`*^41\,\theta^7 -$
$3.7991255503643`*^40\,\theta^8 + 1.073339972987572`*^40\,\theta^9 -$
$2.5906381973931337`*^39\,\theta^{10} + 5.3806768122609554`*^38\,\theta^{11} -$
$9.66542766147963`*^37\,\theta^{12} + 1.5063504106448067`*^37\,\theta^{13} -$
$2.0395706143447065`*^36\,\theta^{14} + 2.3979597145679737`*^35\,\theta^{15} -$
$2.441779100246113`*^34\,\theta^{16} + 2.1422234658979708`*^33\,\theta^{17} -$
$1.6049917252445308`*^32\,\theta^{18} + 1.012102378536468`*^31\,\theta^{19} -$
$5.2401443148533675`*^29\,\theta^{20} + 2.1233801883418154`*^28\,\theta^{21} -$
$5.9677657472719257`*^26\,\theta^{22} + 6.028703874008091`*^24\,\theta^{23} +$
$4.316628659608773`*^23\,\theta^{24} - 2.9179524450579636`*^22\,\theta^{25} +$
$9.781465694388629`*^20\,\theta^{26} - 2.036035192946051`*^19\,\theta^{27} +$
$2.518601478855538`*^17\,\theta^{28} - 1.4315995537848782`*^15\,\theta^{29} +$
$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\big)\big) \Big/$

$$\left((-12.566370614359172` + \theta)^{16} (-6.283185388010722` + \theta)^7 (-6.283185226348451` + \theta)^8 \theta^8 \sqrt{\frac{(-6.283185388010722` + \theta)(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) +$$

$\big(98\,\big(-1.7239514242502465`*^41 + 6.19455209273797`*^41\,\theta -$
$1.0715733419821407`*^42\,\theta^2 + 1.1883364566689056`*^42\,\theta^3 -$

$$9.490987783531211`*^41\,\theta^4+5.814515984234418`*^41\,\theta^5-2.841610189077518`*^41\,\theta^6+1.1374222079829315`*^41\,\theta^7-3.7991255503643`*^40\,\theta^8+1.073339972987572`*^40\,\theta^9-2.5906381973931337`*^39\,\theta^{10}+5.3806768122609554`*^38\,\theta^{11}-9.66542766147963`*^37\,\theta^{12}+1.5063504106448067`*^37\,\theta^{13}-2.0395706143447065`*^36\,\theta^{14}+2.3979597145679737`*^35\,\theta^{15}-2.441779100246113`*^34\,\theta^{16}+2.1422234658979708`*^33\,\theta^{17}-1.6049917252445308`*^32\,\theta^{18}+1.012102378536468`*^31\,\theta^{19}-5.2401443148533675`*^29\,\theta^{20}+2.1233801883418154`*^28\,\theta^{21}-5.9677657472719257`*^26\,\theta^{22}+6.028703874008091`*^24\,\theta^{23}+4.316628659608773`*^23\,\theta^{24}-2.9179524450579636`*^22\,\theta^{25}+9.781465694388629`*^20\,\theta^{26}-2.036035192946051`*^19\,\theta^{27}+2.518601478855538`*^17\,\theta^{28}-1.4315995537848782`*^15\,\theta^{29}+1232.3437759904039`\,\theta^{30}-6.404175164653097`\,\theta^{31}))\Big/$$

$$\left((-12.566370614359172`+\theta)^{16}\,(-6.283185388010722`+\theta)^{8}\,(-6.283185226348451`+\theta)^{7}\,\theta^8\sqrt{\frac{(-6.283185388010722`+\theta)\,(-6.283185226348451`+\theta)\,\theta}{12.566370614359172`-1.`\,\theta}}\right)+$$

$$\Big(224\,\Big(-1.7239514242502465`*^41+6.19455209273797`*^41\,\theta-1.0715733419821407`*^42\,\theta^2+1.1883364566689056`*^42\,\theta^3-9.490987783531211`*^41\,\theta^4+5.814515984234418`*^41\,\theta^5-2.841610189077518`*^41\,\theta^6+1.1374222079829315`*^41\,\theta^7-3.7991255503643`*^40\,\theta^8+1.073339972987572`*^40\,\theta^9-2.5906381973931337`*^39\,\theta^{10}+5.3806768122609554`*^38\,\theta^{11}-9.66542766147963`*^37\,\theta^{12}+1.5063504106448067`*^37\,\theta^{13}-2.0395706143447065`*^36\,\theta^{14}+2.3979597145679737`*^35\,\theta^{15}-2.441779100246113`*^34\,\theta^{16}+2.1422234658979708`*^33\,\theta^{17}-1.6049917252445308`*^32\,\theta^{18}+1.012102378536468`*^31\,\theta^{19}-5.2401443148533675`*^29\,\theta^{20}+2.1233801883418154`*^28\,\theta^{21}-5.9677657472719257`*^26\,\theta^{22}+6.028703874008091`*^24\,\theta^{23}+4.316628659608773`*^23\,\theta^{24}-2.9179524450579636`*^22\,\theta^{25}+9.781465694388629`*^20\,\theta^{26}-2.036035192946051`*^19\,\theta^{27}+2.518601478855538`*^17\,\theta^{28}-1.4315995537848782`*^15\,\theta^{29}+1232.3437759904039`\,\theta^{30}-6.404175164653097`\,\theta^{31}\Big)\Big)\Big/$$

$$\left((-12.566370614359172`+\theta)^{17}\,(-6.283185388010722`+\theta)^{7}\,(-6.283185226348451`+\theta)^{7}\,\theta^8\sqrt{\frac{(-6.283185388010722`+\theta)\,(-6.283185226348451`+\theta)\,\theta}{12.566370614359172`-1.`\,\theta}}\right)+$$

$$\left(56 \left(-1.7239514242502465`*^{41} + 6.19455209273797`*^{41}\,\theta - 1.0715733419821407`*^{42}\,\theta^{2} + 1.1883364566689056`*^{42}\,\theta^{3} - 9.490987783531211`*^{41}\,\theta^{4} + 5.814515984234418`*^{41}\,\theta^{5} - 2.841610189077518`*^{41}\,\theta^{6} + 1.1374222079829315`*^{41}\,\theta^{7} - 3.7991255503643`*^{40}\,\theta^{8} + 1.073339972987572`*^{40}\,\theta^{9} - 2.5906381973931337`*^{39}\,\theta^{10} + 5.3806768122609554`*^{38}\,\theta^{11} - 9.66542766147963`*^{37}\,\theta^{12} + 1.5063504106448067`*^{37}\,\theta^{13} - 2.0395706143447065`*^{36}\,\theta^{14} + 2.3979597145679737`*^{35}\,\theta^{15} - 2.441779100246113`*^{34}\,\theta^{16} + 2.1422234658979708`*^{33}\,\theta^{17} - 1.6049917252445308`*^{32}\,\theta^{18} + 1.012102378536468`*^{31}\,\theta^{19} - 5.2401443148533675`*^{29}\,\theta^{20} + 2.1233801883418154`*^{28}\,\theta^{21} - 5.9677657472719257`*^{26}\,\theta^{22} + 6.028703874008091`*^{24}\,\theta^{23} + 4.316628659608773`*^{23}\,\theta^{24} - 2.9179524450579636`*^{22}\,\theta^{25} + 9.781465694388629`*^{20}\,\theta^{26} - 2.036035192946051`*^{19}\,\theta^{27} + 2.518601478855538`*^{17}\,\theta^{28} - 1.4315995537848782`*^{15}\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\right)\right) \Big/ \left((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}\,(-6.283185226348451` + \theta)^{9}\,\theta^{7}\,\sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) +$$

$$\left(98 \left(-1.7239514242502465`*^{41} + 6.19455209273797`*^{41}\,\theta - 1.0715733419821407`*^{42}\,\theta^{2} + 1.1883364566689056`*^{42}\,\theta^{3} - 9.490987783531211`*^{41}\,\theta^{4} + 5.814515984234418`*^{41}\,\theta^{5} - 2.841610189077518`*^{41}\,\theta^{6} + 1.1374222079829315`*^{41}\,\theta^{7} - 3.7991255503643`*^{40}\,\theta^{8} + 1.073339972987572`*^{40}\,\theta^{9} - 2.5906381973931337`*^{39}\,\theta^{10} + 5.3806768122609554`*^{38}\,\theta^{11} - 9.66542766147963`*^{37}\,\theta^{12} + 1.5063504106448067`*^{37}\,\theta^{13} - 2.0395706143447065`*^{36}\,\theta^{14} + 2.3979597145679737`*^{35}\,\theta^{15} - 2.441779100246113`*^{34}\,\theta^{16} + 2.1422234658979708`*^{33}\,\theta^{17} - 1.6049917252445308`*^{32}\,\theta^{18} + 1.012102378536468`*^{31}\,\theta^{19} - 5.2401443148533675`*^{29}\,\theta^{20} + 2.1233801883418154`*^{28}\,\theta^{21} - 5.9677657472719257`*^{26}\,\theta^{22} + 6.028703874008091`*^{24}\,\theta^{23} + 4.316628659608773`*^{23}\,\theta^{24} - 2.9179524450579636`*^{22}\,\theta^{25} + 9.781465694388629`*^{20}\,\theta^{26} - 2.036035192946051`*^{19}\,\theta^{27} + 2.518601478855538`*^{17}\,\theta^{28} - 1.4315995537848782`*^{15}\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\right)\right) \Big/ \left((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{8}\,(-6.283185226348451` + \theta)^{8}\right.$$

$$\theta^7 \sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) +$$

$$\Big(224\,\big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^2 + 1.1883364566689056`*^{\wedge}42\,\theta^3 - 9.490987783531211`*^{\wedge}41\,\theta^4 + 5.814515984234418`*^{\wedge}41\,\theta^5 - 2.841610189077518`*^{\wedge}41\,\theta^6 + 1.1374222079829315`*^{\wedge}41\,\theta^7 - 3.7991255503643`*^{\wedge}40\,\theta^8 + 1.073339972987572`*^{\wedge}40\,\theta^9 - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} - 9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} - 2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} - 2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} - 1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} - 5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} - 5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} + 4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} + 9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} + 2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\big)\Big) \Big/$$

$$\Big((-12.566370614359172` + \theta)^{17}\,(-6.283185388010722` + \theta)^7\,(-6.283185226348451` + \theta)^8$$

$$\theta^7 \sqrt{\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\Bigg) +$$

$$\Big(56\,\big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^2 + 1.1883364566689056`*^{\wedge}42\,\theta^3 - 9.490987783531211`*^{\wedge}41\,\theta^4 + 5.814515984234418`*^{\wedge}41\,\theta^5 - 2.841610189077518`*^{\wedge}41\,\theta^6 + 1.1374222079829315`*^{\wedge}41\,\theta^7 - 3.7991255503643`*^{\wedge}40\,\theta^8 + 1.073339972987572`*^{\wedge}40\,\theta^9 - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} - 9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} - 2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} - 2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} - 1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} - 5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} - 5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} + 4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} + 9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} + 2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\big)\Big) \Big/$$

$$\left((-12.566370614359172` + \theta)^{16} (-6.283185388010722` + \theta)^{9} (-6.283185226348451` + \theta)^{7} \theta^{7} \sqrt{\frac{(-6.283185388010722` + \theta)(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) +$$

$$\Big(224 \big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^{2} + 1.1883364566689056`*^{\wedge}42\,\theta^{3} - 9.490987783531211`*^{\wedge}41\,\theta^{4} + 5.814515984234418`*^{\wedge}41\,\theta^{5} - 2.841610189077518`*^{\wedge}41\,\theta^{6} + 1.1374222079829315`*^{\wedge}41\,\theta^{7} - 3.7991255503643`*^{\wedge}40\,\theta^{8} + 1.073339972987572`*^{\wedge}40\,\theta^{9} - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} - 9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} - 2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} - 2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} - 1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} - 5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} - 5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} + 4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} + 9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} + 2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\big)\Big) \Big/$$

$$\left((-12.566370614359172` + \theta)^{17} (-6.283185388010722` + \theta)^{8} (-6.283185226348451` + \theta)^{7} \theta^{7} \sqrt{\frac{(-6.283185388010722` + \theta)(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}}\right) +$$

$$\Big(272 \big(-1.7239514242502465`*^{\wedge}41 + 6.19455209273797`*^{\wedge}41\,\theta - 1.0715733419821407`*^{\wedge}42\,\theta^{2} + 1.1883364566689056`*^{\wedge}42\,\theta^{3} - 9.490987783531211`*^{\wedge}41\,\theta^{4} + 5.814515984234418`*^{\wedge}41\,\theta^{5} - 2.841610189077518`*^{\wedge}41\,\theta^{6} + 1.1374222079829315`*^{\wedge}41\,\theta^{7} - 3.7991255503643`*^{\wedge}40\,\theta^{8} + 1.073339972987572`*^{\wedge}40\,\theta^{9} - 2.5906381973931337`*^{\wedge}39\,\theta^{10} + 5.3806768122609554`*^{\wedge}38\,\theta^{11} - 9.66542766147963`*^{\wedge}37\,\theta^{12} + 1.5063504106448067`*^{\wedge}37\,\theta^{13} - 2.0395706143447065`*^{\wedge}36\,\theta^{14} + 2.3979597145679737`*^{\wedge}35\,\theta^{15} - 2.441779100246113`*^{\wedge}34\,\theta^{16} + 2.1422234658979708`*^{\wedge}33\,\theta^{17} - 1.6049917252445308`*^{\wedge}32\,\theta^{18} + 1.012102378536468`*^{\wedge}31\,\theta^{19} - 5.2401443148533675`*^{\wedge}29\,\theta^{20} + 2.1233801883418154`*^{\wedge}28\,\theta^{21} - 5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} + 4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} + 9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} + 2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} +$$

$$1232.3437759904039` \theta^{30} - 6.404175164653097` \theta^{31})) \Big/$$

$$\Bigg((-12.566370614359172` + \theta)^{18} (-6.283185388010722` + \theta)^7 (-6.283185226348451` + \theta)^7$$

$$\theta^7 \sqrt{\frac{(-6.283185388010722` + \theta) (-6.283185226348451` + \theta) \theta}{12.566370614359172` - 1.` \theta}}\Bigg) -$$

$$\Bigg(\Bigg(\frac{2 (-6.283185388010722` + \theta)}{12.566370614359172` - 1.` \theta} + \frac{2 (-6.283185226348451` + \theta)}{12.566370614359172` - 1.` \theta} +$$

$$\frac{2.` (-6.283185388010722` + \theta) (-6.283185226348451` + \theta)}{(12.566370614359172` - 1.` \theta)^2} +$$

$$\frac{2 \theta}{12.566370614359172` - 1.` \theta} + \frac{2.` (-6.283185388010722` + \theta) \theta}{(12.566370614359172` - 1.` \theta)^2} +$$

$$\frac{2.` (-6.283185226348451` + \theta) \theta}{(12.566370614359172` - 1.` \theta)^2} +$$

$$\frac{2.` (-6.283185388010722` + \theta) (-6.283185226348451` + \theta) \theta}{(12.566370614359172` - 1.` \theta)^3}\Bigg)$$

$$(-1.7239514242502465`*^41 + 6.19455209273797`*^41 \theta -$$
$$1.0715733419821407`*^42 \theta^2 + 1.1883364566689056`*^42 \theta^3 -$$
$$9.490987783531211`*^41 \theta^4 + 5.814515984234418`*^41 \theta^5 -$$
$$2.841610189077518`*^41 \theta^6 + 1.1374222079829315`*^41 \theta^7 -$$
$$3.7991255503643`*^40 \theta^8 + 1.073339972987572`*^40 \theta^9 -$$
$$2.5906381973931337`*^39 \theta^{10} + 5.3806768122609554`*^38 \theta^{11} -$$
$$9.66542766147963`*^37 \theta^{12} + 1.5063504106448067`*^37 \theta^{13} -$$
$$2.0395706143447065`*^36 \theta^{14} + 2.3979597145679737`*^35 \theta^{15} -$$
$$2.441779100246113`*^34 \theta^{16} + 2.1422234658979708`*^33 \theta^{17} -$$
$$1.6049917252445308`*^32 \theta^{18} + 1.012102378536468`*^31 \theta^{19} -$$
$$5.2401443148533675`*^29 \theta^{20} + 2.1233801883418154`*^28 \theta^{21} -$$
$$5.9677657472719257`*^26 \theta^{22} + 6.028703874008091`*^24 \theta^{23} +$$
$$4.316628659608773`*^23 \theta^{24} - 2.9179524450579636`*^22 \theta^{25} +$$
$$9.781465694388629`*^20 \theta^{26} - 2.036035192946051`*^19 \theta^{27} +$$
$$2.518601478855538`*^17 \theta^{28} - 1.4315995537848782`*^15 \theta^{29} +$$
$$1232.3437759904039` \theta^{30} - 6.404175164653097` \theta^{31})\Bigg) \Big/$$

$$\Bigg(2 (-12.566370614359172` + \theta)^{16} (-6.283185388010722` + \theta)^7$$

$$(-6.283185226348451` + \theta)^7 \theta^7$$

$$\left(\frac{(-6.283185388010722` + \theta) (-6.283185226348451` + \theta) \theta}{12.566370614359172` - 1.` \theta}\right)^{3/2}\Bigg) +$$

$$\Bigg(7 \Bigg(\frac{(-6.283185388010722` + \theta) (-6.283185226348451` + \theta)}{12.566370614359172` - 1.` \theta} +$$

$$\frac{(-6.283185388010722` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{1.`\,(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{(12.566370614359172` - 1.`\,\theta)^2}\Bigg)$$

$$\Big(-1.7239514242502465`*^41 + 6.19455209273797`*^41\,\theta - 1.0715733419821407`*^42\,\theta^2 + 1.1883364566689056`*^42\,\theta^3 - 9.490987783531211`*^41\,\theta^4 + 5.814515984234418`*^41\,\theta^5 - 2.841610189077518`*^41\,\theta^6 + 1.1374222079829315`*^41\,\theta^7 - 3.7991255503643`*^40\,\theta^8 + 1.073339972987572`*^40\,\theta^9 - 2.5906381973931337`*^39\,\theta^{10} + 5.3806768122609554`*^38\,\theta^{11} - 9.66542766147963`*^37\,\theta^{12} + 1.5063504106448067`*^37\,\theta^{13} - 2.0395706143447065`*^36\,\theta^{14} + 2.3979597145679737`*^35\,\theta^{15} - 2.441779100246113`*^34\,\theta^{16} + 2.1422234658979708`*^33\,\theta^{17} - 1.6049917252445308`*^32\,\theta^{18} + 1.012102378536468`*^31\,\theta^{19} - 5.2401443148533675`*^29\,\theta^{20} + 2.1233801883418154`*^28\,\theta^{21} - 5.9677657472719257`*^26\,\theta^{22} + 6.028703874008091`*^24\,\theta^{23} + 4.316628659608773`*^23\,\theta^{24} - 2.9179524450579636`*^22\,\theta^{25} + 9.781465694388629`*^20\,\theta^{26} - 2.036035192946051`*^19\,\theta^{27} + 2.518601478855538`*^17\,\theta^{28} - 1.4315995537848782`*^15\,\theta^{29} + 1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\Big)\Bigg)\Big/$$

$$\left((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^7\,(-6.283185226348451` + \theta)^7\,\theta^8\left(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}\right)^{3/2}\right) +$$

$$\Bigg(7\,\Bigg(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)}{12.566370614359172` - 1.`\,\theta} + \frac{(-6.283185388010722` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{1.`\,(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{(12.566370614359172` - 1.`\,\theta)^2}\Bigg)$$

$$\Big(-1.7239514242502465`*^41 + 6.19455209273797`*^41\,\theta - 1.0715733419821407`*^42\,\theta^2 + 1.1883364566689056`*^42\,\theta^3 - 9.490987783531211`*^41\,\theta^4 + 5.814515984234418`*^41\,\theta^5 - 2.841610189077518`*^41\,\theta^6 + 1.1374222079829315`*^41\,\theta^7 - 3.7991255503643`*^40\,\theta^8 + 1.073339972987572`*^40\,\theta^9 - 2.5906381973931337`*^39\,\theta^{10} + 5.3806768122609554`*^38\,\theta^{11} - 9.66542766147963`*^37\,\theta^{12} + 1.5063504106448067`*^37\,\theta^{13} - 2.0395706143447065`*^36\,\theta^{14} + 2.3979597145679737`*^35\,\theta^{15} - 2.441779100246113`*^34\,\theta^{16} + 2.1422234658979708`*^33\,\theta^{17} - 1.6049917252445308`*^32\,\theta^{18} + 1.012102378536468`*^31\,\theta^{19} - 5.2401443148533675`*^29\,\theta^{20} + 2.1233801883418154`*^28\,\theta^{21} -$$

$$5.9677657472719257`*^26\,\theta^{22} + 6.028703874008091`*^24\,\theta^{23} +$$
$$4.316628659608773`*^23\,\theta^{24} - 2.9179524450579636`*^22\,\theta^{25} +$$
$$9.781465694388629`*^20\,\theta^{26} - 2.036035192946051`*^19\,\theta^{27} +$$
$$2.518601478855538`*^17\,\theta^{28} - 1.4315995537848782`*^15\,\theta^{29} +$$
$$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31})\Big) \Big/$$
$$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}\,(-6.283185226348451` + \theta)^{8}$$
$$\theta^{7}\left(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}\right)^{3/2}\Bigg) +$$
$$\Bigg(7\,\Bigg(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)}{12.566370614359172` - 1.`\,\theta} +$$
$$\frac{(-6.283185388010722` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} +$$
$$\frac{1.`\,(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{(12.566370614359172` - 1.`\,\theta)^{2}}\Bigg)$$
$$\big(-1.7239514242502465`*^41 + 6.19455209273797`*^41\,\theta -$$
$$1.0715733419821407`*^42\,\theta^{2} + 1.1883364566689056`*^42\,\theta^{3} -$$
$$9.490987783531211`*^41\,\theta^{4} + 5.814515984234418`*^41\,\theta^{5} -$$
$$2.841610189077518`*^41\,\theta^{6} + 1.1374222079829315`*^41\,\theta^{7} -$$
$$3.7991255503643`*^40\,\theta^{8} + 1.073339972987572`*^40\,\theta^{9} -$$
$$2.5906381973931337`*^39\,\theta^{10} + 5.3806768122609554`*^38\,\theta^{11} -$$
$$9.66542766147963`*^37\,\theta^{12} + 1.5063504106448067`*^37\,\theta^{13} -$$
$$2.0395706143447065`*^36\,\theta^{14} + 2.3979597145679737`*^35\,\theta^{15} -$$
$$2.441779100246113`*^34\,\theta^{16} + 2.1422234658979708`*^33\,\theta^{17} -$$
$$1.6049917252445308`*^32\,\theta^{18} + 1.012102378536468`*^31\,\theta^{19} -$$
$$5.2401443148533675`*^29\,\theta^{20} + 2.1233801883418154`*^28\,\theta^{21} -$$
$$5.9677657472719257`*^26\,\theta^{22} + 6.028703874008091`*^24\,\theta^{23} +$$
$$4.316628659608773`*^23\,\theta^{24} - 2.9179524450579636`*^22\,\theta^{25} +$$
$$9.781465694388629`*^20\,\theta^{26} - 2.036035192946051`*^19\,\theta^{27} +$$
$$2.518601478855538`*^17\,\theta^{28} - 1.4315995537848782`*^15\,\theta^{29} +$$
$$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31})\Big) \Big/$$
$$\Bigg((-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{8}\,(-6.283185226348451` + \theta)^{7}$$
$$\theta^{7}\left(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}\right)^{3/2}\Bigg) +$$
$$\Bigg(16\,\Bigg(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)}{12.566370614359172` - 1.`\,\theta} +$$
$$\frac{(-6.283185388010722` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} + \frac{(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta} +$$

$$\left.\frac{1.`\ (-6.283185388010722`+\theta)\ (-6.283185226348451`+\theta)\ \theta}{(12.566370614359172`-1.`\ \theta)^2}\right)$$

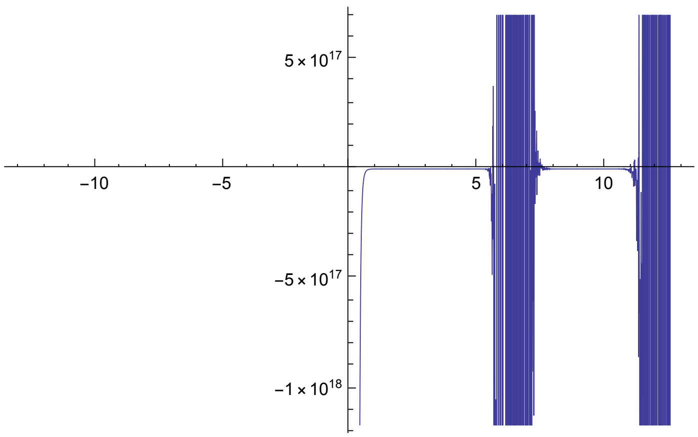
$$\Big(-1.7239514242502465`*^{\wedge}41+6.19455209273797`*^{\wedge}41\ \theta-$$
$$1.0715733419821407`*^{\wedge}42\ \theta^2+1.1883364566689056`*^{\wedge}42\ \theta^3-$$
$$9.490987783531211`*^{\wedge}41\ \theta^4+5.814515984234418`*^{\wedge}41\ \theta^5-$$
$$2.841610189077518`*^{\wedge}41\ \theta^6+1.1374222079829315`*^{\wedge}41\ \theta^7-$$
$$3.7991255503643`*^{\wedge}40\ \theta^8+1.073339972987572`*^{\wedge}40\ \theta^9-$$
$$2.5906381973931337`*^{\wedge}39\ \theta^{10}+5.3806768122609554`*^{\wedge}38\ \theta^{11}-$$
$$9.66542766147963`*^{\wedge}37\ \theta^{12}+1.5063504106448067`*^{\wedge}37\ \theta^{13}-$$
$$2.0395706143447065`*^{\wedge}36\ \theta^{14}+2.3979597145679737`*^{\wedge}35\ \theta^{15}-$$
$$2.441779100246113`*^{\wedge}34\ \theta^{16}+2.1422234658979708`*^{\wedge}33\ \theta^{17}-$$
$$1.6049917252445308`*^{\wedge}32\ \theta^{18}+1.012102378536468`*^{\wedge}31\ \theta^{19}-$$
$$5.2401443148533675`*^{\wedge}29\ \theta^{20}+2.1233801883418154`*^{\wedge}28\ \theta^{21}-$$
$$5.9677657472719257`*^{\wedge}26\ \theta^{22}+6.028703874008091`*^{\wedge}24\ \theta^{23}+$$
$$4.316628659608773`*^{\wedge}23\ \theta^{24}-2.9179524450579636`*^{\wedge}22\ \theta^{25}+$$
$$9.781465694388629`*^{\wedge}20\ \theta^{26}-2.036035192946051`*^{\wedge}19\ \theta^{27}+$$
$$2.518601478855538`*^{\wedge}17\ \theta^{28}-1.4315995537848782`*^{\wedge}15\ \theta^{29}+$$
$$\left.1232.3437759904039`\ \theta^{30}-6.404175164653097`\ \theta^{31}\Big)\right)\Big/$$

$$\Big((-12.566370614359172`+\theta)^{17}\ (-6.283185388010722`+\theta)^7$$
$$(-6.283185226348451`+\theta)^7\ \theta^7$$
$$\left.\left(\frac{(-6.283185388010722`+\theta)\ (-6.283185226348451`+\theta)\ \theta}{12.566370614359172`-1.`\ \theta}\right)^{3/2}\right)+$$

$$\Bigg(3\ \left(\frac{(-6.283185388010722`+\theta)\ (-6.283185226348451`+\theta)}{12.566370614359172`-1.`\ \theta}+\right.$$
$$\frac{(-6.283185388010722`+\theta)\ \theta}{12.566370614359172`-1.`\ \theta}+\frac{(-6.283185226348451`+\theta)\ \theta}{12.566370614359172`-1.`\ \theta}+$$
$$\left.\frac{1.`\ (-6.283185388010722`+\theta)\ (-6.283185226348451`+\theta)\ \theta}{(12.566370614359172`-1.`\ \theta)^2}\right)^2$$

$$\Big(-1.7239514242502465`*^{\wedge}41+6.19455209273797`*^{\wedge}41\ \theta-$$
$$1.0715733419821407`*^{\wedge}42\ \theta^2+1.1883364566689056`*^{\wedge}42\ \theta^3-$$
$$9.490987783531211`*^{\wedge}41\ \theta^4+5.814515984234418`*^{\wedge}41\ \theta^5-$$
$$2.841610189077518`*^{\wedge}41\ \theta^6+1.1374222079829315`*^{\wedge}41\ \theta^7-$$
$$3.7991255503643`*^{\wedge}40\ \theta^8+1.073339972987572`*^{\wedge}40\ \theta^9-$$
$$2.5906381973931337`*^{\wedge}39\ \theta^{10}+5.3806768122609554`*^{\wedge}38\ \theta^{11}-$$
$$9.66542766147963`*^{\wedge}37\ \theta^{12}+1.5063504106448067`*^{\wedge}37\ \theta^{13}-$$
$$2.0395706143447065`*^{\wedge}36\ \theta^{14}+2.3979597145679737`*^{\wedge}35\ \theta^{15}-$$
$$2.441779100246113`*^{\wedge}34\ \theta^{16}+2.1422234658979708`*^{\wedge}33\ \theta^{17}-$$
$$1.6049917252445308`*^{\wedge}32\ \theta^{18}+1.012102378536468`*^{\wedge}31\ \theta^{19}-$$
$$5.2401443148533675`*^{\wedge}29\ \theta^{20}+2.1233801883418154`*^{\wedge}28\ \theta^{21}-$$

$$5.9677657472719257`*^{\wedge}26\,\theta^{22} + 6.028703874008091`*^{\wedge}24\,\theta^{23} +$$
$$4.316628659608773`*^{\wedge}23\,\theta^{24} - 2.9179524450579636`*^{\wedge}22\,\theta^{25} +$$
$$9.781465694388629`*^{\wedge}20\,\theta^{26} - 2.036035192946051`*^{\wedge}19\,\theta^{27} +$$
$$2.518601478855538`*^{\wedge}17\,\theta^{28} - 1.4315995537848782`*^{\wedge}15\,\theta^{29} +$$
$$1232.3437759904039`\,\theta^{30} - 6.404175164653097`\,\theta^{31}\Big)\Big) \Big/$$
$$\Big(4\,(-12.566370614359172` + \theta)^{16}\,(-6.283185388010722` + \theta)^{7}$$
$$(-6.283185226348451` + \theta)^{7}\,\theta^{7}$$
$$\left(\frac{(-6.283185388010722` + \theta)\,(-6.283185226348451` + \theta)\,\theta}{12.566370614359172` - 1.`\,\theta}\right)^{5/2}\Bigg),\ \{\theta, -13, 13\}\Big]$$



$$\text{Solve}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\,n\,(1/(6\,(\theta))) == c,\ n\right]$$

$$\left\{\left\{n \to \frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}}\right\}\right\}$$

$$\text{Solve}\left[0 == \frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\ \theta\right]$$

{ }

$$\text{TrigReduce}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\text{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}}\right]$$

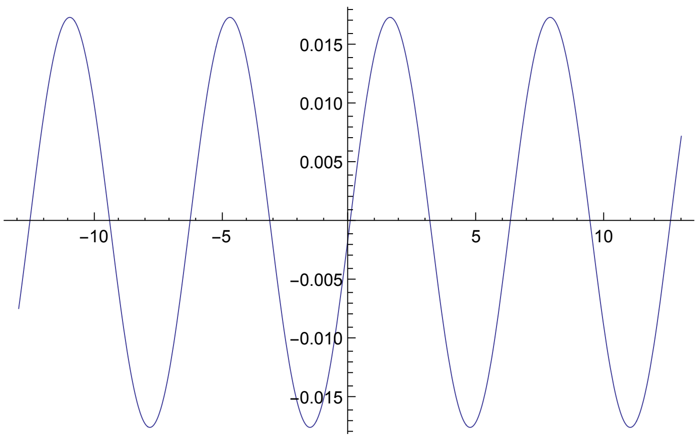
$$\frac{\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\theta]}{180\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}}$$

$$\frac{\pi\,\sqrt{4\,\pi-e}\,\sqrt{e}\,\text{Sin}[e]}{180\,\sqrt{(4\,\pi-e)\,e}}$$

$$\mathrm{N}\left[\frac{1}{180}\pi\,\mathrm{Sin}[\mathbb{e}]\right]$$

0.00716949

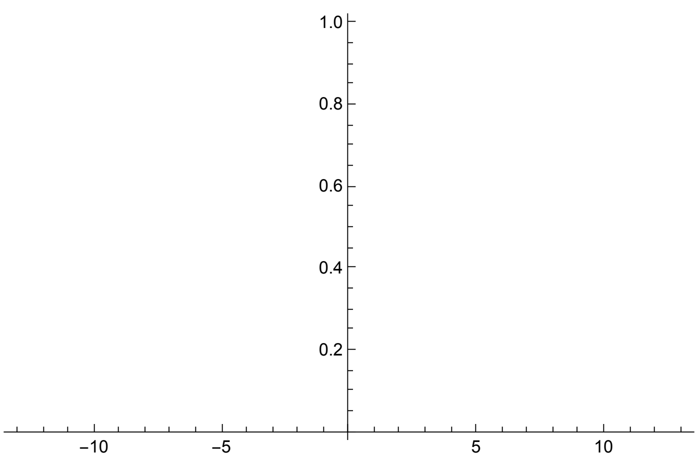
$$\mathrm{Plot}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\mathrm{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}},\,\{\theta,\,-13,\,13\}\right]$$



$$\mathrm{Solve}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\mathrm{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}} == 1,\,\theta\right]$$

$$\left\{\left\{\theta\to\mathrm{ArcSin}\left[\frac{180}{\pi}\right]\right\}\right\}$$

$$\mathrm{Plot}\left[\mathrm{ArcSin}\left[\frac{180}{\pi}\right]\,x,\,\{x,\,-13,\,13\}\right]$$



$$\mathrm{Reduce}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\mathrm{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}}\right]$$

$$\mathrm{Reduce}\left[\frac{\pi\,\sqrt{4\,\pi-\theta}\,\sqrt{\theta}\,\mathrm{Sin}[\theta]}{180\,\sqrt{(4\,\pi-\theta)\,\theta}}\right]$$

$$\text{Solve}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}} == 2,\ \theta\right]$$

$$\left\{\left\{\theta\to\text{ArcSin}\left[\frac{360}{\pi}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}} == 3,\ \theta\right]$$

$$\left\{\left\{\theta\to\text{ArcSin}\left[\frac{540}{\pi}\right]\right\}\right\}$$

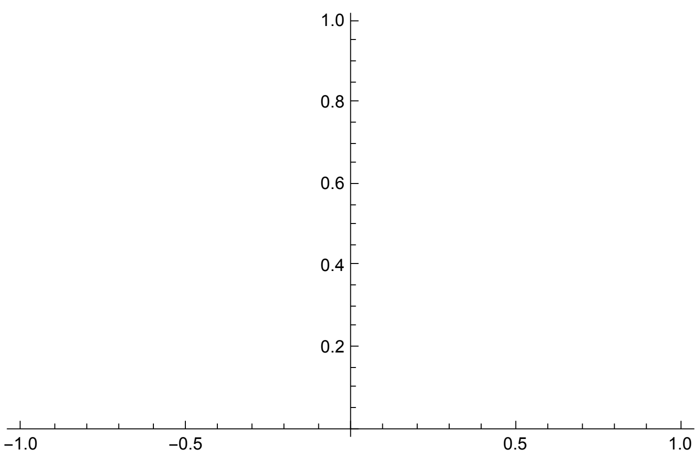
$$\text{Solve}\left[\frac{\pi\ \sqrt{4\pi-\theta}\ \sqrt{\theta}\ \text{Sin}[\theta]}{180\ \sqrt{(4\pi-\theta)\ \theta}} == e,\ \theta\right]$$

$$\left\{\left\{\theta\to\text{ArcSin}\left[\frac{180\ e}{\pi}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{1080\ c\ \sqrt{\theta}\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\pi-\theta}}\ n\ (1\ /\ (6\ (\theta)))\ ==\ c,\ \theta\right]$$

$$\left\{\left\{\theta\to\text{ArcCsc}\left[\frac{\pi}{180\ n}\right]\right\}\right\}$$

$$\text{Plot}\left[\text{ArcCsc}\left[\frac{\pi}{180\ n}\right],\ \{n,\ -1,\ 1\}\right]$$



$$\text{N}\left[\text{ArcCsc}\left[\frac{\pi}{180\times 2}\right]\right]$$

$$1.5708 - 5.4345\ i$$

$$\text{N}\left[\text{ArcCsc}\left[\frac{\pi}{180\times 1}\right]\right]$$

$$1.5708 - 4.7413\ i$$

$N\left[\text{ArcCsc}\left[\frac{\pi}{180 \times 3}\right]\right]$

1.5708 - 5.83998 i

θ

The Geometric Patterns of Perception

by Parker Emmerson

The idea of this paper is to explain how, when a wedge of arc length, t, is taken out of a circle and the circle is then put back together, keeping the initial radius as the slant of the newly formed cone, the height increases and the inital radius changes angle to the circular base, which has a new radius. The difference between the radii leads to a change in circumference for the circle of our system. That change can be considered a $D[C]\, d\theta$. The change is also then placed in terms of time. So, we have relationary time aspects fusing with axis at an infinite angle.

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle, the base of the cone, of radius r_1

$r^2 = r_1^2 + h^2$

This is the initial radius squared expressed as the slant of the cone in terms of the height of the cone, h, and the radius of the base of the cone, r_1

$r = \sqrt{(r_1^2 + h^2)}$

$t = \theta r$

$t / \theta = r$

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r \quad \rightarrow$ Equation 7

$r_1^2 == r^2 - h^2$

$r_1 = \sqrt{(r^2 - h^2)}$

$h < r$

Solve[r_1^2 + h^2 == r^2, h]

$\left\{\left\{h \rightarrow -\sqrt{r^2 - r_1^2}\right\}, \left\{h \rightarrow \sqrt{r^2 - r_1^2}\right\}\right\}$

$\mathbf{t = C - C_2 = 2\pi r - 2\pi r_1}$

Put

$r_1 = \sqrt{(r^2 - h^2)}$

in for the equation of the base of the cone of Equation 7.

$t = C - C_2 =$

$2\pi r - 2\pi r_1 = 2\pi\,(t/\theta) - 2\pi\,\sqrt{((t/\theta)^2 - h^2)} = t$

$(t/\theta) = r$

$\left(2\pi\,(r) - 2\pi\,\sqrt{((r)^2 - h^2)}\right) = t$

Add $2\pi\,\sqrt{((r)^2 - h^2)}$ to both sides

$t + 2\pi\,\sqrt{((t/\theta)^2 - (h^2))} = 2\pi\,(t/\theta) = 2\pi r$

Subtract t from both sides

$2\pi\,\sqrt{((t/\theta)^2 - (h^2))} = 2\pi\,(t/\theta) - t = 2\pi r - t$

divide by 2π on both sides

$(t/\theta) - t/2\pi = \sqrt{((t/\theta)^2 - (h^2))} = r_1 = \sqrt{((r)^2 - (h^2))}$

$(t/\theta) - t/(2\pi)$

$$-\frac{t}{2\pi} + \frac{t}{\theta}$$

Square both sides

$((t/\theta) - (t/2\pi))^2 = ((t/\theta)^2 - (h^2)) = (r_1{}^2)$

add (h^2) to both sides

$(h^2) + ((t/\theta) - (t/2\pi))\,((t/\theta) - (t/2\pi)) = (t/\theta)^2 = r^2$

$((t/\theta) - (t/2\pi))^2$

$((r) - (\theta * r/2\pi))^2$

$$\left(r - \frac{\pi r \theta}{2}\right)^2$$

$$\left(-\frac{(\pi * r * \theta)}{2} + \frac{(r * \theta)}{\theta}\right)^2$$

$$\left(r - \frac{\pi r \theta}{2}\right)^2$$

Expand$\left[\left(r - \frac{\pi * r * \theta}{2}\right)^2\right]$

$$r^2 - \pi r^2 \theta + \frac{1}{4}\pi^2 r^2 \theta^2$$

Subtract $\left(-\frac{\pi\, r\theta}{2}+r\right)^2$ **from both sides**

(t / θ) ^2 - {(t / θ) - t / 2 π} {(t / θ) - t / 2 π} = (h^2)

(r^2 / θ^2) - {(r) - (θ * r) / 2 π} {((θ * r) / θ) - (θ * r) / 2 π}

Take the square root on both sides to find h

h = Sqrt[(t / θ) ^2 - {(t / θ) - t / 2 π} {(t / θ) - t / 2 π}] =
$\sqrt{(r)\,\hat{}\,2 - \{(r) - (\theta * r) / 2\pi\}\{(r) - (\theta * r) / 2\pi\}}$

(r) ^2 - {(r) - (θ * r) / 2 π} {(r) - (θ * r) / 2 π}

$$\left\{r^2 - \left(r - \frac{\pi\, r\, \theta}{2}\right)^2\right\}$$

$$\text{Simplify}\left[\sqrt{-\left(-\frac{\pi\, r * \theta}{2} + \frac{r * \theta}{\theta}\right)^2 + \frac{r\,\hat{}\,2 * \theta^2}{\theta^2}}\,\right]$$

$$\sqrt{r^2 - \left(r - \frac{\pi\, r\, \theta}{2}\right)^2}$$

$$\text{Simplify}\left[\sqrt{-\left(-\frac{\pi\, (r * \theta)}{2} + \frac{(r * \theta)}{\theta}\right)^2 + r\,\hat{}\,2}\,\right]$$

$$\sqrt{r^2 - \left(r - \frac{\pi\, r\, \theta}{2}\right)^2}$$

$$\text{Simplify}\left[\sqrt{-\left(-\frac{\pi\, (r\theta)}{2} + \frac{(r\theta)}{\theta}\right)^2 + r}\,\right]$$

$$\sqrt{r^2 - \left(-\frac{\pi\, r\theta}{2} + \frac{r\theta}{\theta}\right)^2}$$

Sqrt[(t / θ) ^2 - {(t / θ) - t / 2 π} {(t / θ) - t / 2 π}] =
Sqrt[((θr) / θ) ^2 - {(r) - (θr) / 2 π} ((r) - (θr) / 2 π)]

(((θr) / θ) ^2) = θ^2 r^2 / θ^2

r^2

Sqrt[((θr) / θ) ^2 - {(r) - (θr) / 2 π} ((r) - (θr) / 2 π)]

$$\sqrt{-\left(-\frac{\pi\, r\theta}{2} + \frac{r\theta}{\theta}\right)^2 + \frac{r\theta^2}{\theta^2}} = \left\{\sqrt{\frac{\theta r^2}{\theta^2} - \left(r - \frac{\pi\, \theta r}{2}\right)^2}\right\} = h$$

$$\text{Expand}\left[\left(r - \frac{\pi\,\theta * r}{2}\right)^2\right]$$

$$r^2 - \pi\, r^2\, \theta + \frac{1}{4}\pi^2\, r^2\, \theta^2$$

$$\text{Solve}\left[\left\{\sqrt{\frac{\theta r^2}{\theta^2} - \left(r - \frac{\pi\,\theta r}{2}\right)^2}\right\} == h,\ \{\theta\}\right]$$

$$h\,\hat{}\,2 = \frac{\theta r^2}{\theta^2} - \left(r - \frac{\pi\,\theta r}{2}\right)^2$$

$$r^2 - \pi\, r\, \theta r + \frac{\pi^2\,(\theta r)^2}{4} = r^2 - \pi\, r^2\, \theta + \frac{1}{4}\pi^2\, r^2\, \theta^2$$

$$\sqrt{r^2 - \left(r^2 - \pi\, r^2\, \theta + \frac{1}{4}\pi^2\, r^2\, \theta^2\right)}$$

$$\sqrt{\pi\, r^2\, \theta - \frac{1}{4}\pi^2\, r^2\, \theta^2}$$

$$\sqrt{\pi\, r^2\, \theta - \frac{1}{4}\pi^2\, r^2\, \theta^2} = h$$

Square both sides

$$\pi\, r^2\, \theta - \frac{1}{4}\pi^2\, r^2\, \theta^2 = (h\,\hat{}\,2)$$

Divide by r^2 on both sides

$$\left(\pi\, r^2\, \theta - \frac{1}{4}\pi^2\, r^2\, \theta^2\right) \Big/ (r\,\hat{}\,2) = \left((h\,\hat{}\,2) \,/\, r^2\right)$$

$$\left(\pi\ \theta - \frac{1}{4}\pi^2\ \theta^2\right) = \left((h\,\hat{}\,2) \,/\, r^2\right)$$

$$(h\,\hat{}\,2) \Big/ \left(\pi\ \theta - \frac{1}{4}\pi^2\ \theta^2\right) = r^2$$

$$h = c3\theta$$

$$(((3.0 * 10\,\hat{}\,8) * 3 * \theta)\,\hat{}\,2) \Big/ \left(\pi\ \theta - \frac{1}{4}\pi^2\ \theta^2\right) = r^2$$

$$r^2$$

$$\left((h\,\hat{}\,2) \,/\, r^2\right) = x$$

Multiply by r ^ 2; Divide by $\left(1-(\pi*\theta)+\frac{1}{4}\left(\pi^2*\theta^2\right)\right)$ on both sides

EQUATION ⌗ X .1

$$(h^2) \Big/ \left(\pi*\Theta-\frac{1}{4}\left(\pi^2*\Theta^2\right)\right) = r^2$$

set r^2 = (1 + 3 + 5 ... (2 n - 1))

$$(1+3+5\ldots(2n-1)) = (h^2) \Big/ \left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)$$

For n = 1

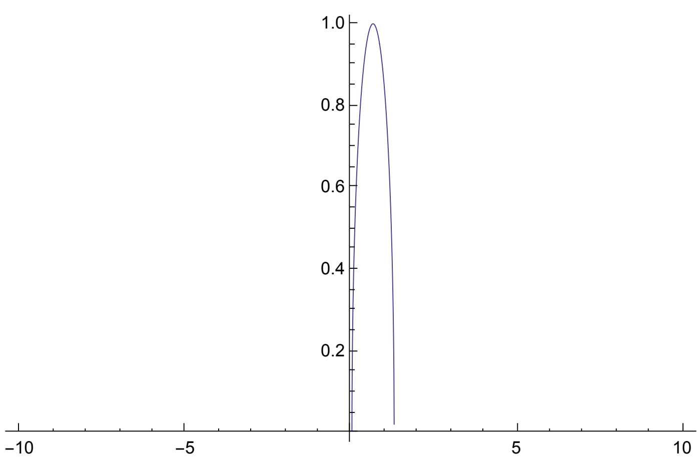
$$1 = \left((h^2) \Big/ \left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)\right),$$

so

$$\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right) = (h^2)$$

$$\sqrt{\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)} = h$$

Plot$\left[\sqrt{\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}, \{\theta, -10, 10\}\right]$



Solve$\left[\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right) == 0, \{\theta\}\right]$

$$\left\{\{\Theta\to 0\}, \left\{\Theta\to\frac{4}{\pi}\right\}\right\}$$

For n = 2;

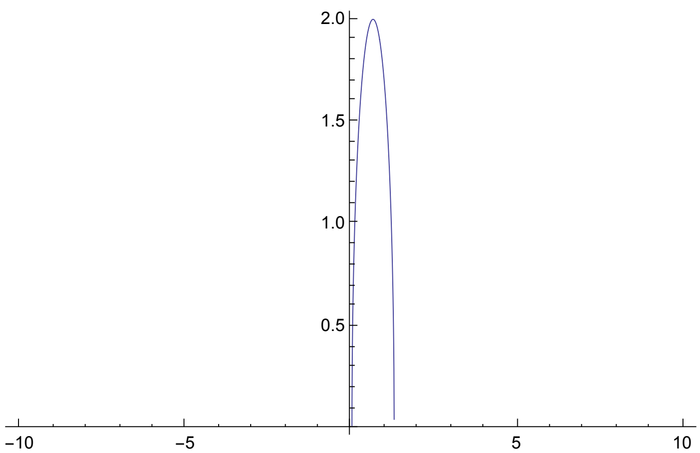
$$(1+(2n-1)) = 4 = \left((h^2) \Big/ \left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)\right)$$

So, multiplying on both sides,

$$4\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) = (h \wedge 2)$$

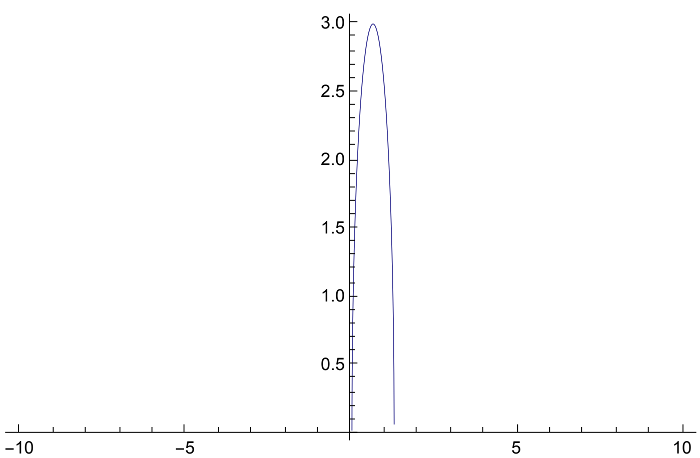
$$\sqrt{4\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)} = h$$

$$\text{Plot}\left[\sqrt{4\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}, \{\theta, -10, 10\}\right]$$



For n = 3

$$\text{Plot}\left[\sqrt{9\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}, \{\theta, -10, 10\}\right]$$



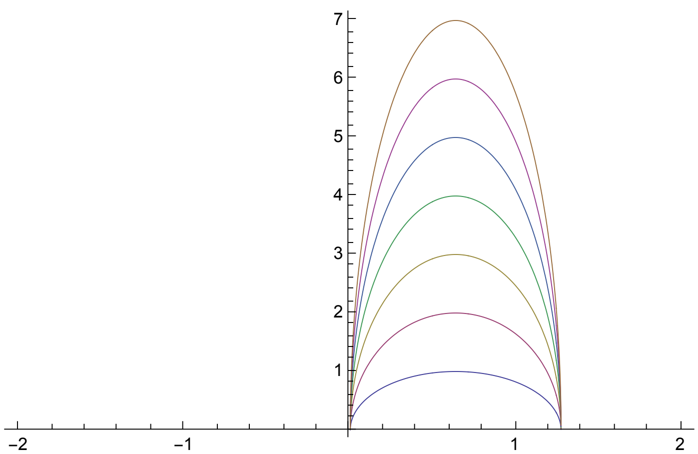
For n = 4; $\sqrt{16\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)} = h$

For n = 5; $\sqrt{25\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}=h$

For n = 6; $\sqrt{36\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}=h$

For n = 7; $\sqrt{49\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}=h$

$$\text{Plot}\left[\left\{\sqrt{\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{4\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{9\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{16\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{25\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{36\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{49\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}\right\},\ \{\theta,-2,2\}\right]$$



We have plotted what will happen to the height as theta changes. Next we want to know r_1 and its change with theta if r is the series r ^ 2 = (1 + 3 + ... (2 n - 1))

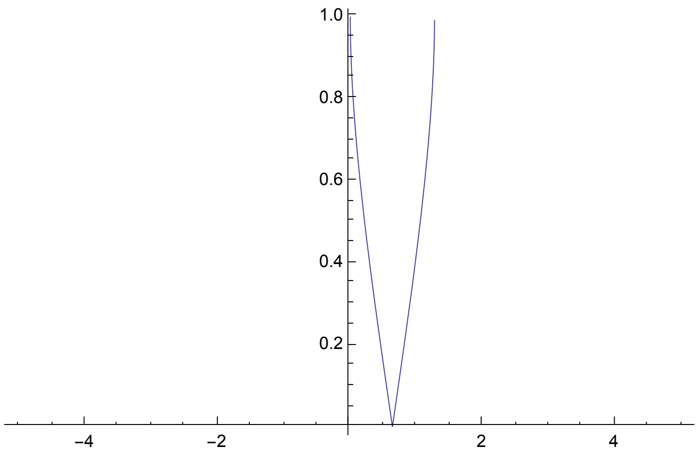
Some have noted the phalas and some have noted that the mind is sometimes thought of as the head.

Remember, $r_1=\sqrt{((t/\theta)\hat{}2-(h\hat{}2))}=r_1=\sqrt{(r\hat{}2-h\hat{}2)}$

For n = 1;

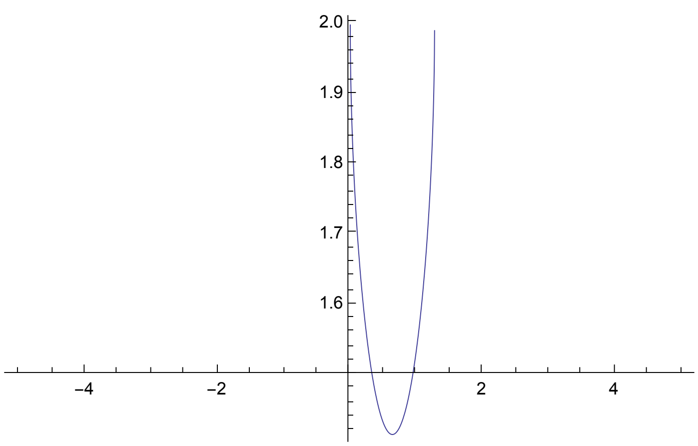
$$r_1 = \sqrt{(r\wedge 2 - h\wedge 2)} = \sqrt{\left(1 - \sqrt{\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}\right)}$$

$$\text{Plot}\left[\sqrt{\left(1 - \sqrt{\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}\right)}, \{\theta, -5, 5\}\right]$$



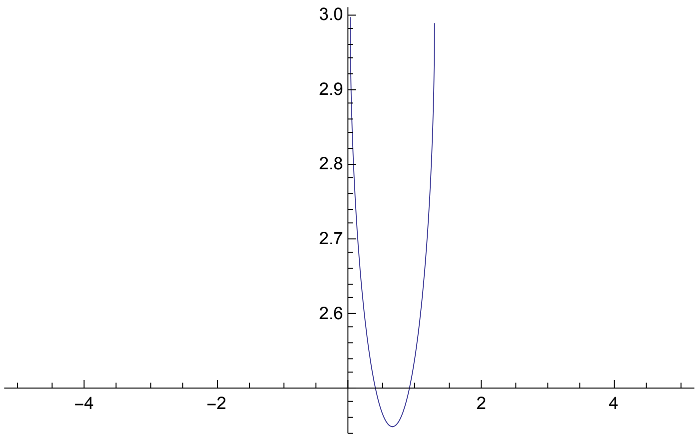
For n = 2

$$\text{Plot}\left[\sqrt{4 - \sqrt{4\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}}, \{\theta, -5, 5\}\right]$$



For n = 3;

$$\text{Plot}\left[\sqrt{9-\sqrt{9\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},\ \{\theta,-5,5\}\right]$$



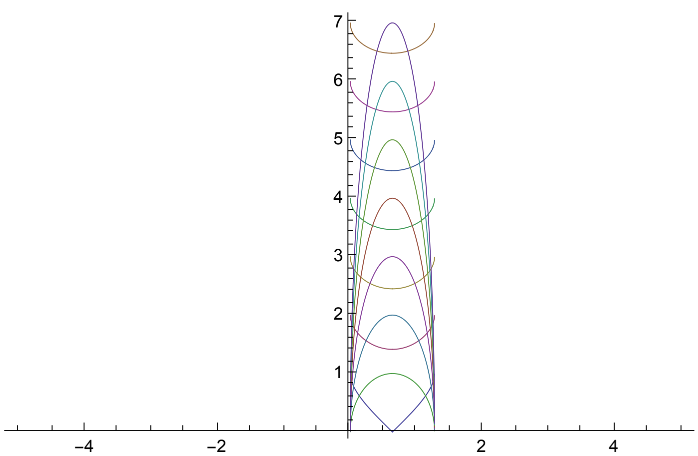
$$n=4;\ r_1=\sqrt{16-\sqrt{16\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}}$$

$$n=5;\ r_1=\sqrt{25-\sqrt{25\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}}$$

$$n=6;\ r_1=\sqrt{36-\sqrt{36\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}}$$

$$n=7;\ r_1=\sqrt{49-\sqrt{49\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}}$$

$$\text{Plot}\Big[\Big\{\sqrt{\left(1-\sqrt{\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}\right)},\ \sqrt{4-\sqrt{4\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},$$
$$\sqrt{9-\sqrt{9\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},\ \sqrt{16-\sqrt{16\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},$$
$$\sqrt{25-\sqrt{25\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},\ \sqrt{36-\sqrt{36\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},$$
$$\sqrt{49-\sqrt{49\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}},\ \sqrt{\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},$$
$$\sqrt{4\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{9\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{16\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},$$
$$\sqrt{25\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{36\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)},\ \sqrt{49\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}\Big\},$$
$$\{\theta, -5, 5\}\Big]$$



Though please note the pointed place at
which the bottom most chalace intersects the x axis.

```
Plot[{Sqrt[(1 - Sqrt[(π*θ - 1/4 (π^2*θ^2))])], Sqrt[4 - Sqrt[4 (π*θ - 1/4 (π^2*θ^2))]],
  Sqrt[9 - Sqrt[9 (π*θ - 1/4 (π^2*θ^2))]], Sqrt[16 - Sqrt[16 (π*θ - 1/4 (π^2*θ^2))]],
  Sqrt[25 - Sqrt[25 (π*θ - 1/4 (π^2*θ^2))]], Sqrt[36 - Sqrt[36 (π*θ - 1/4 (π^2*θ^2))]],
  Sqrt[49 - Sqrt[49 (π*θ - 1/4 (π^2*θ^2))]]}, {θ, -10, 10}]
```

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle,
the base of the cone, of radius r_1

So, we integrate the circumference, to get a certain area,
due to a representationality in the virtual world.

In our last discovery, we found out that the height of the cone is a function of the angle and the radius. Here, we will try to eliminate one of the variables, and we can do this, because it is the same variable as time when given a constant velocity, say of light going toward your eye. We will try to see about the concept of negative time and philosophically discuss its objective meaning. We begin by consulting Figure x.

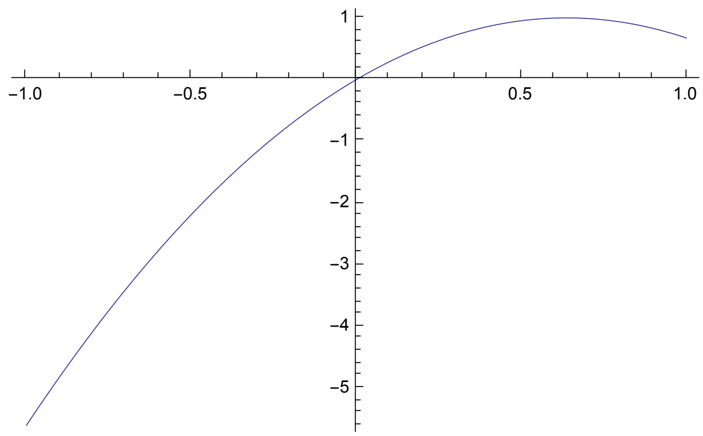
from equations of a cone, we know that

$$(h^2) \Big/ \left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) = r^2$$

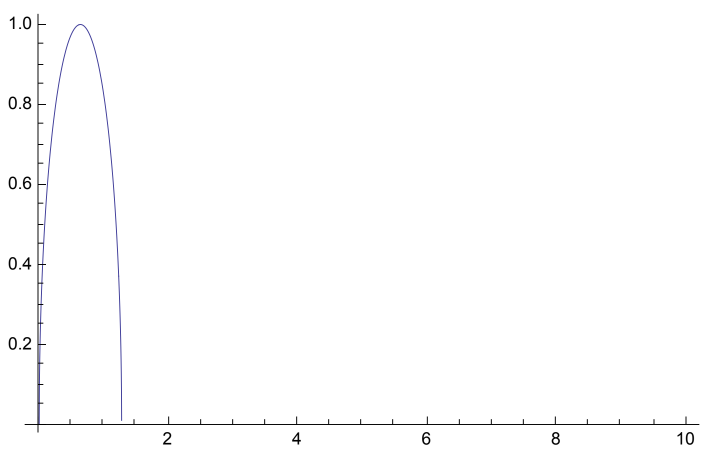
Thus, we can also say that for r^2=1, because n=1; that,

$$\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) = (h^2) \Big/ r^2 = X^2$$

```
Plot[(π * θ - 1/4 (π^2 * θ^2)), {θ, -1, 1}]
```



```
Plot[Sqrt[(π * θ - 1/4 (π^2 * θ^2))], {θ, 0, 10}]
```



Suppose that the height of the cone is transforming at the speed of light, moving up to its highest length. We see that it then comes back down, through the passage of time or angle. We can then plot purely the radius and angle measure, without the height as an inexpressible entitiy in terms of the other variables we are relating, because of the constant speed of light acting to describe the height in terms of travel through space - time. That which can be measured by the folding of the circle into a cone relates to the amount of the circle you take out from the time then to the time now. We then get the below equation

To come up with this equation, we say that h = c*t = c*f(θ)

so, we also then say that, from

EQUATION ⌗ X .1

$$(h^2)\Big/\left(\pi*\Theta-\frac{1}{4}\left(\pi^2*\Theta^2\right)\right)=r^2$$

$$\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)=(h^2)\big/r^2=X^2;$$

$$r^2\left(\pi*f[\theta]-\frac{1}{4}\left(\pi^2*f[\theta]^2\right)\right)=(h^2)=c^2*t^2$$

30 sec = π "time"

so, for our time equality to work with the angle change, we are going to have to relate 360 degrees = 60 seconds = 2 π rad. That means to go from seconds to angles, we multiply a theta given in radians by 180/π in order to go to degrees, and then convert to those degrees to seconds by multiplying by (1/6 deg.), because 60 seconds=360 degrees.

So, this means that we can say that time is equal to the amount of the circle' s angularity/arc length that we remove from the initial circle has a unit of time.

from time----->angle measure, we multiply by

From the equation
ct = c * (f[θ])

S.T.

θ is in degrees, and to go to time, we would convert

θdeg. (π rad. / 180 deg.), and from radians,
we say that thirty seconds go by every pi radians., so to cancel the radians,
we say every 30 seconds, we cover pi radians of distance. Thus,
the final conversion fom degrees to minutes runs :
θ deg. * (π rad. / 180 deg.) (60 sec / π rad.) = t

Our multiplier then is just 1 sec. / 3 deg. to go to seconds.
and we recently found that :

[(h^2) / (πr^2)] = (θ - 1 / 4 π (θ^2))

Thus, also we may say that it takes 3 deg. / sec. if we are given a time

$$c^2 * t^2 = r^2 \left(\pi * \theta - \frac{1}{4} \left(\pi^2 * \theta^2\right)\right) = c^2 * (1/3)\ \theta^2$$

$$c^2 * \left((3\ \theta)^2 \Big/ \left(\pi * \theta - \frac{1}{4} \left(\pi^2 * \theta^2\right)\right)\right) = r^2$$

$$r = \sqrt{c^2 * \left((3\ \theta)^2 \Big/ \left(\pi * \theta - \frac{1}{4} \left(\pi^2 * \theta^2\right)\right)\right)}$$

60 / 180

$$\frac{1}{3}$$

EQUATION ⌗ X .1

$$(h^2) \Big/ \left(\pi * \Theta - \frac{1}{4} \left(\pi^2 * \Theta^2\right)\right) = r^2$$

So, if we are given an angle, the generalized forms would look like this :

$$\left(c^2 * (((1/3)\ \Theta)^2) \Big/ \left(\pi * \Theta - \frac{1}{4} \left(\pi^2 * \Theta^2\right)\right)\right) = r^2$$

What happens when we factor the equation

$$\sqrt{(3.0 * 10^8)^2 * \left(((t)^2) \Big/ \left(\pi * \theta - \frac{1}{4} \left(\pi^2 * \theta^2\right)\right)\right)}$$

$$\text{Factor}\left[\sqrt{\left((3.0 * 10^8)^2 * (((1/3)\ \theta)^2) \Big/ \left(\pi * \theta - \frac{1}{4} \left(\pi^2 * \theta^2\right)\right)\right)}\right]$$

$$1.12838 \times 10^8 \sqrt{-\frac{\Theta}{-4 + \pi\ \Theta}}$$

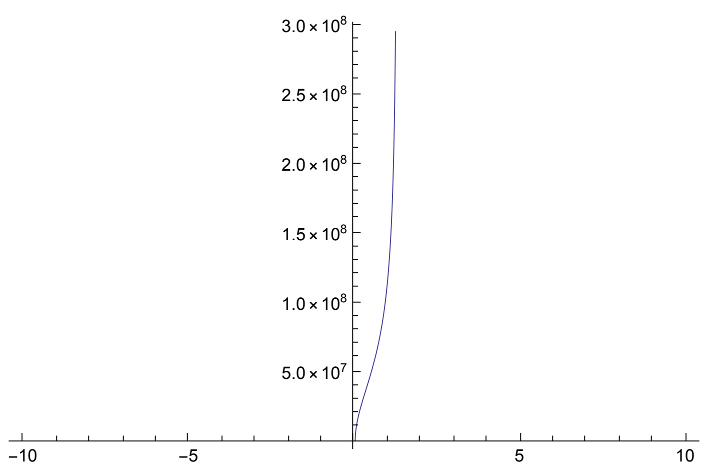
```
√(((3.0 * 10^8)^2 * ((t)^2) / (π * (θ / 3) - 1/4 (π^2 * (θ / 3)^2))))
```

$$3.\times 10^{8}\sqrt{\frac{t^{2}}{\frac{\pi\,\theta}{3}-\frac{\pi^{2}\,\theta^{2}}{36}}}$$

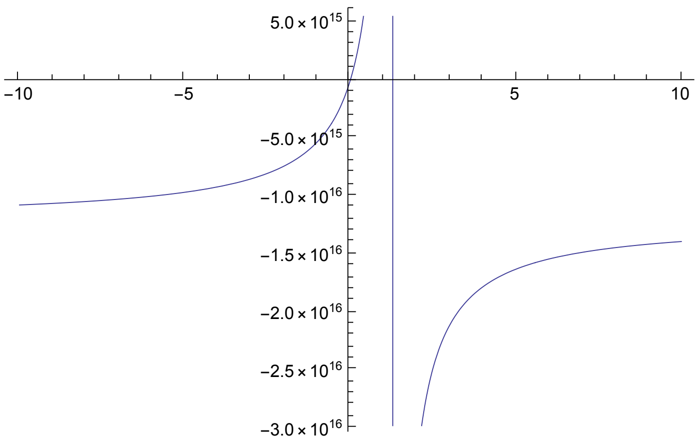
An imaginary solution.

Then we' ll plot our time in terms of theta when solved for r.

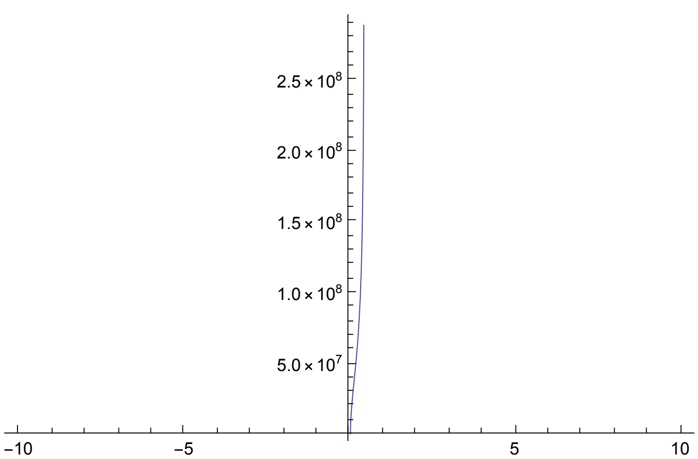
```
Plot[√(((3.0 * 10^8)^2 * (((1/3) θ)^2) / (π * θ - 1/4 (π^2 * θ^2)))), {θ, -10, 10}]
```



```
Plot[((3.0*10^8)^2*((t)^2)/(π*3 t - 1/4 (π^2*3 t^2))), {t, -10, 10}]
```




```
Plot[Sqrt[((3.0*10^8)^2*(((t)^2)/(π*3 t - 1/4 (π^2*(3 t)^2))))], {t, -10, 10}]
```



where c is the speed of light and 3 * t = the angle we have taken out of the circle,
when keeping the initial radius of the circle as the slant of the new cone,
and our new radius of the base of the cone is determined

$$(\texttt{c}^{\wedge}2) = \left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) \texttt{r}^{\wedge}2 \,/\, (((1/3)\ \theta)^{\wedge}2)$$

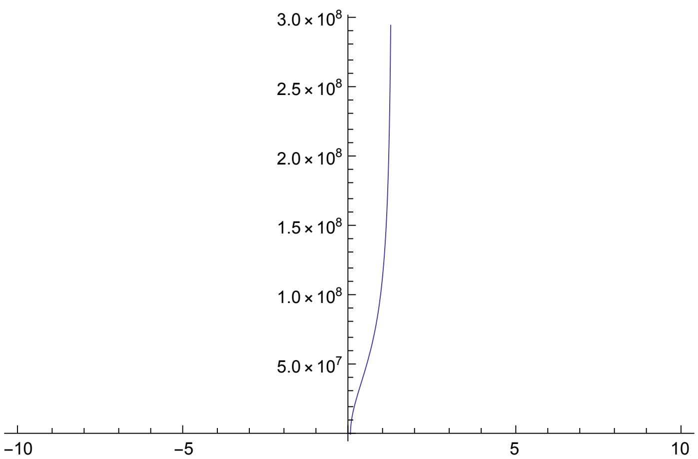
$$(\texttt{c}^{\wedge}2)\,/\,\texttt{r}^{\wedge}2 = \left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) \Big/ \ (((1/3)\ \theta)^{\wedge}2)$$

$$\texttt{Solve}\left[\left((3.0 * 10^{\wedge}8)^{\wedge}2 * \left((3\ \theta)^{\wedge}2 \Big/ \left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)\right)\right) == \texttt{r},\ \theta\right]$$

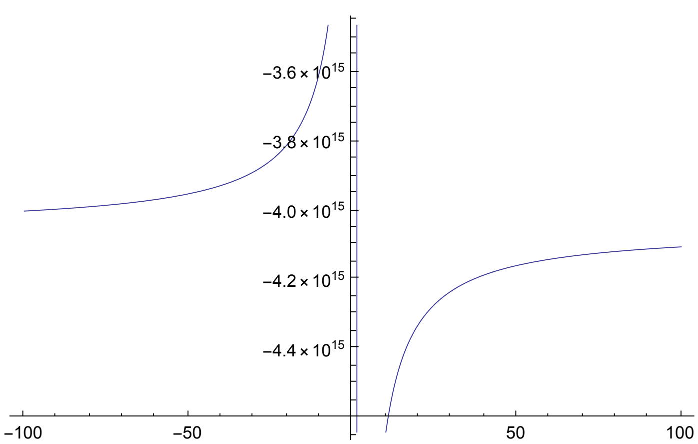
$$\left\{\left\{\theta \to \frac{12.5664\ \texttt{r}}{3.24 \times 10^{18} + 9.8696\ \texttt{r}}\right\}\right\}$$

$$\left\{\left\{\theta \to \left(\frac{12.566370614359172\grave{}\ \texttt{r}}{3.24\grave{}*^{\wedge}18 + 9.869604401089358\grave{}\ \texttt{r}}\right)\right\}\right\}$$

$$\texttt{Plot}\left[\sqrt{((3.0 * 10^{\wedge}8)^{\wedge}2) \Big/ \left(\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) \Big/ \ (((1/3)\ \theta)^{\wedge}2)\right)},\ \{\theta, -10, 10\}\right]$$



$$\texttt{Plot}\left[((3.0 * 10^{\wedge}8)^{\wedge}2) \Big/ \left(\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right) \Big/ \ (((1/3)\ \theta)^{\wedge}2)\right),\ \{\theta, -100, 100\}\right]$$



But to now place θ in terms of r, we see a new plot

$$3\left(\frac{\pi}{\frac{\pi}{4}+\frac{9.\times 10^{12}}{r^2}}\right) = t$$

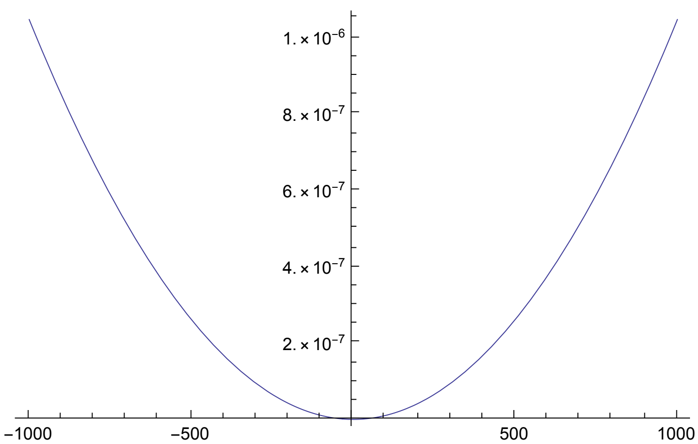
$$\text{Factor}\left[3\left(\frac{\pi}{\frac{\pi}{4}+\frac{9.`*\text{^}12}{r^2}}\right)\right]$$

$$\frac{37.6991\, r^2}{3.6\times 10^{13}+3.14159\, r^2}$$

$$\text{Simplify}\left[3\left(\frac{\pi}{\frac{\pi}{4}+\frac{9.`*\text{^}12}{r^2}}\right)\right]$$

$$\frac{9.42478\, r^2}{9.\times 10^{12}+0.785398\, r^2}$$

$$\text{Plot}\left[3\left(\frac{\pi}{\frac{\pi}{4}+\frac{9.`*\text{^}12}{r^2}}\right), \{r, -1000, 1000\}\right]$$



$$\frac{\pi}{\frac{\pi}{4}+\frac{9.`*\text{^}12}{r^2}} = \theta = dt = \text{change in time}$$

$$\theta\left(\frac{\pi}{4}+\frac{9.`*\text{^}12}{r^2}\right) = \pi$$

$$\theta\,\frac{9.`*\text{^}12}{r^2} = \pi - \theta\,\frac{\pi}{4}$$

$$r^2 = \theta\,(9.`*\text{^}12)/\pi - \theta\,\frac{\pi}{4}$$

$$\sqrt{\theta\,(9.`*\text{^}12)/\pi - \theta\,\frac{\pi}{4}} = r$$

For n = 1;

$\theta * (9.`*^{\wedge}12) \Big/ \left(\pi - \theta * \frac{\pi}{4}\right) = r = 1;$

Thus, $\left(\pi - \theta * \frac{\pi}{4}\right) = \theta * (9.`*^{\wedge}12);$

and,

$\pi \Big/ \left((9.`*^{\wedge}12) + \frac{\pi}{4}\right) = \theta o\ = o.a\,k\pi = \theta \left(\frac{\pi}{4} + \frac{9.`*^{\wedge}12}{r^2}\right);$

$\pi = \theta * \frac{\pi}{4} + \theta * \frac{9.`*^{\wedge}12}{r^2};$

$\pi - \theta * \frac{\pi}{4} = \theta * \frac{9.`*^{\wedge}12}{r^2};$

$r^2 \left(\pi - \theta * \frac{\pi}{4}\right) = \theta * (9.`*^{\wedge}12);$

$\theta * (9.`*^{\wedge}12) \Big/ \left(\pi - \theta * \frac{\pi}{4}\right) = r^2;$

$\sqrt{\left\{\theta * (9.`*^{\wedge}12) \Big/ \left(\pi - \theta * \frac{\pi}{4}\right)\right\}} = r\backslash$

$\text{Solve}\left[\left(c^{\wedge}2 * (((1/3)\,\theta)^{\wedge}2) \Big/ \left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)\right) == r^{\wedge}2, \theta\right]$

$\left\{\left\{\theta \to \frac{36\,\pi\,r^2}{4\,c^2 + 9\,\pi^2\,r^2}\right\}\right\}$

$N\left[\pi \Big/ \left((9.`*^{\wedge}12) + \frac{\pi}{4}\right)\right]$

3.49066×10^{-13}

$\text{Solve}\left[\sqrt{\left\{\theta * (9.`*^{\wedge}12) \Big/ \left(\pi - \theta * \frac{\pi}{4}\right)\right\}} == r, \theta\right]$

Solve::eqf : $\left\{3. \times 10^6 \sqrt{\frac{\theta}{\pi + \text{Times}[\ll 3 \gg]}}\right\} == r$ is not a well–formed equation. ≫

Solve::eqf : $\left\{3. \times 10^6 \sqrt{\frac{\theta}{\pi + \text{Times}[\ll 3 \gg]}}\right\} == r$ is not a well–formed equation. ≫

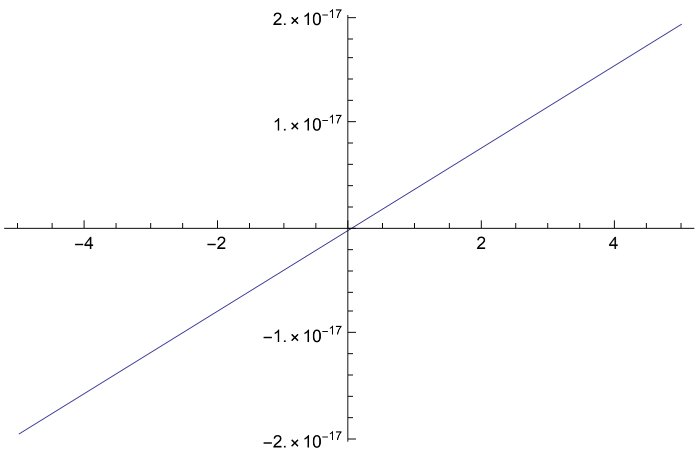
$$\text{Solve}\left[\left\{3.\grave{}*\wedge 6\ \sqrt{\frac{\theta}{\pi-\frac{\pi\,\theta}{4}}}\right\} == r,\ \theta\right]$$

Solve::eqf : $\left\{3.\times 10^{6}\ \sqrt{\frac{\theta}{\pi+\text{Times}[\ll 3\gg]}}\right\} == r$ is not a well−formed equation. ≫

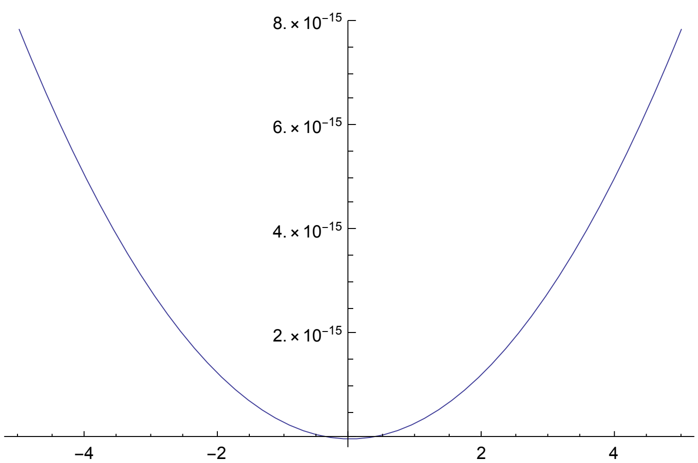
Solve::eqf : $\left\{3.\times 10^{6}\ \sqrt{\frac{\theta}{\pi+\text{Times}[\ll 3\gg]}}\right\} == r$ is not a well−formed equation. ≫

$$\text{Solve}\left[\left\{3.\times 10^{6}\ \sqrt{\frac{\Theta}{\pi-\frac{\pi\,\Theta}{4}}}\right\} == r,\ \Theta\right]$$

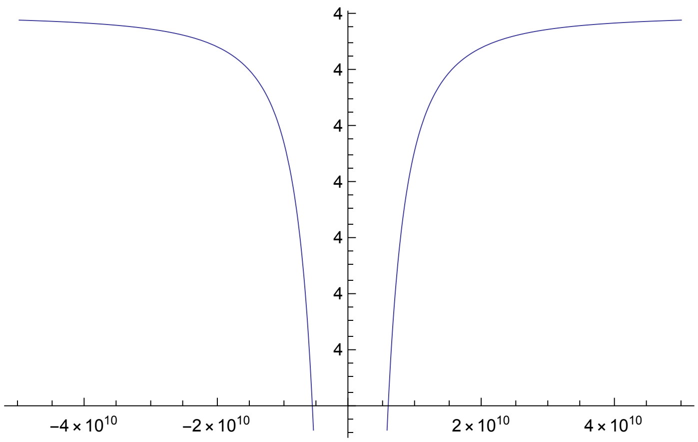
$$\text{Plot}\left[\frac{12.566370614359172\grave{}\ r}{3.24\grave{}*\wedge 18+9.869604401089358\grave{}\ r},\ \{r,-5,5\}\right]$$



$$\text{Plot}\left[\frac{36\,\pi\,r^{2}}{4\,(3.0*10\wedge 8)^{2}+9\,\pi^{2}\,r^{2}},\ \{r,-5,5\}\right]$$

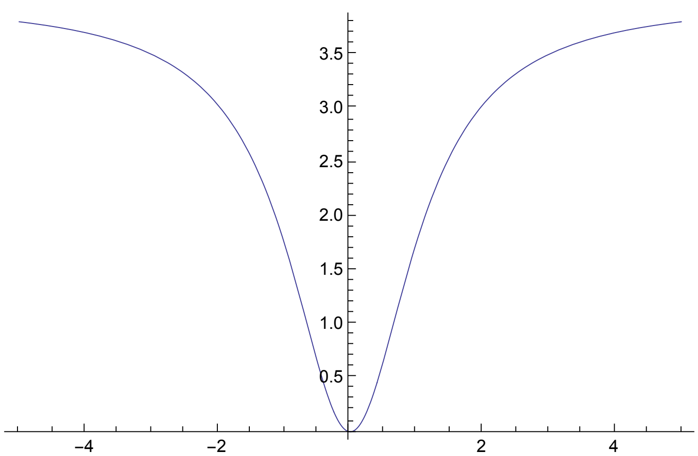


```
Plot[π/(π/4 + 9.`*^12/r^2), {r, -50 000 000 000, 50 000 000 000}]
```

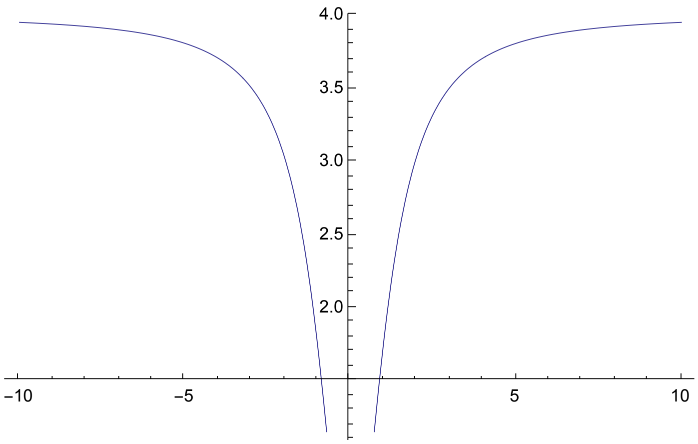



```
This plot maps what forever looks like.
```

```
Plot[π/(π/4 + 1/r^2), {r, -5, 5}]
```



$$\text{Plot}\left[\frac{\pi}{\frac{\pi}{4}+\frac{1}{r^2}}, \{r, -10, 10\}\right]$$

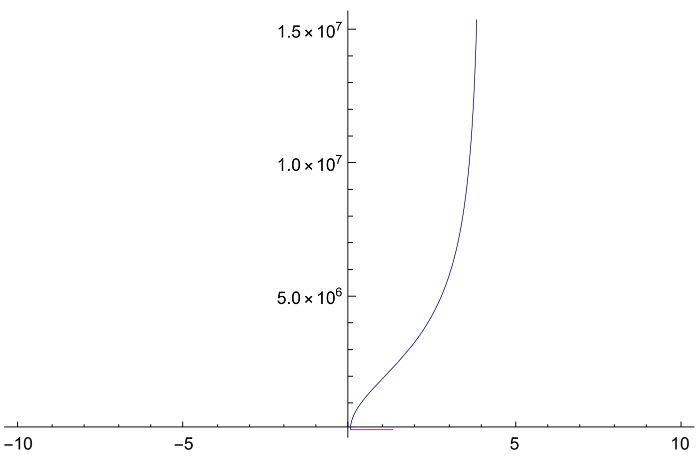


This is one forever within the four forevers. Does it really matter what part of forever time I take out of the circle to make my circle? no, not really, all time is all circle at the same time. We start from where the measurement begins.

This is a plot for fun, and interest.

$$\text{Plot}\left[\left\{\sqrt{\left\{\theta * (9.\grave{} *\char`^12) \Big/ \left(\pi - \theta * \frac{\pi}{4}\right)\right\}}, \sqrt{\left(1 - \sqrt{\left(\pi * \theta - \frac{1}{4}\left(\pi^2 * \theta^2\right)\right)}\right)}\right\}, \{\theta, -10, 10\}\right]$$

Goes all the way probably up to 2π, but that is just my guess.



Thus, we show that we must combine the plot for r when n = 1 and the plot for r when the speed of light is plugged into the distance for r = h. Only when we do this, do we even see anything close to 2π.

However, if we want to make sure that our units are correct,
we will create a new change of variables by converting units.

$$\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{r^2}} = \theta = \mathrm{dt} = \text{change in time}$$

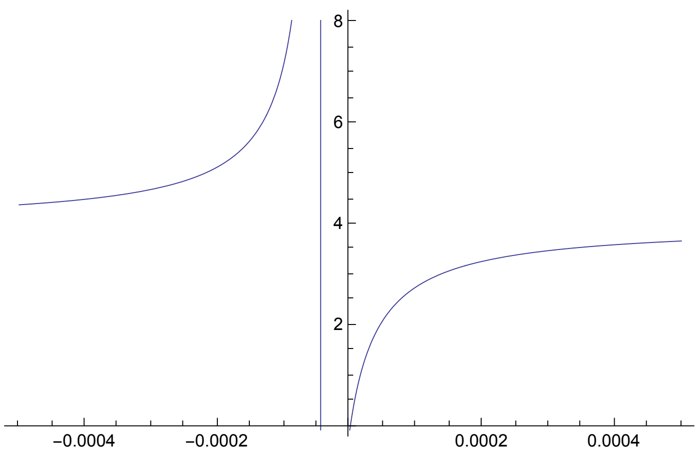
Converting theta into a change in time requires some thought,
and also the multiplier $(\pi / 3)$.

Speculation : Dark matter is present due to the incorrect integrations of the circle when compared with the luminosity of a change in height of the cone or the distance of an event to the subject.

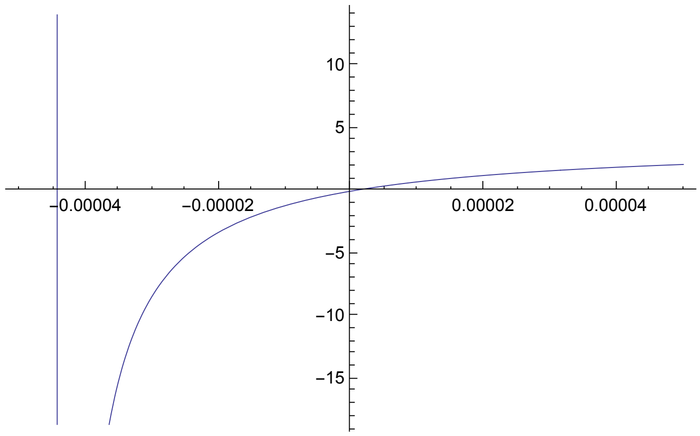
CONCLUSION

$$\mathrm{Plot}\left[\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{\left(\sqrt{(((3.0*10\hat{}8)*3*\theta)\hat{}2)\Big/\left(\pi\,\theta-\frac{1}{4}\pi^2\,\theta^2\right)}\right)^2}}, \{\theta, -. = , .0005\}\,\right]$$

$$\mathrm{Plot}\left[\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{\left(\sqrt{(((3.0*10\hat{}8)*3*\theta)\hat{}2)\Big/\left(\pi\,\theta-\frac{1}{4}\pi^2\,\theta^2\right)}\right)^2}}, \{\theta, -.0005, .0005\}\right]$$



$$\text{Plot}\left[\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{\left(\sqrt{(((3.0*10\hat{}8)*3*\theta)\hat{}2)\Big/\left(\pi\ \theta-\frac{1}{4}\pi^2\ \theta^2\right)}\right)^2}},\ \{\theta,\ -.00005,\ .00005\}\right]$$



$$\text{Plot}\left[\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{\sqrt{\frac{\left((3.\grave{}\times10^8)\ 3\ \theta\right)^2}{\pi\ \theta-\frac{\pi^2\ \theta^2}{4}}}^{\,2}}},\ \{\theta,\ -500,\ 500\}\right]$$

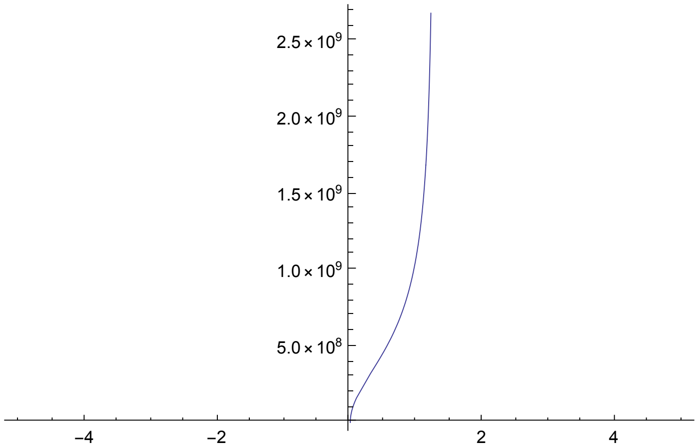
$$\sqrt{(((3.0*10\hat{}8)*3*\theta)\hat{}2)\Big/\left(\pi\ \theta-\frac{1}{4}\pi^2\ \theta^2\right)}\ =\ \text{r}$$

$$\text{Solve}\left[\frac{\pi}{\frac{\pi}{4}+\frac{9.\grave{}*\hat{}12}{\sqrt{\frac{\left((3.\grave{}\times10^8)\ 3\ \theta\right)^2}{\pi\ \theta-\frac{\pi^2\ \theta^2}{4}}}^{\,2}}}==\theta,\ \theta\right]$$

$\{\{\theta\to 0.\},\ \{\theta\to 4.0001\}\}$

$$\sqrt{(((3.0*10\hat{}8)\ 3\ \theta)\hat{}2)\Big/\left(\pi*\theta-\frac{1}{4}\left(\pi^2*\theta^2\right)\right)}\ :=\ \text{r}$$

```
Plot[Sqrt[(((3.0*10^8) 3 θ)^2) / (π*θ - 1/4 (π^2*θ^2))], {θ, -5, 5}]
```



Drawing Hypocycloids with these equations, we find that :

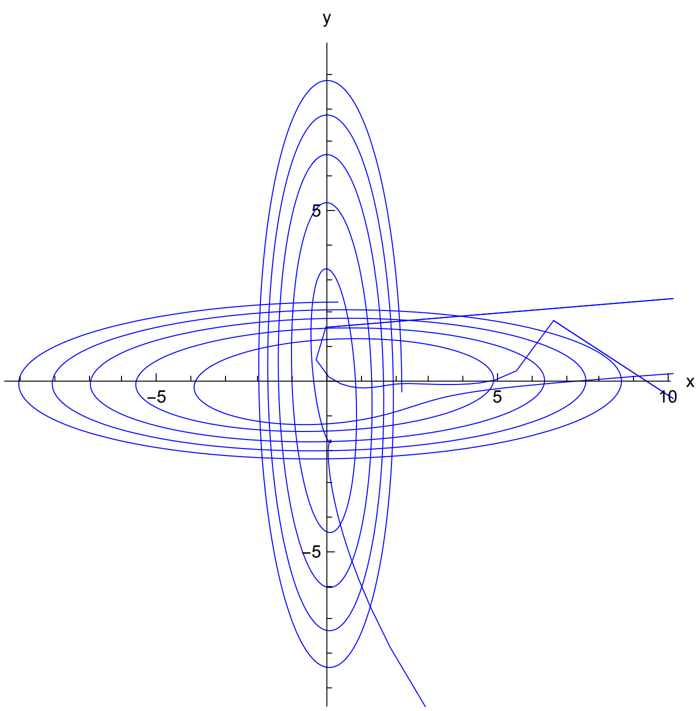
These are the Specific plots,
which I invented by folding of a cone into circle, which is Divine Proportion.

```
Clear[x, y, t, a, b,  tmini, tmaxi]
```

$$a = \frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+t+\pi^2 t}};$$

$$b = \sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)};$$

```
tmini = -10 * Pi;
tmaxi = 10 * Pi;
{x[t_], y[t_]} =
  {(a - b) * Cos[t] + b * Cos[(a - b) / b * t], (a - b) * Sin[t] - b * Sin[(a - b) / b * t]};

hypocycloid =
     ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.0015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```

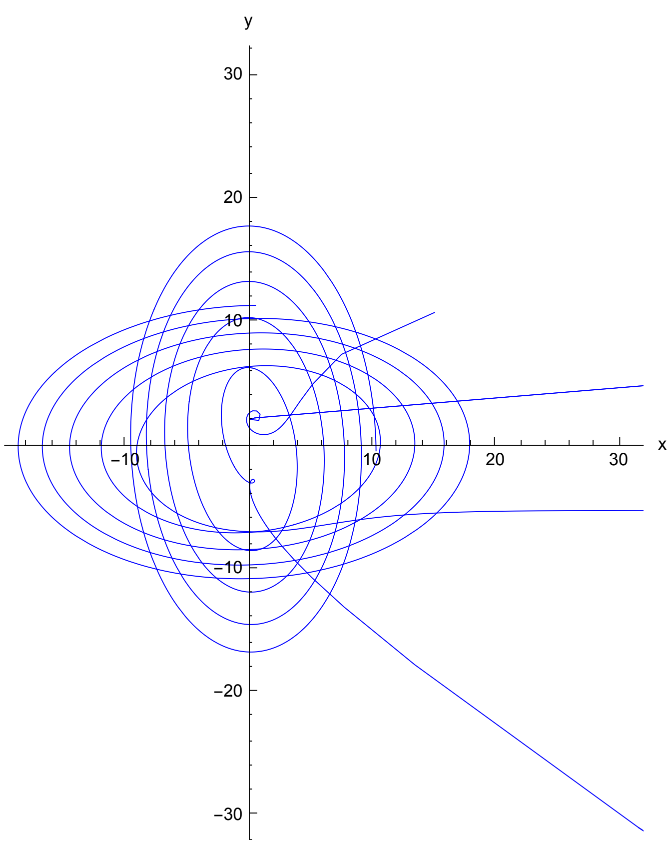


```
Clear[x, y, t, a, b,  tmini, tmaxi]
```

$$a = \text{GoldenRatio} * \frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+t+\pi^2 t}};$$

$$b = \sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)} \Big/ \text{GoldenRatio};$$

```
tmini  = -10 * Pi;
tmaxi = 10 * Pi;
{x[t_], y[t_]} =
  {(a - b) * Cos[t] + b * Cos[(a - b) / b * t], (a - b) * Sin[t] - b * Sin[(a - b) / b * t]};

hypocycloid =
     ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.0015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```



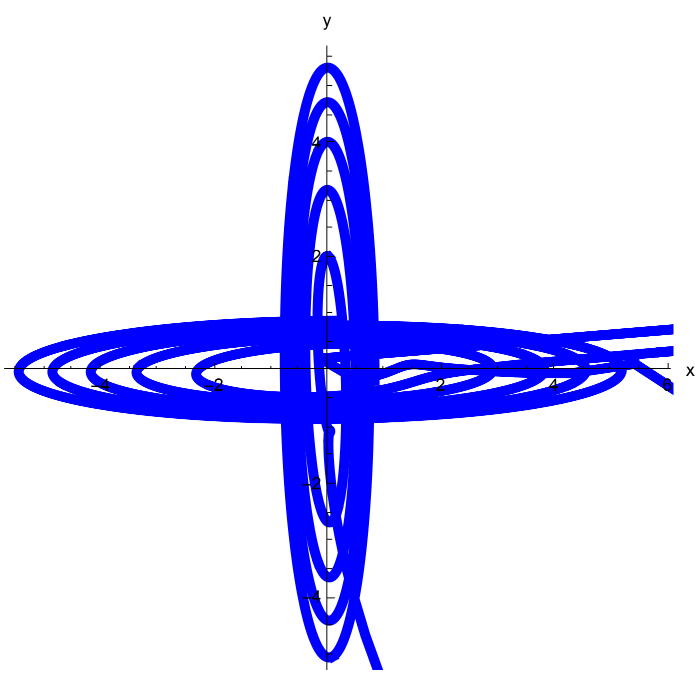
$$\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+t+\pi^2 t}} \text{ is the derivative of } \sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)}$$

```
Clear[x, y, t, a, b,  tmini, tmaxi]
```

$$a = \frac{3\left(1+\pi^2\right)}{\text{GoldenRatio} * 2\,\pi\,\sqrt{-2\,\pi + t + \pi^2\,t}};$$

$$b = \text{GoldenRatio}\,\sqrt{9\left(1 - t - \frac{t}{\pi^2} + \frac{2}{\pi}\right)} \Big/ \text{GoldenRatio};$$

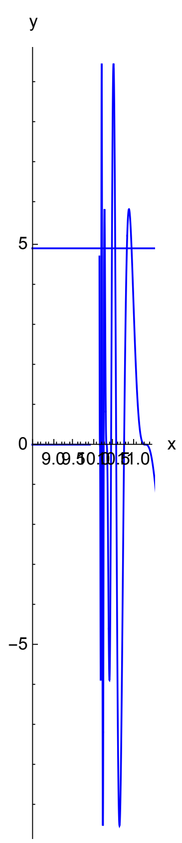
```
tmini  =  -10 * Pi;
tmaxi = 10 * Pi;
{x[t_], y[t_]} =
  {(a - b) * Cos[t] + b * Cos[(a - b) / b * t], (a - b) * Sin[t] - b * Sin[(a - b) / b * t]};

hypocycloid =
     ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```



```
Clear[x, y, t, a, b,  tmini, tmaxi]
a = 10;
b = 4;
tmini  =  -50 * Pi;
tmaxi = 50 * Pi;
{x[t_], y[t_]} =
```

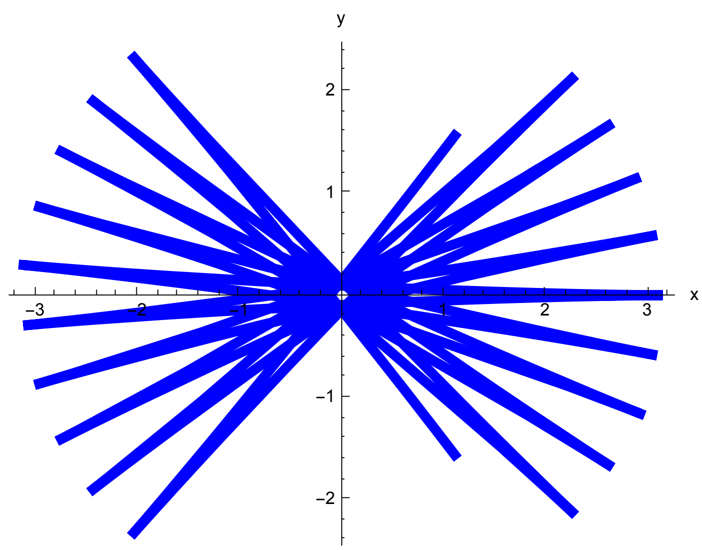
$$\left\{(a-b) * \mathrm{Cos}\left[\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+t+\pi^2 t}}\right] + b * \mathrm{Cos}\left[(a-b)/b * \frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+t+\pi^2 t}}\right],\right.$$
$$\left.(a-b) * \mathrm{Sin}\left[\sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)}\right] - b * \mathrm{Sin}\left[(a-b)/b * \sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)}\right]\right\};$$

```
hypocycloid =
    ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
     PlotStyle -> {{Blue, Thickness[0.015]}},
     AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```



CHAOS!

```
Clear[x, y, t, a, b,  tmini, tmaxi]
a = π;
b = GoldenRatio;
tmini  =  -10 π;
tmaxi = 10 π;
{x[t_], y[t_]} =
  {(a - b) * Cos[t] + b * Cos[(a - b) / b * t], (a - b) * Sin[t] - b * Sin[(a - b) / b * t]};

hypocycloid =
     ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```

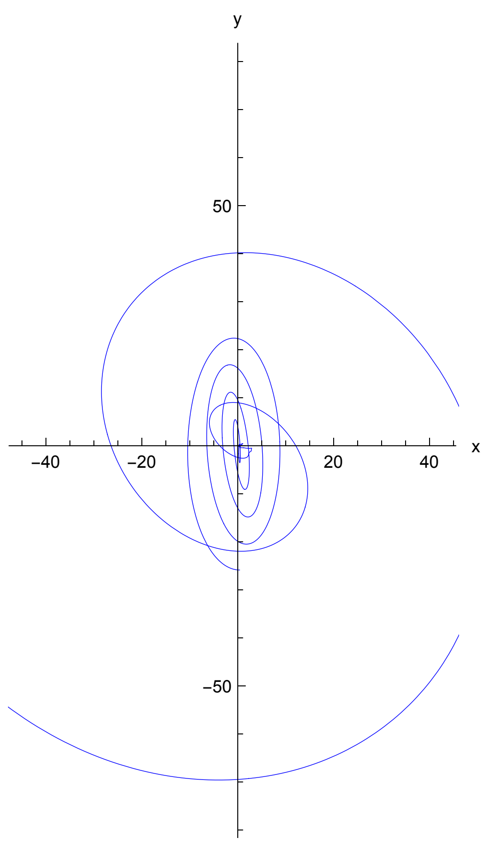


```
Clear[x, y, t, a, b,  tmini, tmaxi]
```

$$a = -\frac{\text{Log}[1+t]}{(\text{GoldenRatio})\ \text{ProductLog}[-\text{Log}[1+t]]};$$

$$b = \sqrt{9\left(1-t-\frac{t}{\pi^2}+\frac{2}{\pi}\right)} \Big/ \text{GoldenRatio};$$

```
tmini  =  -10 * Pi;
tmaxi = 10 * Pi;
{x[t_], y[t_]} =
  {(a - b) * Cos[t] + b * Cos[(a - b) / b * t], (a - b) * Sin[t] - b * Sin[(a - b) / b * t]};

hypocycloid =
     ParametricPlot[{x[t], y[t]}, {t, tmini, tmaxi},
      PlotStyle -> {{Blue, Thickness[0.0015]}},
      AspectRatio -> Automatic, AxesLabel -> {"x", "y"}]
```



$C = \pi r$

$C_2 = \pi r_1$

$r\,^\wedge 2 = r_1\,^\wedge 2 + h\,^\wedge 2$

$r = \sqrt{}\,(r_1\,^\wedge 2 + h\,^\wedge 2)$

$t = \theta r$

$t / \theta = r$

$t = C - C_2 = \pi r - \pi r_1 = \theta r$

$r_1\,^\wedge 2 == r\,^\wedge 2 - h\,^\wedge 2$

$r_1 = \sqrt{}\,(r\,^\wedge 2 - h\,^\wedge 2)$

$h < r$

$\text{Solve}[r_1\,^\wedge 2 + h\,^\wedge 2 == r\,^\wedge 2,\ h]$

$\left\{\left\{h \to -\sqrt{r^2 - r_1^2}\right\},\ \left\{h \to \sqrt{r^2 - r_1^2}\right\}\right\}$

$t = C - C_2 = \pi r - \pi r_1$

$\pi r - \pi r_1 = \pi\ (t / \theta) - \pi \sqrt{}\,((t / \theta)\,^\wedge 2 - h\,^\wedge 2)$

$\text{Solve}\left[\pi\ (t / \theta) - \pi\ \sqrt{((t / \theta)\,^\wedge 2 - (h\,^\wedge 2))}\ == t,\ h\right]$

$t + \pi\ \sqrt{((t / \theta)\,^\wedge 2 - (h\,^\wedge 2))}\ = \pi\ (t / \theta)$

$\pi\ \sqrt{((t / \theta)\,^\wedge 2 - (h\,^\wedge 2))}\ = \pi\ (t / \theta) - t$

$(t / \theta) - t / \pi = \sqrt{((t / \theta)\,^\wedge 2 - (h\,^\wedge 2))}$

$\{(t / \theta) - t / \pi\}\ \{(t / \theta) - t / \pi\} = ((t / \theta)\,^\wedge 2 - (h\,^\wedge 2))$

$(h\,^\wedge 2) + \{(t / \theta) - t / \pi\}\ \{(t / \theta) - t / \pi\} = (t / \theta)\,^\wedge 2$

$(t / \theta)\,^\wedge 2 - \{(t / \theta) - t / \pi\}\ \{(t / \theta) - t / \pi\} = (h\,^\wedge 2)$

$h = \text{Sqrt}[(t / \theta)\,^\wedge 2 - \{(t / \theta) - t / \pi\}\ \{(t / \theta) - t / \pi\}]$

$$\left\{\sqrt{-\left(-\frac{t}{\pi} + \frac{t}{\theta}\right)^2 + \frac{t^2}{\theta^2}}\right\}$$

$$\sqrt{-\left(-\frac{(\theta r)}{\pi} + \frac{(\theta r)}{\theta}\right)^2 + \frac{(\theta r)^2}{\theta^2}}$$

$$t+\pi\ \sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\ =\pi\ (t/\theta)$$

$$\theta t+\theta\pi\ \sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\ =\pi\ (t)$$

$$\theta+\left(\theta\pi\ \sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=\pi$$

$$\left(\theta\pi\ \sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=\pi-\theta$$

$$\left(\theta\pi\ \sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=\pi-\theta$$

$$\left(\sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=(\pi-\theta)\ /\theta\pi$$

$$\pi\ \left(\sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=(\pi-\theta)\ /\theta$$

$$\pi\theta\ \left(\sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t=(\pi-\theta)$$

$$\pi\theta\ \left(\left(\sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t\right)-\pi=-\theta$$

$$\pi\ \left(\left(\sqrt{((t/\theta)^{\wedge}2-(h^{\wedge}2))}\right)\Big/ t\right)-\pi=-1$$

$$\{\pi^{\wedge}2\ ((t/\theta)^{\wedge}2-(h^{\wedge}2))\}\ /\ t^{\wedge}2-\pi=-1$$

$$\{\pi^{\wedge}2\ ((t/\theta)^{\wedge}2-(h^{\wedge}2))\}\ /\ t^{\wedge}2=-1+\pi$$

$$\{\pi^{\wedge}2\ ((t/\theta)^{\wedge}2-(h^{\wedge}2))\}=t^{\wedge}2\ (-1+\pi)$$

$$\{\pi^{\wedge}2\ ((t/\theta)^{\wedge}2-(h^{\wedge}2))\}=t^{\wedge}2\ (-1+\pi)$$

$$\pi^{\wedge}2\ (t/\theta)^{\wedge}2-\pi^{\wedge}2\ (h^{\wedge}2)=t^{\wedge}2\ (-1+\pi)$$

$$\pi^{\wedge}2\ (t/\theta)^{\wedge}2=t^{\wedge}2\ (-1+\pi)+\pi^{\wedge}2\ (h^{\wedge}2)$$

$$(t/\theta)^{\wedge}2=\{t^{\wedge}2\ (-1+\pi)+\pi^{\wedge}2\ (h^{\wedge}2)\}\ /\ \pi^{\wedge}2$$

$$(t/\theta)=\sqrt{\{t^{\wedge}2\ (-1+\pi)+\pi^{\wedge}2\ (h^{\wedge}2)\}\ /\ \pi^{\wedge}2}$$

$$\left(t\Big/\ \sqrt{\{t^{\wedge}2\ (-1+\pi)+\pi^{\wedge}2\ (h^{\wedge}2)\}\ /\ \pi^{\wedge}2}\ \theta\right)=1$$

$$t\Big/\ \sqrt{\{t^{\wedge}2\ (-1+\pi)+\pi^{\wedge}2\ (h^{\wedge}2)\}\ /\ \pi^{\wedge}2}=\theta$$

$$r\,^\wedge 2 = (1+3+5+7 \ldots + (2n-1))$$

$$n = 1,\ 2,\ 3,\ 4,\ 5,\ 6 \ldots$$

$$\sqrt{-\left(-\frac{(\theta r)}{\pi}+\frac{(\theta r)}{\theta}\right)^2+\frac{(\theta r)^2}{\theta^2}} = h$$

$$\sqrt{-\left(-\frac{(\theta r)}{\pi}+\frac{(\theta r)}{\theta}\right)^2+r^2} = h$$

$$\left(-\frac{(\theta r)}{\pi}+\frac{(\theta r)}{\theta}\right)\left(-\frac{(\theta r)}{\pi}+\frac{(\theta r)}{\theta}\right)$$

$$\text{Expand}\left[\left(-\frac{\theta r}{\pi}+\frac{\theta r}{\theta}\right)^2\right]$$

$$\frac{\theta r^2}{\pi^2}+\frac{\theta r^2}{\theta^2}-\frac{2\,\theta r^2}{\pi\,\theta}$$

$$\text{Sqrt}\left[\left(-\left(\frac{\theta r^2}{\pi^2}+\frac{\theta r^2}{\theta^2}-\frac{2\,\theta r^2}{\pi\,\theta}\right)\right)+r\,^\wedge 2\right]$$

$$\sqrt{r^2-\frac{\theta r^2}{\pi^2}-\frac{\theta r^2}{\theta^2}+\frac{2\,\theta r^2}{\pi\,\theta}}$$

$$\sqrt{r^2-\frac{\theta r^2}{\pi^2}-\frac{\theta r^2}{\theta^2}+\frac{2\,\theta r^2}{\pi\,\theta}}$$

$$\sqrt{r^2-\frac{\theta r^2}{\pi^2}-\frac{\theta r^2}{\theta^2}+\frac{2\,\theta r^2}{\pi\,\theta}} = h$$

$$(h\,^\wedge 2) = r^2-\frac{\theta r^2}{\pi^2}-\frac{\theta r^2}{\theta^2}+\frac{2\,\theta r^2}{\pi\,\theta}$$

$$(h\,^\wedge 2) = r^2-\frac{\theta r^2}{\pi^2}-\frac{\theta r^2}{\theta^2}+\frac{2\,\theta r^2}{\pi\,\theta}$$

$$((h\,^\wedge 2)\ /\ r\,^\wedge 2) = 1-\frac{\theta}{\pi^2}-\theta+(2\,\theta\ /\ \pi\theta)$$

$$(h\,^\wedge 2)\Big/\left(1-\frac{\theta}{\pi^2}-\theta+(2\,\theta\ /\ \pi\theta)\right) = r\,^\wedge 2$$

```
r^2 = (1+3+5+7...+(2n-1))
```

```
for n = 1, r^2 = (2n-1)
```

$$(2n-1) = (h^2) \Big/ \left(1 - \frac{\theta}{\pi^2} - \theta + (2\theta / \pi\theta)\right)$$

$$1 = (h^2) \Big/ \left(1 - \frac{\theta}{\pi^2} - \theta + (2\theta / \pi\theta)\right)$$

$$1 - \frac{\theta}{\pi^2} - \theta + (2\theta / \pi\theta) = (h^2)$$

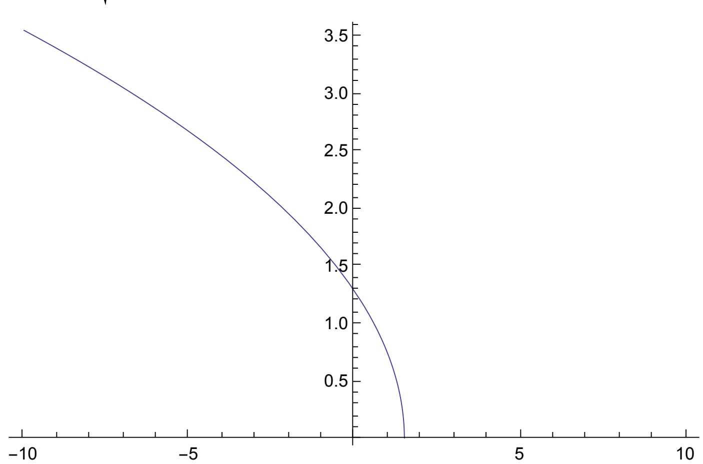
$$1 - \frac{\theta}{\pi^2} - \theta + (2\theta / \pi\theta)$$

$$1 - \Theta - \frac{\Theta}{\pi^2} + \frac{2\Theta}{\pi\Theta}$$

$$\sqrt{\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}$$

$$\sqrt{1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}}$$

$$\text{Plot}\left[\sqrt{\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}, \{\theta, -10, 10\}\right]$$



graph of n = 1

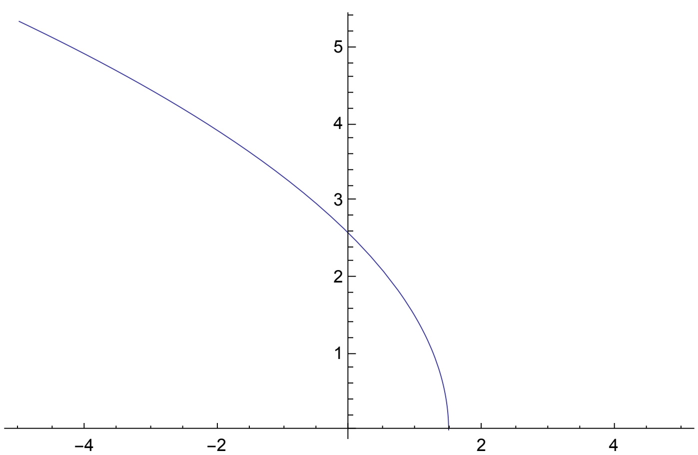
for n = 2, r^2 = 1 + (2 n - 1) = 4

$$4 = (h\wedge 2) \Big/ \left(1 - \frac{\theta}{\pi^2} + \theta + (2\,\theta / \pi\theta)\right)$$

$$4\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)$$

$$4\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right) = \text{answer2}$$

$$\text{Plot}\left[\sqrt{4\left(\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)\right)},\ \{\theta, -5, 5\}\right]$$

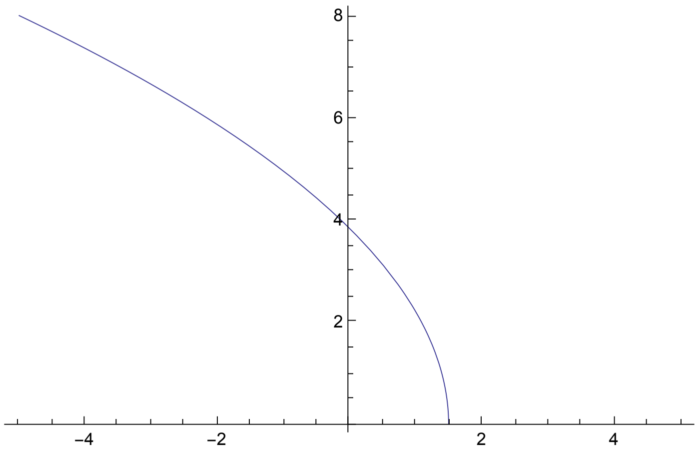


graph of n = 2

for n = 3, r^2 = 9

$$\left[\sqrt{9\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \theta\right] = \text{answer3}$$

$$\text{Plot}\left[\sqrt{9\left(\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)},\ \{\theta,-5,5\}\right]$$

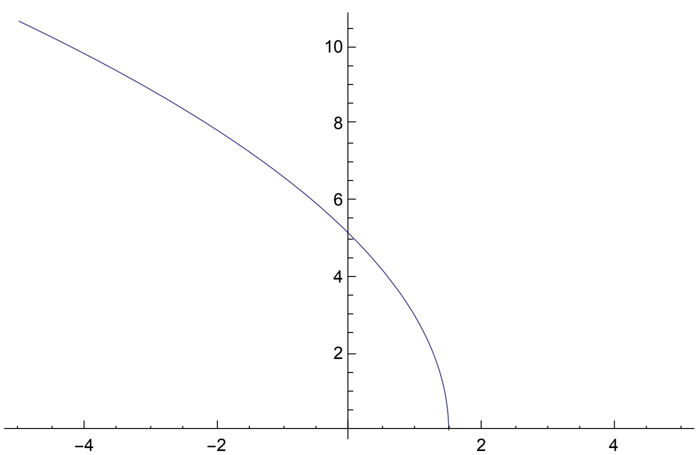


Graph of n = 3

for n = 4, r ^ 2 = 16

$$\sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)} = \text{answer4}$$

$$\text{Plot}\left[\sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \{\theta,-5,5\}\right]$$

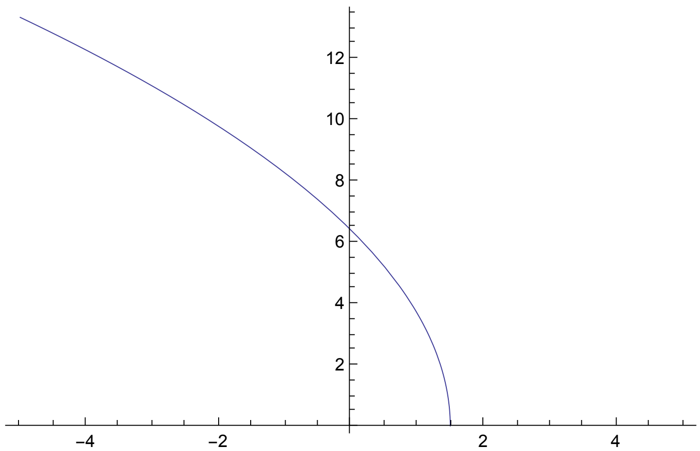


Graph for n = 4

For n = 5, (r^2) = 25

$$\sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)} = \text{answer5}$$

$$\text{Plot}\left[\sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \{\theta, -5, 5\}\right]$$

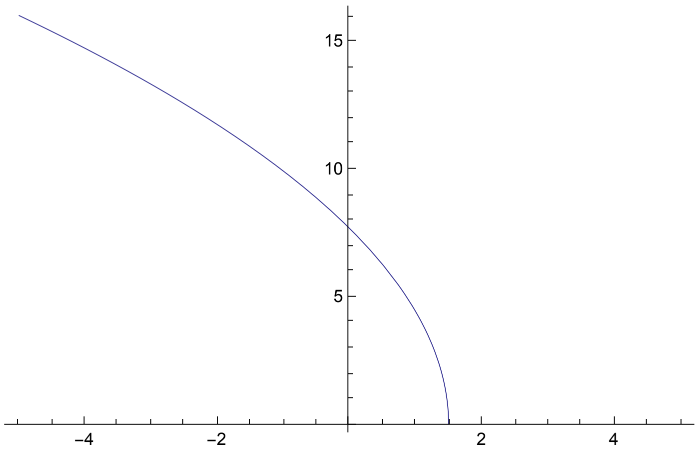


Graph for n = 5

For n = 6, r^2 = 36

$$\sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)} = \text{answer6}$$

$$\text{Plot}\left[\sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \{\theta,\ -5,\ 5\}\right]$$



Graph for n = 6

The Digression ...

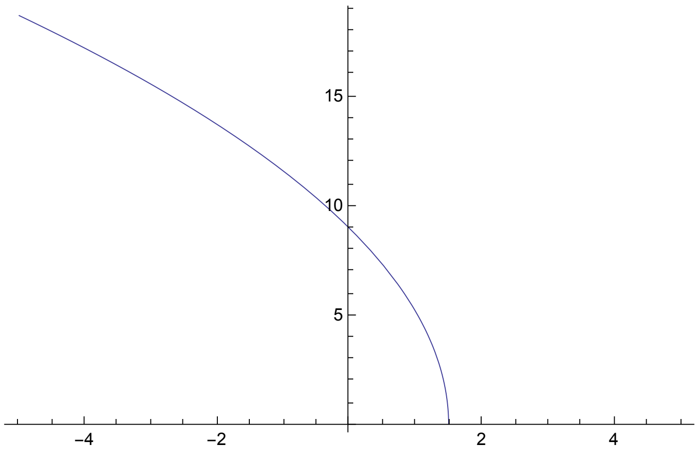
$$\int\sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\,d\theta$$

Digression The ...

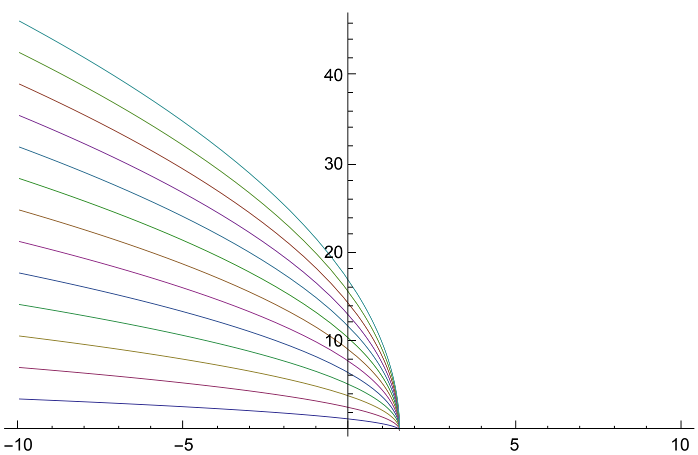
$$-\frac{4\left(2\pi-\pi^2(-1+\theta)-\theta\right)^{3/2}}{\pi+\pi^3}$$

For n = 7, r ^ 2 = 49

$$\text{Plot}\left[\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \{\theta, -5, 5\}\right]$$



$$\text{Plot}\left[\left\{\sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\right.\right.$$
$$\sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$
$$\sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{\left(100\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)},$$
$$\left.\left.\sqrt{121\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{144\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{169\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\right\},\ \{\theta, -10, 10\}\right]$$



```
r₁ = √ (r^2 - h^2)
```

r ^ 2 = (1 + 3 + 5 + 7 ... + (2 n − 1))

n = 1, 2, 3, 4, 5, 6 ...

For n = 1;

$$(2\,n-1)-\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)=1-\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)=\sqrt{\left(1-\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)}$$

$$\sqrt{\left(1-\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)}$$

$$\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}$$

$$\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}=r_1$$

For n = 2;

$$2\,n-(4)\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)=\left(4-\left((4)\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)\right)$$

$$\left(4-\left((4)\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)\right)\right)$$

$$4-4\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)$$

$$4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)$$

$$4-4\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)$$

$$\sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

For n = 3;

$$1+3+(2\,n-1)-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)=1+3+(2\,(3)-1)-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)$$

$$1+3+(2\,(3)-1)-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)$$

$$9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)$$

$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

For n = 4;

$$\sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

For n = 5;

$$\sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

For n = 6;

$$\sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

For n = 7;

$$\sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}=r_1$$

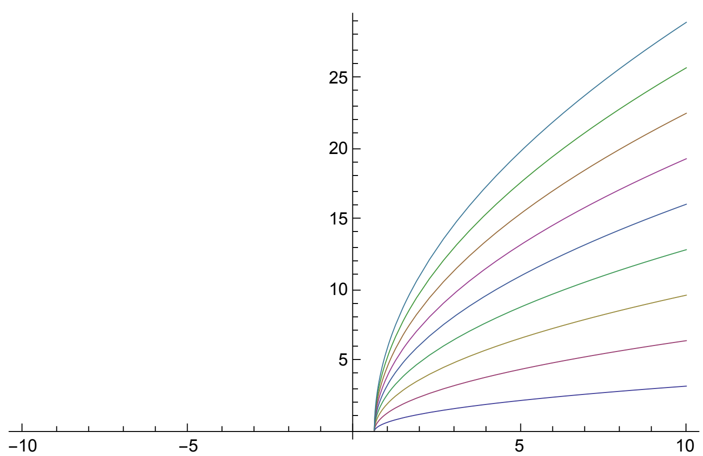
For n = 8;

$$\sqrt{64 - 64\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)} = r_1$$

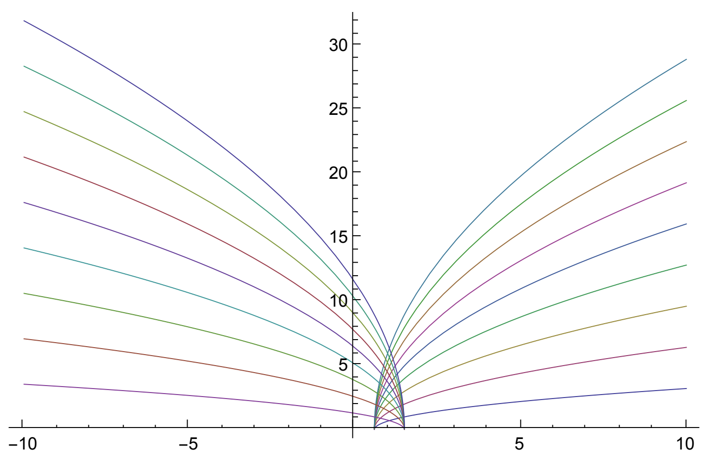
For n = 9;

$$\sqrt{81 - 81\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)} = r_1$$

$$\text{Plot}\Big[\Big\{\sqrt{-\frac{2}{\pi} + \theta + \frac{\theta}{\pi^2}},\ \sqrt{4 - 4\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{9 - 9\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{16 - 16\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{25 - 25\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{36 - 36\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{49 - 49\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{64 - 64\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)},\ \sqrt{81 - 81\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}\Big\}, \{\theta, -10, 10\}\Big]$$



$$\text{Plot}\left[\left\{\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}},\ \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\right.\right.$$
$$\sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$
$$\sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64-64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81-81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$
$$\sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$
$$\sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$
$$\left.\left.\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\right\},\ \{\theta,-10,10\}\right]$$



dC = C1 - C2

C1 = 2 πr; C2 = 2 πr1

dC = 2 πr - 2 πr1 = t = rθ

For n = 1;

$$2\,\pi r = 2\,\pi\left(\sqrt{2\,n-1}\right) = 2\,\pi$$

$$2\,\pi r1 = \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}$$

$$2\,\pi - \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}} = dC$$

$$2\,\pi - \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}$$

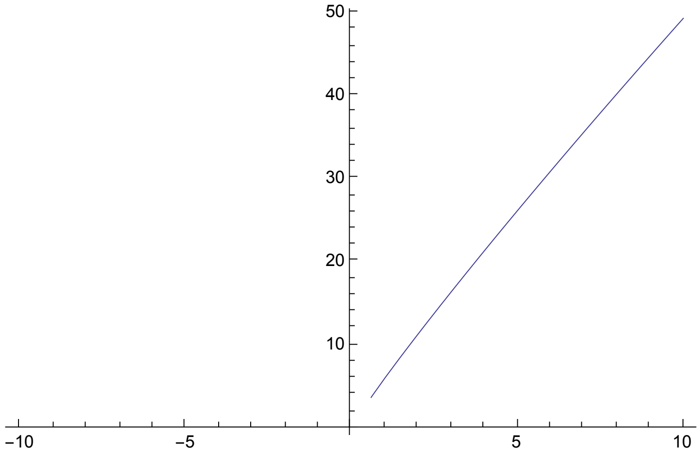
$$2\,\pi - \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}$$

$$\int\left(2\,\pi - \left(\left(\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}\right)\wedge(1/2)\right)\right)d\theta$$

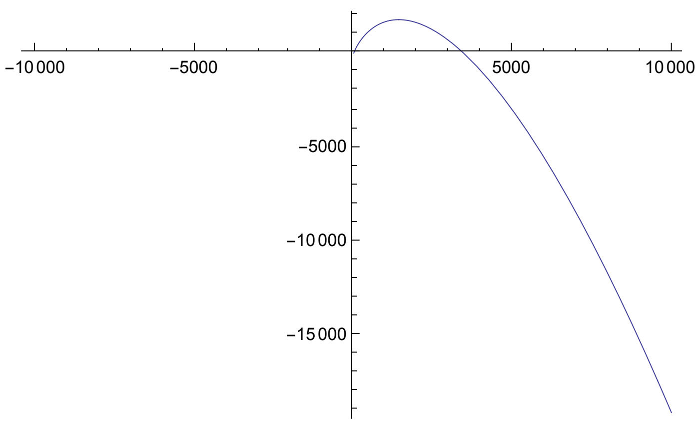
$$2\,\pi\,\theta - \frac{4\,\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}$$

$$2\,\pi\,\theta - \frac{4\,\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)} = C$$

$$\text{Plot}\left[2\,\pi\,\theta - \frac{4\,\pi^2\,\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\,\left(1+\pi^2\right)},\ \{\theta,\ -10,\ 10\}\right]$$



$$\text{Plot}\left[2\,\pi\,\theta - \frac{4\,\pi^2\,\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\,\left(1+\pi^2\right)},\ \{\theta,\ -10\,000,\ 10\,000\}\right]$$



$dC = 2\,\pi r - 2\,\pi r1 = t = r\theta$

For $n = 2$

$2\,\pi\,\left(\sqrt{2\,n}\right) = 4\,\pi$

$$4\,\pi - 2\,\pi\,\sqrt{4 - 4\,\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)} = dC = t = r\theta$$

$$\int\left(4\pi - 2\pi\sqrt{4 - 4\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}\right)d\theta$$

$$4\pi\theta - \frac{8\left(-2\pi + \theta + \pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}$$

For n = 3

$$2\pi\left(\sqrt{1+3+(2n-1)}\right) = 6\pi$$

$$\left(6\pi - 2\pi\left(\sqrt{9 - 9\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}\right)\right)$$

$$6\pi - 2\pi\sqrt{9 - 9\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}$$

$$\int\left(6\pi - 2\pi\sqrt{9 - 9\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}\right)d\theta$$

$$6\pi\theta - \frac{4\left(-2\pi + \theta + \pi^2\theta\right)^{3/2}}{1+\pi^2}$$

For n = 4 ;

$$dC = 2\pi r - 2\pi r1 = t = r\theta$$

$$2\pi(1+3+5+(2n-1)) - 2\pi\sqrt{16 - 16\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}$$

$$2(8+2n)\pi - 2\pi\sqrt{16 - 16\left(1 - \theta - \frac{\theta}{\pi^2} + \frac{2}{\pi}\right)}$$

$$2(8+2n)\pi - 2\pi\sqrt{16 - 16\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}$$

$$2\pi(1+3+5+(2(4)-1))$$

$$32\pi$$

$$32\pi - 2\pi\sqrt{16 - 16\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}$$

$$32\pi - 2\pi\sqrt{16 - 16\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}$$

$$\int\left(32\pi - 2\pi\sqrt{16 - 16\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}\right)d\theta$$

$$-8\left(-4\pi\theta + \frac{2\left(-2\pi + \theta + \pi^2\theta\right)^{3/2}}{3\left(1 + \pi^2\right)}\right)$$

For n = 5;

$$2\pi(1 + 3 + 5 + 7 + (2n - 1)) - 2\pi$$

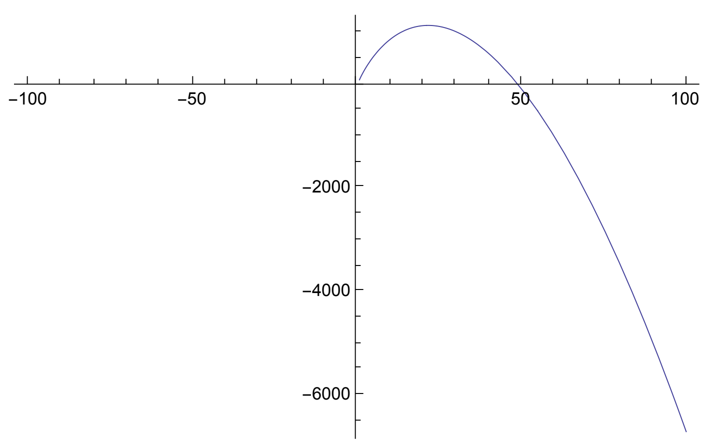
$$2\pi(1 + 3 + 5 + 7 + (2(5) - 1)) - 2\pi$$

$$48\pi$$

$$\int\left(48\pi - 2\pi\sqrt{25 - 25\left(1 + \frac{2}{\pi} - \theta - \frac{\theta}{\pi^2}\right)}\right)d\theta$$

$$48\pi\theta - \frac{20\left(-2\pi + \theta + \pi^2\theta\right)^{3/2}}{3\left(1 + \pi^2\right)}$$

$$\text{Plot}\left[48\pi\theta - \frac{20\left(-2\pi + \theta + \pi^2\theta\right)^{3/2}}{3\left(1 + \pi^2\right)}, \{\theta, -100, 100\}\right]$$



For n = 6;

2 π (1 + 3 + 5 + 7 + 9 + (2 n − 1)) − 2 π

For n = 7;

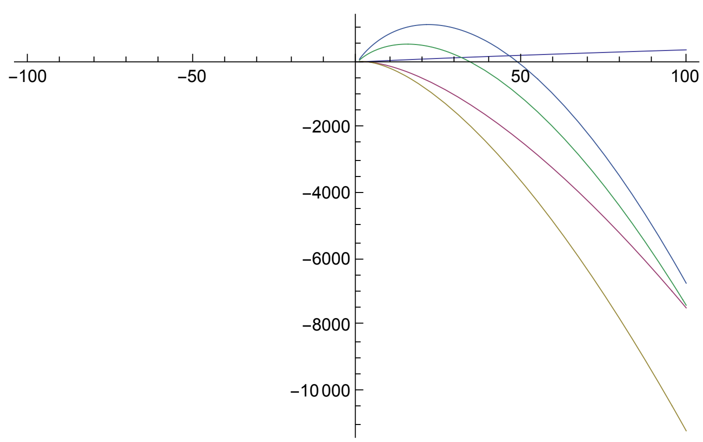
2 π (1 + 3 + 5 + 7 + 9 + 11 + (2 n − 1)) − 2 π

For n = 8;

2 π (1 + 3 + 5 + 7 + 9 + 11 + 13 + (2 n − 1)) − 2 π

The Following Plot Combines Inegrals of dC for n = 1, 2, 3, 4, 5

$$\text{Plot}\left[\left\{\left(2\pi\theta-\frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right),\ \left(4\pi\theta-\frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),\ \left(6\pi\theta-\frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right),\ \left(-8\left(-4\pi\theta+\frac{2\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right),\ \left(48\pi\theta-\frac{20\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right\},\ \{\theta,-100,100\}\right]$$



$$\text{Plot}\left[\left\{\left(2\pi\theta-\frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right),\ \left(4\pi\theta-\frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),\right.\right.$$

$$\left(6\pi\theta-\frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right),\ \left(-8\left(-4\pi\theta+\frac{2\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right),$$

$$\left(48\pi\theta-\frac{20\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),\ \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}},\ \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

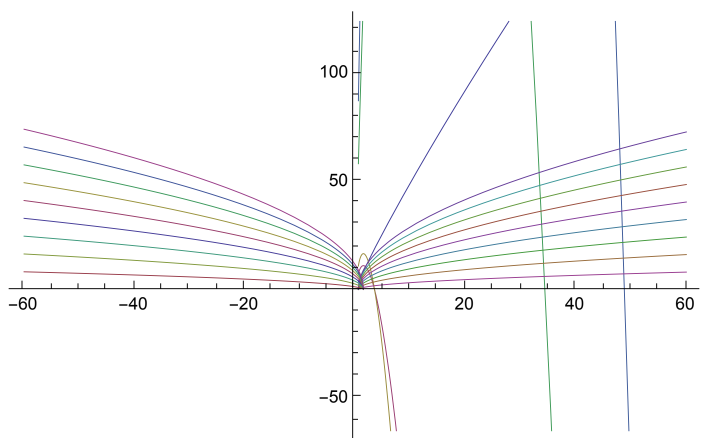
$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64-64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{81-81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\left.\left.\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\right\},\ \{\theta,-60,60\}\right]$$



$$\text{Plot}\Bigg[\Bigg\{\left(2\pi\theta-\frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right),\ \left(4\pi\theta-\frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),$$

$$\left(6\pi\theta-\frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right),\ \left(-8\left(-4\pi\theta+\frac{2\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right),$$

$$\left(48\pi\theta-\frac{20\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),\ \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}},\ \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

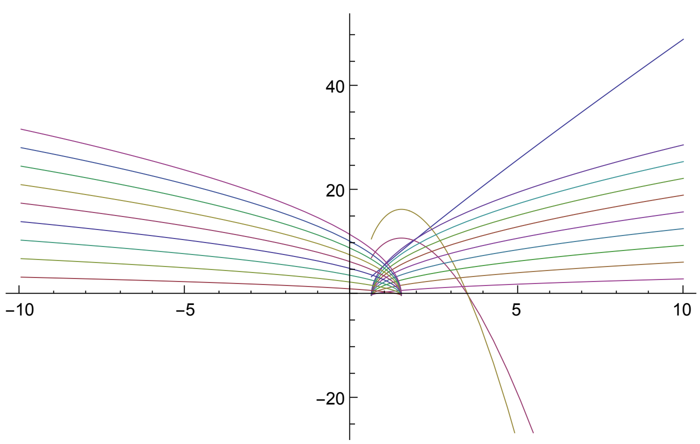
$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64-64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{81-81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\Bigg\},\ \{\theta,-10,10\}\Bigg]$$



$$\text{Plot}\Big[\Big\{\left(2\pi\theta - \frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right), \left(4\pi\theta - \frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),$$

$$\left(6\pi\theta - \frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right), \left(-8\left(-4\pi\theta + \frac{2\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right),$$

$$\left(48\pi\theta - \frac{20\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right), \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}, \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

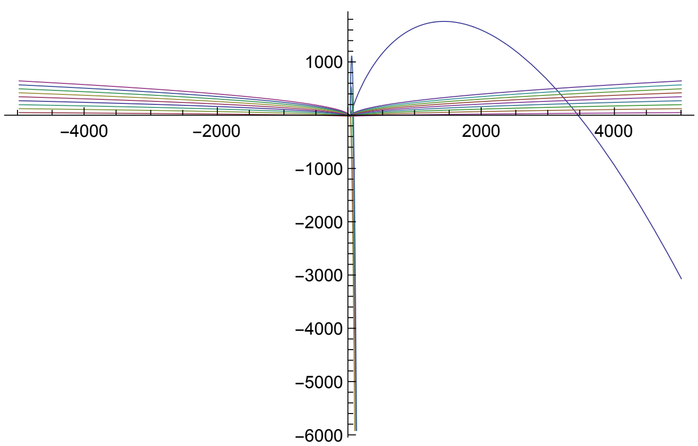
$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{64-64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{81-81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\Big\}, \{\theta, -5000, 5000\}\Big]$$



The Derivatives of r_1 and their graphs

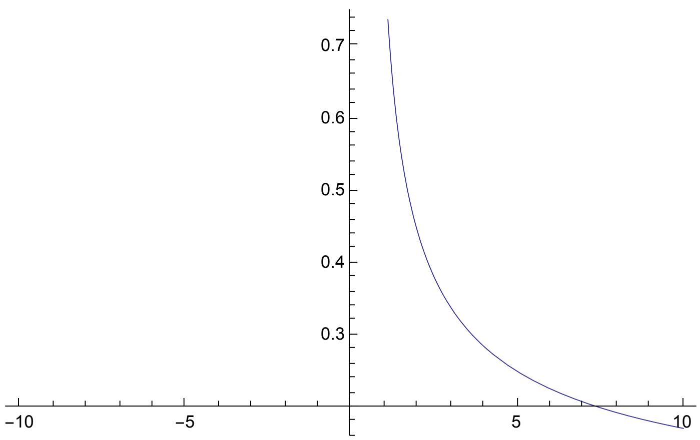
$$\text{D}\left[\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}, \theta\right]$$

$$\frac{1+\frac{1}{\pi^2}}{2\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}}$$

$$\text{Simplify}\left[\frac{1+\frac{1}{\pi^2}}{2\sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}}\right]$$

$$\frac{1+\pi^2}{2\,\pi\,\sqrt{-2\,\pi+\theta+\pi^2\,\theta}}$$

$$\text{Plot}\left[\frac{1+\pi^2}{2\,\pi\,\sqrt{-2\,\pi+\theta+\pi^2\,\theta}},\ \{\theta,-10,10\}\right]$$



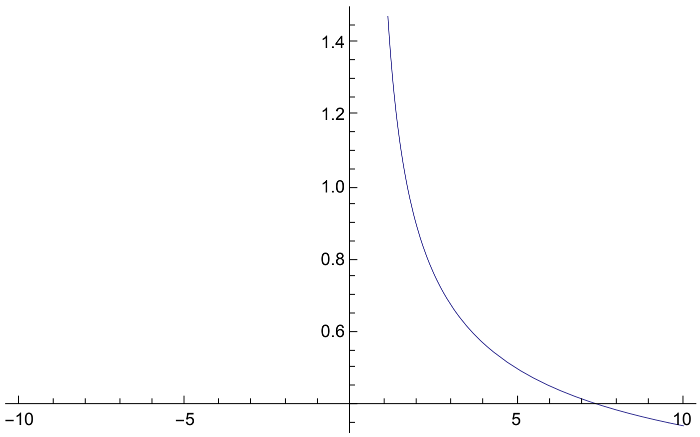
$$\text{D}\left[\sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \theta\right]$$

$$-\frac{2\left(-1-\frac{1}{\pi^2}\right)}{\sqrt{4-4\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)}}$$

$$\text{Simplify}\left[-\frac{2\left(-1-\frac{1}{\pi^2}\right)}{\sqrt{4-4\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)}}\right]$$

$$\frac{1+\pi^2}{\pi\,\sqrt{-2\,\pi+\theta+\pi^2\,\theta}}$$

$$\text{Plot}\left[\frac{1+\pi^2}{\pi\sqrt{-2\pi+\theta+\pi^2\theta}},\{\theta,-10,10\}\right]$$



$$\text{D}\left[\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\theta\right]$$

$$-\frac{9\left(-1-\frac{1}{\pi^2}\right)}{2\sqrt{9-9\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)}}$$

$$\text{Simplify}\left[-\frac{9\left(-1-\frac{1}{\pi^2}\right)}{2\sqrt{9-9\left(1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}\right)}}\right]$$

$$\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}}$$

Plots of the derivative of h

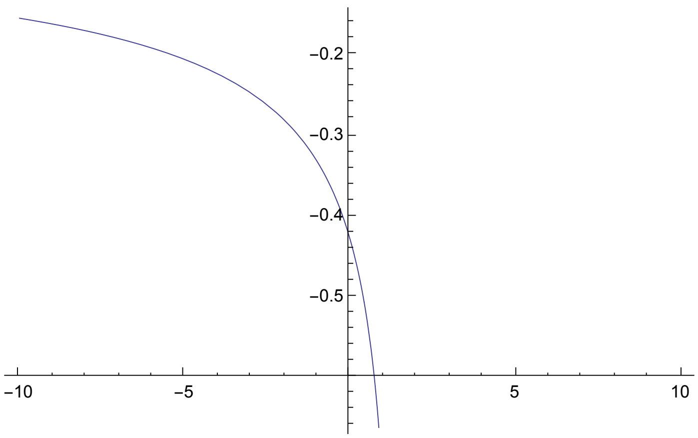
$$\text{D}\left[\sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\theta\right]$$

$$\frac{-1-\frac{1}{\pi^2}}{2\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}$$

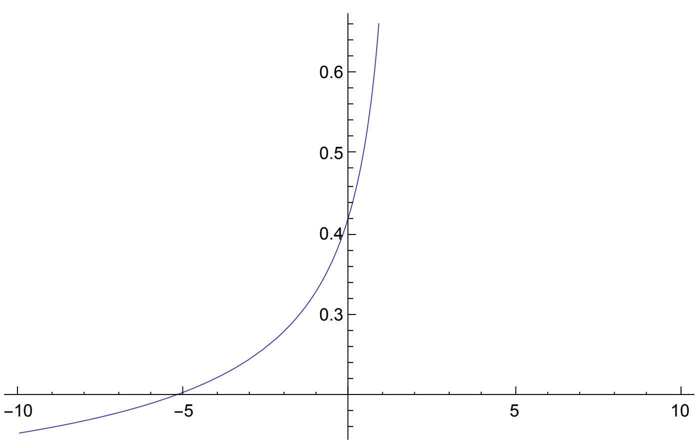
$$\text{Simplify}\left[\frac{-1-\frac{1}{\pi^2}}{2\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}\right]$$

$$-\frac{1+\pi^2}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}$$

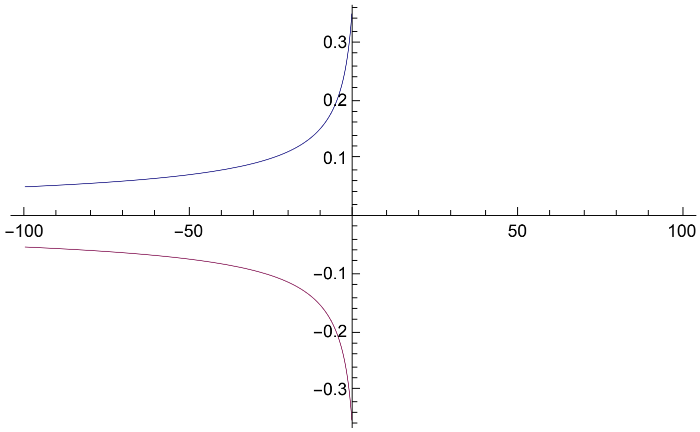
$$\text{Plot}\left[\left(-\frac{1+\pi^2}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}\right),\ \{\theta,\ -10,\ 10\}\right]$$



$$\text{Plot}\left[\left(\frac{1+\pi^2}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}\right),\ \{\theta,\ -10,\ 10\}\right]$$



$$\text{Plot}\left[\left\{\left(\frac{1+\pi^2}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}\right),\ \left(-\frac{1+\pi^2}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}\right)\right\},\ \{\theta,\ -10,\ 10\}\right]$$



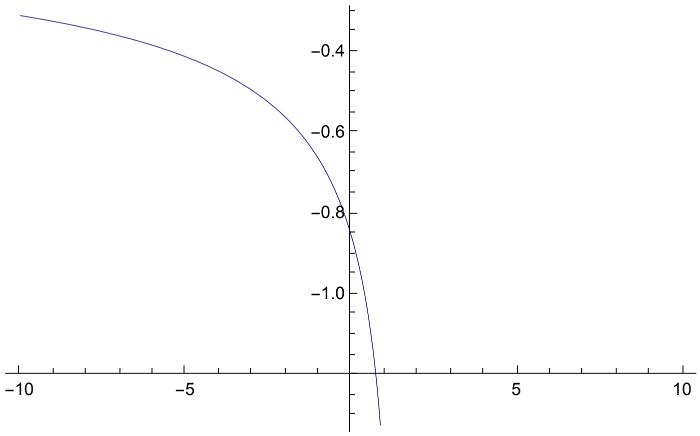
$$\text{D}\left[\sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \theta\right]$$

$$\frac{-1-\frac{1}{\pi^2}}{\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}$$

$$\text{Simplify}\left[\frac{-1-\frac{1}{\pi^2}}{\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}\right]$$

$$\frac{\left(-1-\frac{1}{\pi^2}\right)\pi}{\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}$$

$$\text{Plot}\left[\frac{\left(-1-\frac{1}{\pi^2}\right)\pi}{\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}, \{\theta, -10, 10\}\right]$$



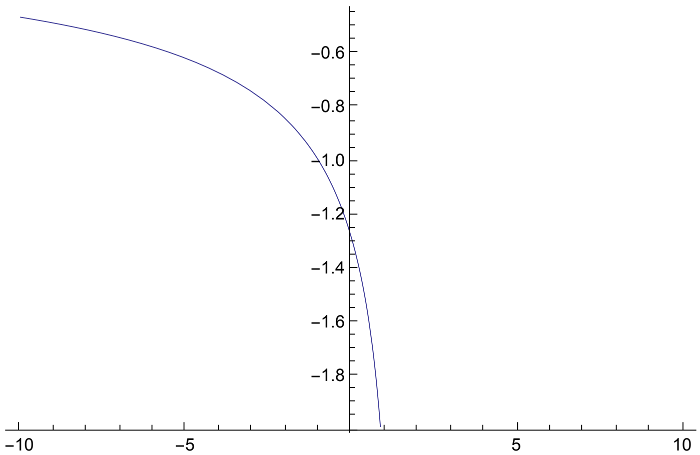
$$\text{D}\left[\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \theta\right]$$

$$\frac{3\left(-1-\frac{1}{\pi^2}\right)}{2\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}$$

$$\text{Simplify}\left[\frac{3\left(-1-\frac{1}{\pi^2}\right)}{2\sqrt{1+\frac{2}{\pi}-\theta-\frac{\theta}{\pi^2}}}\right]$$

$$-\frac{3\left(1+\pi^2\right)}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}}$$

$$\text{Plot}\left[-\frac{3\left(1+\pi^2\right)}{2\,\pi\,\sqrt{2\,\pi-\pi^2\,(-1+\theta)-\theta}},\ \{\theta,\ -10,\ 10\}\right]$$



$$\text{Plot}\Big[\Big\{\left(2\pi\theta-\frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right),\ \left(4\pi\theta-\frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),$$

$$\left(6\pi\theta-\frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right),\ \left(-8\left(-4\pi\theta+\frac{2\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right)\right),$$

$$\left(48\pi\theta-\frac{20\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),\ \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}},\ \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16-16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25-25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{36-36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{49-49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64-64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

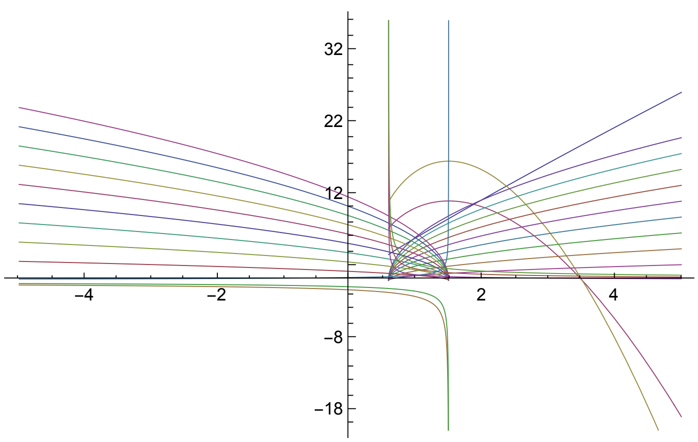
$$\sqrt{81-81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

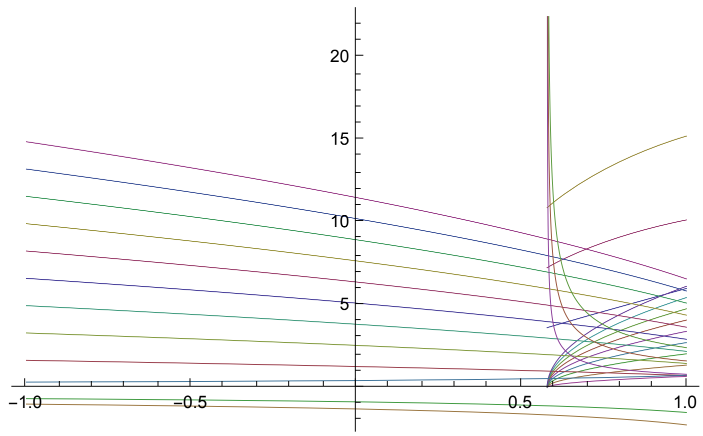
$$\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{16\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{25\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{36\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

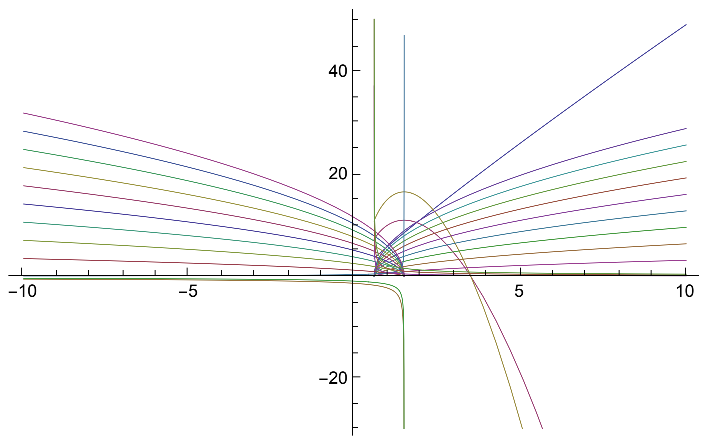
$$\sqrt{49\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{64\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},\ \sqrt{81\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

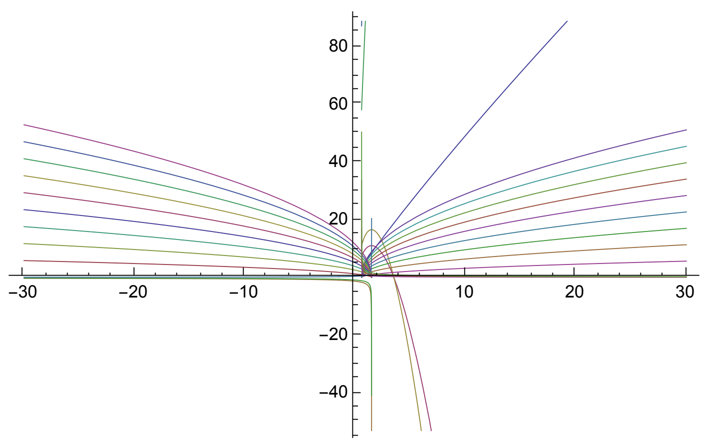
$$-\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{2\pi-\pi^2(-1+\theta)-\theta}},\ \frac{\left(-1-\frac{1}{\pi^2}\right)\pi}{\sqrt{2\pi-\pi^2(-1+\theta)-\theta}},\ \left(\frac{1+\pi^2}{2\pi\sqrt{2\pi-\pi^2(-1+\theta)-\theta}}\right),$$

$$\frac{1+\pi^2}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}},\ \frac{1+\pi^2}{\pi\sqrt{-2\pi+\theta+\pi^2\theta}},\ \frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}}\Big\},\ \{\theta,-5,5\}\Big]$$




20
15
10
5
−1.0
−0.5
0.5
1.0


40
20
−20
−10
−5
5
10


80
60
40
20
−20
−40
−30
−20
−10
10
20
30

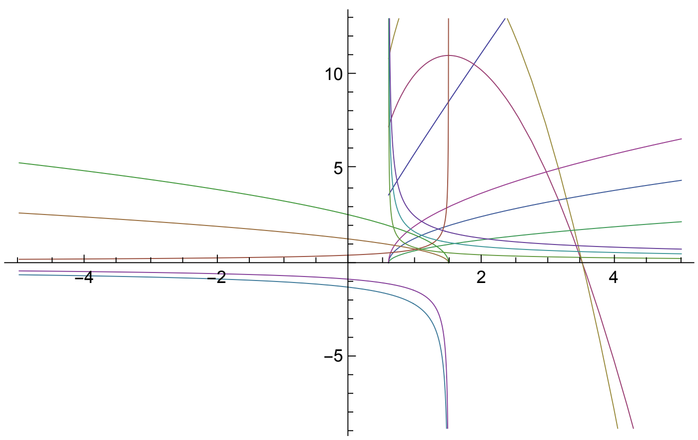
$$\text{Plot}\Big[\Big\{\left(2\pi\theta - \frac{4\pi^2\left(-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}\right)^{5/4}}{5\left(1+\pi^2\right)}\right), \left(4\pi\theta - \frac{8\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{3\left(1+\pi^2\right)}\right),$$

$$\left(6\pi\theta - \frac{4\left(-2\pi+\theta+\pi^2\theta\right)^{3/2}}{1+\pi^2}\right), \sqrt{-\frac{2}{\pi}+\theta+\frac{\theta}{\pi^2}}, \sqrt{4-4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$\sqrt{9-9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{4\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}, \sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)},$$

$$-\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{2\pi-\pi^2(-1+\theta)-\theta}}, \frac{\left(-1-\frac{1}{\pi^2}\right)\pi}{\sqrt{2\pi-\pi^2(-1+\theta)-\theta}}, \frac{1+\pi^2}{2\pi\sqrt{2\pi-\pi^2(-1+\theta)-\theta}},$$

$$\frac{1+\pi^2}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}}, \frac{1+\pi^2}{\pi\sqrt{-2\pi+\theta+\pi^2\theta}}, \frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}}\Big\}, \{\theta, -5, 5\}\Big]$$



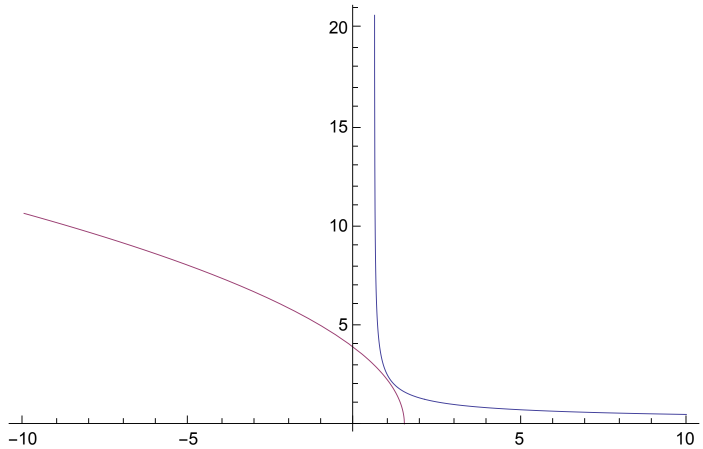
$$\text{Plot}\left[\left(\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+\theta+\pi^2\theta}}\right), \left(\sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\right), \{\theta, -10, 10\}\right]$$

Plot::nonopt : Options expected (instead of $\{\theta, -10, 10\}$) beyond position 2 in

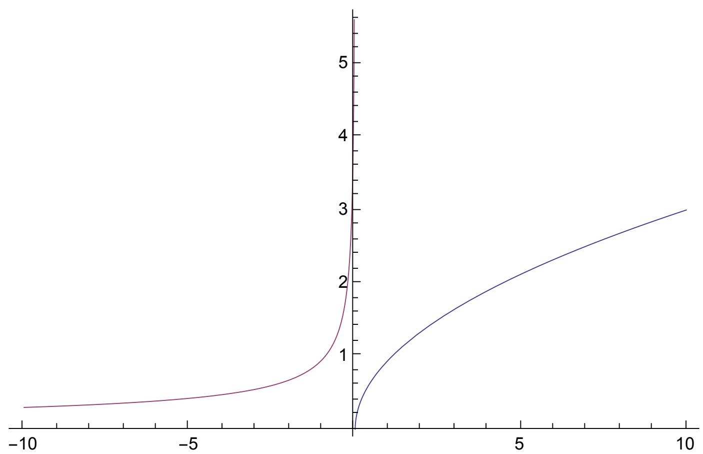
$$\text{Plot}\left[\frac{3\left(1+\pi^2\right)}{2\pi\sqrt{-2\pi+\theta+\text{Power}[\ll 2\gg]\,\theta}}, \sqrt{9\left(1-\theta-\frac{\theta}{\text{Power}[\ll 2\gg]}+\frac{2}{\pi}\right)}, \{\theta, -10, 10\}\right]$$. An option must be a rule or a list of rules. ≫

A differential equation of the form ax "+bx'+cx can be approximated as the combination of two parametric exponential functions

$$\text{Plot}\left[\left\{\frac{3\left(1+\pi^2\right)}{2\,\pi\,\sqrt{-2\,\pi+\theta+\pi^2\,\theta}},\ \sqrt{9\left(1-\theta-\frac{\theta}{\pi^2}+\frac{2}{\pi}\right)}\right\},\ \{\theta,\ -10,\ 10\}\right]$$



$$\text{Plot}\left[\left\{\sqrt{\theta-\theta/\pi\text{^}2},\ 1\Big/\sqrt{-\theta-\theta/\pi\text{^}2}\right\},\ \{\theta,\ -10,\ 10\}\right]$$



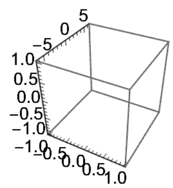
$$\text{Solve}\left[\theta==\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\theta]^2}\right)\right)-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\theta]^2}\right)\right)^2}},\ \theta\right]$$

$$\{\{\theta\to r\}\}$$

$$\frac{r\,\sqrt{\pi^2-\text{ArcCos}\left[\frac{\sqrt{1+\text{Cos}[\theta]}}{\sqrt{2}}\right]^2}}{\pi}$$

$$\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}$$

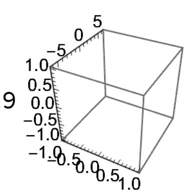
$$\text{ContourPlot3D}\left[\left(\sqrt{\left(3.5481432270250993`*\text{^}18-1.1294090667581471`*\text{^}18\ \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}+8.987551787368176`*\text{^}16\ (\theta)^2\right)}\right)\Big/\left(\sqrt{39.47841760435743`-12.566370614359172`\ \theta+\theta^2}\right),\ \{\eta,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{r,-1,1\}\right]$$

$2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)$ 

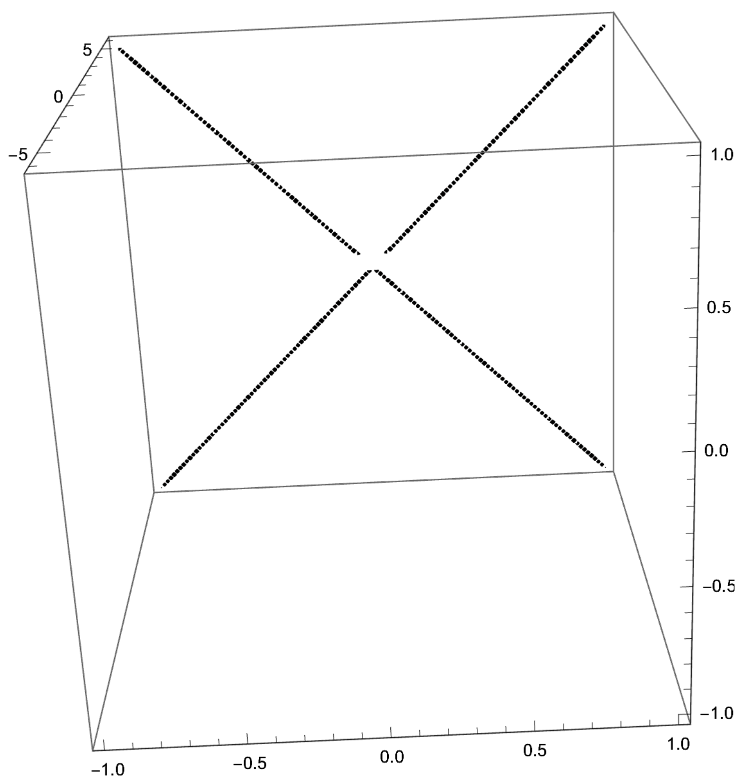
$$\overline{}$$
r^2

$$\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}$$

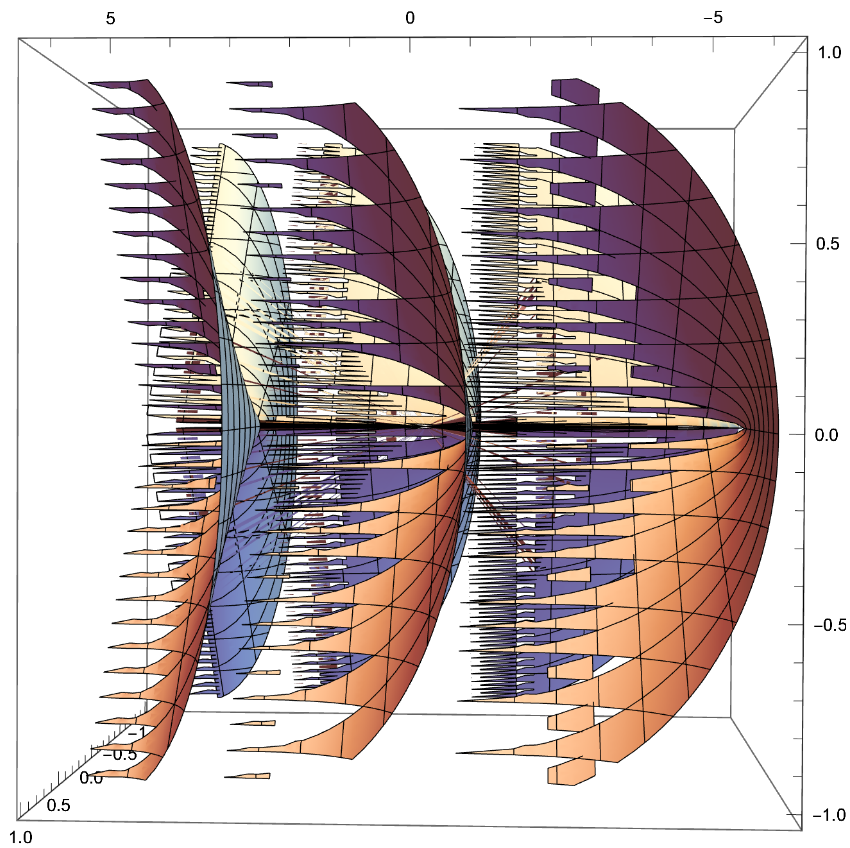
$$\text{ContourPlot3D}\left[\left(\sqrt{\left(3.5481432270250993`*\text{^}18-1.1294090667581471`*\text{^}18\ \theta+8.987551787368176`*\text{^}16\ (\theta)^2\right)}\right)\Big/\left(\sqrt{39.47841760435743`-12.566370614359172`\ \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}+\theta^2}\right),\ \{\eta,-1,1\},\{\theta,-2\,\pi,2\,\pi\},\{r,-1,1\}\right]$$

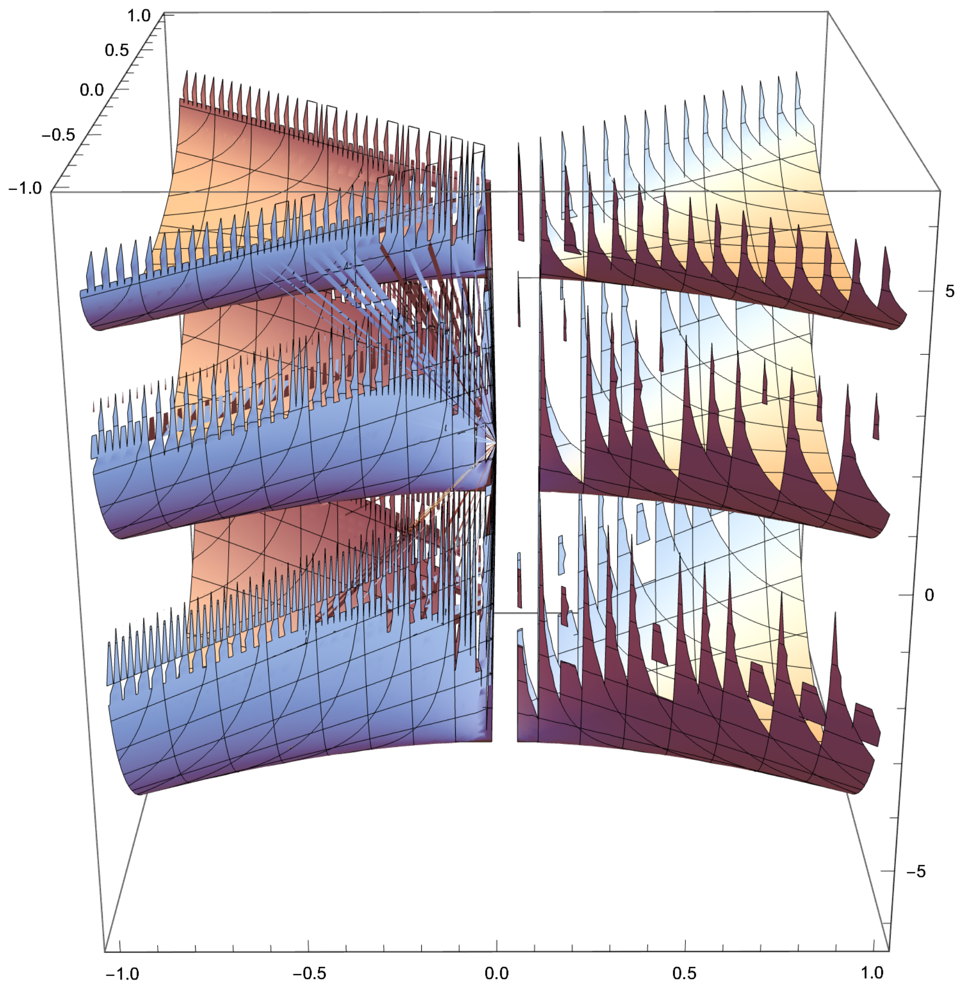
6.28319 

$$\text{ContourPlot3D}\Big[\left(\sqrt{\left(3.5481432270250993\text{`}*\text{^}18 - 1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2\right)}\right),\ \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{r, -1, 1\}\Big]$$

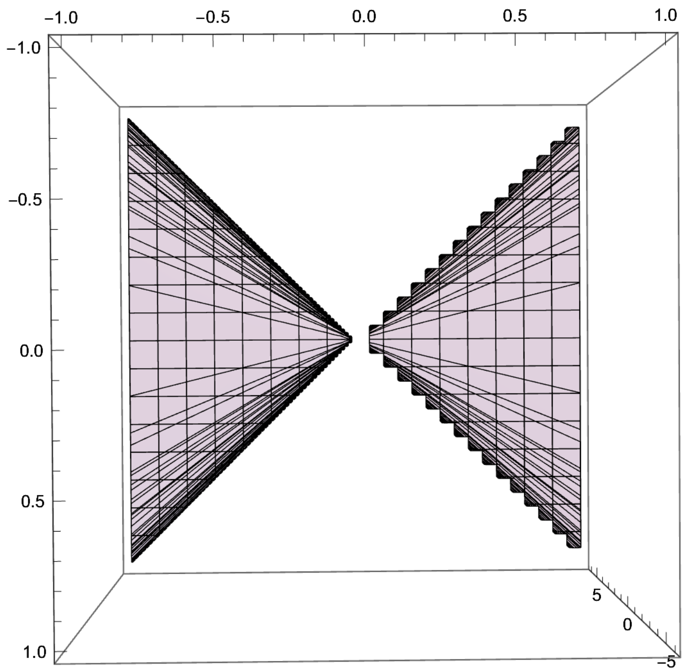


$$\text{ContourPlot3D}\Big[\left(\sqrt{\left(3.5481432270250993\text{`}*\text{^}18 - 1.1294090667581471\text{`}*\text{^}18\,\theta + 8.987551787368176\text{`}*\text{^}16\,(\theta)^2\right)}\right)\Big/\left(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta + \left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2}\right),\ \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{r, -1, 1\}\Big]$$

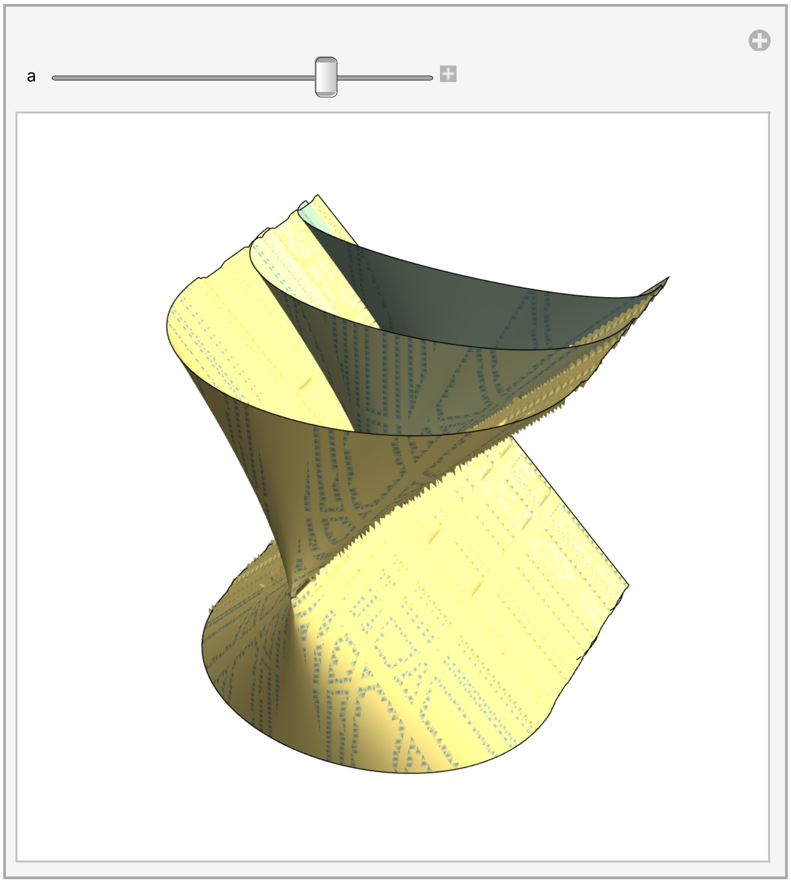

5
0
−5
1.0
0.5
0.0
−0.5
−1.0
−1
−0.5
0.0
0.5
1.0


1.0
0.5
0.0
−0.5
−1.0
5
0
−5
−1.0
−0.5
0.0
0.5
1.0

$$\text{ContourPlot3D}\left[\left(\sqrt{\left(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2\right)}\right)\Big/\left(\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + \theta^2}\right),\ \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{r, -1, 1\}\right]$$



$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\left(\sqrt{\left(3.5481432270250993`*^18 - 1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,(\theta)^2\right)}\right)\Big/\left(\sqrt{39.47841760435743` - 12.566370614359172`\,\theta + \left(\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)^2}\right) + a,\ \{\eta, -1, 1\}, \{\theta, -2\pi, 2\pi\}, \{r, -1, 1\}, \text{Mesh} \to \text{False}, \text{Boxed} \to \text{False}, \text{Axes} \to \text{None}, \text{ColorFunction} \to \text{"StarryNightColors"}\right], \{a, 0, 4\}\right]$$



Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

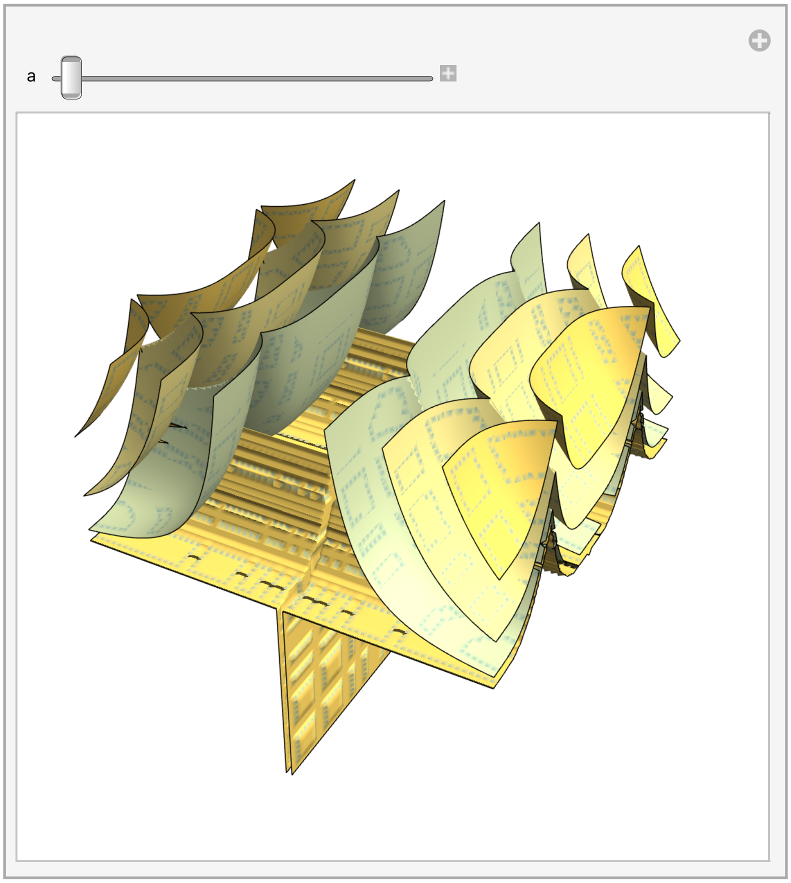
Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

$$\texttt{ContourPlot3D}\left[\left\{\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right\},\right.$$
$$\left.\{r, -1, 1\}, \{\beta, -\pi, \pi\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$

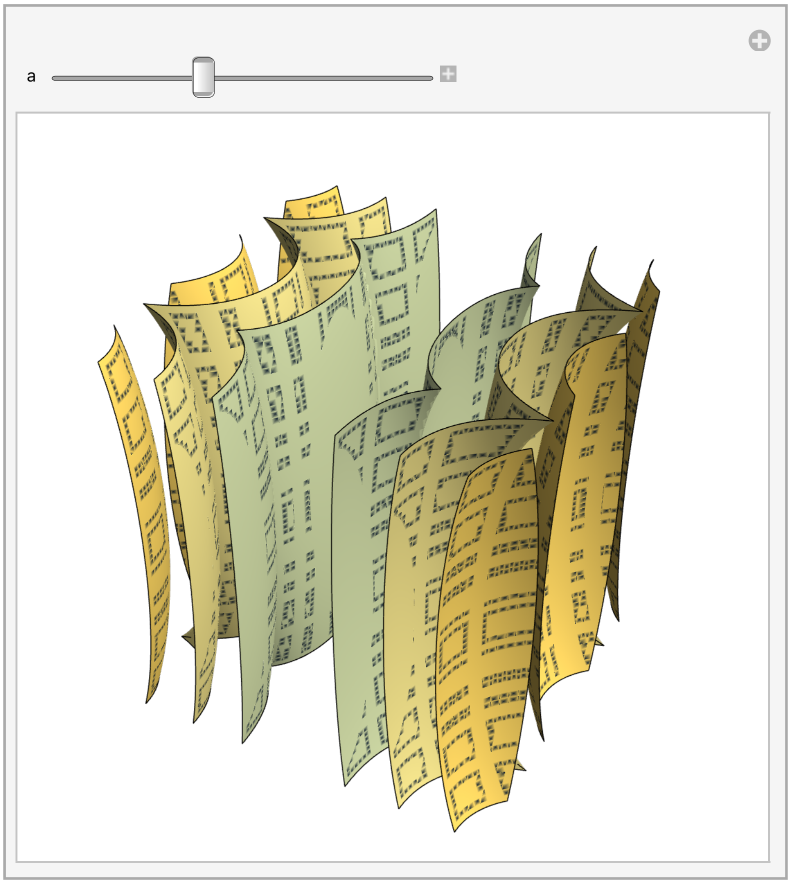
```
Manipulate[ContourPlot3D[Sqrt[4 π r^2 θ - r^2 (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))^2]/(2 π) + a,
  {r, -1, 1}, {β, -π, π}, {θ, -2 π, 2 π}, Mesh → False, Boxed → False,
  Axes → None, ColorFunction → "StarryNightColors"], {a, 0, 4}]
```

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\left(2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi} + a,\right.\right.$$



```
Manipulate[ContourPlot3D[Sqrt[4 π r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - r^2 θ^2]/(2 π) + a,
  {r, -1, 1}, {β, -π, π}, {θ, -2 π, 2 π}, Mesh → False, Boxed → False,
  Axes → None, ColorFunction → "StarryNightColors"], {a, 0, 4}]
```

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)-r^2\,\theta^2}}{2\,\pi}+a,\right.\right.$$



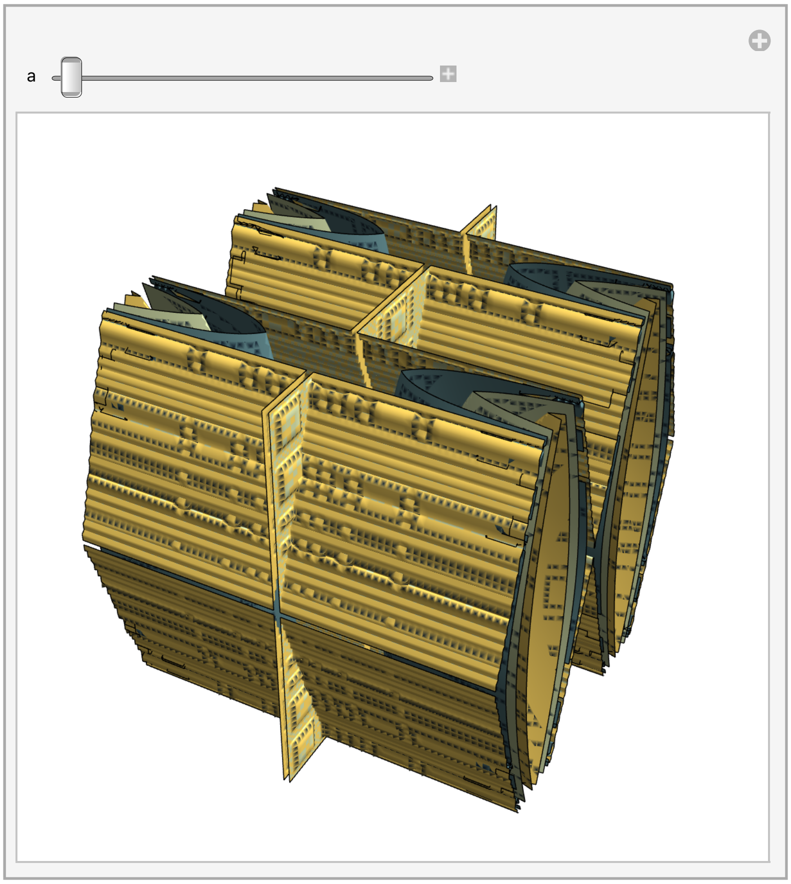
$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)-r^2\,\theta^2}}{2\,\pi}+a,\right.\right.$$

```
{r, -1, 1}, {β, -π, π}, {θ, -2 π, 2 π}, Mesh → False, Boxed → False,
Axes → None, ColorFunction → "StarryNightColors"], {a, 0, 4}]
```

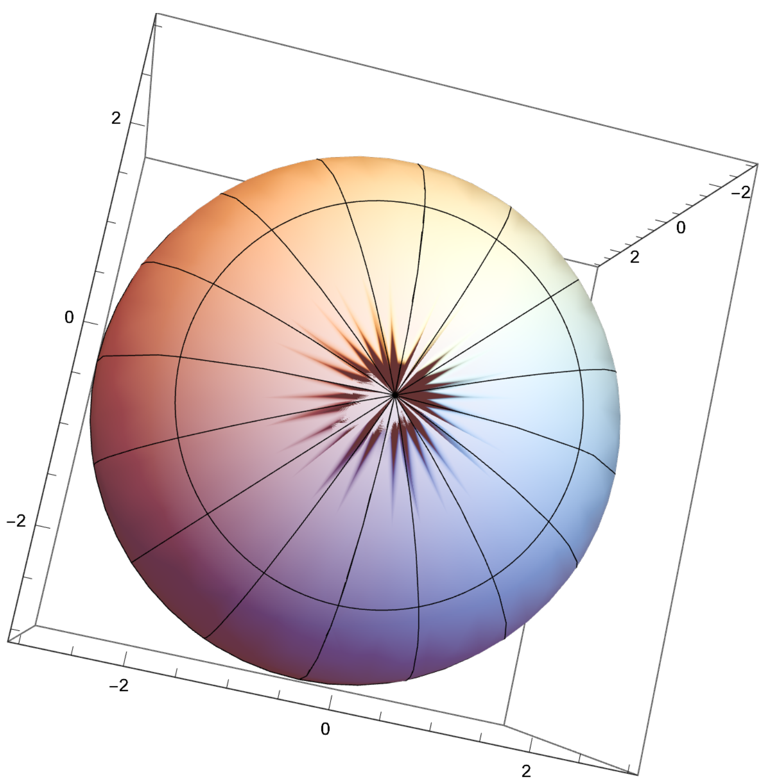
$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\,r^2\,\left(2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)-r^2\,\theta^2}}{2\,\pi}+a,\right.\right.$$

$$\{r,-1,1\},\{\beta,-\pi,\pi\},\{\theta,-2\,\pi,2\,\pi\},\text{Mesh}\to\text{False},\text{Boxed}\to\text{False},$$

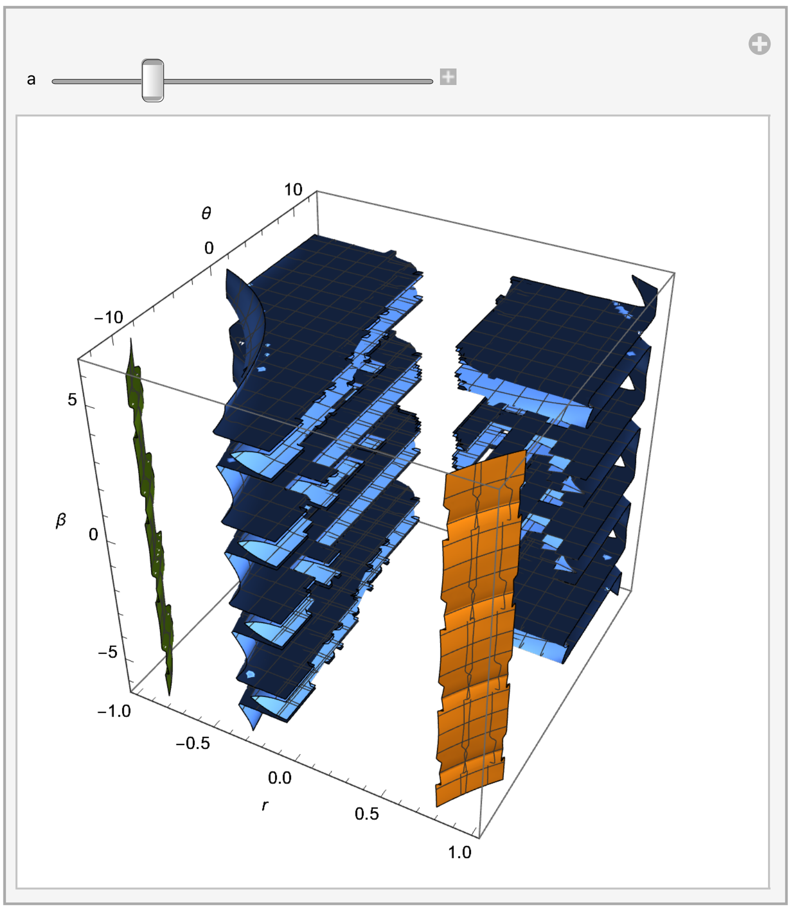
$$\left.\left.\text{Axes}\to\text{None},\text{ColorFunction}\to\text{"StarryNightColors"}\right],\{a,0,4\}\right]$$



```
ContourPlot3D[(√(-8.478662640222557`*^16 ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2) +
      6.74710535`*^15 ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 + 2.6636504262789424`*^17 Sin[β]^2))/
  (√(-9.433939159106512`*^15 ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2) +
      7.50729025`*^14 ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 + 2.9637593956662092`*^16 Sin[β]^2)),
 {r, -1, 1}, {η, -1, 1}, {β, -π, π}, Mesh → False, Boxed → False,
 Axes → None,
 ColorFunction → "StarryNightColors"]

SphericalPlot3D[(√(-8.478662640222557`*^16 θ +
      6.74710535`*^15 θ^2 + 2.6636504262789424`*^17 Sin[β]^2))/
  (√(-9.433939159106512`*^15 θ + 7.50729025`*^14 θ^2 +
      2.9637593956662092`*^16 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π, π}]
```



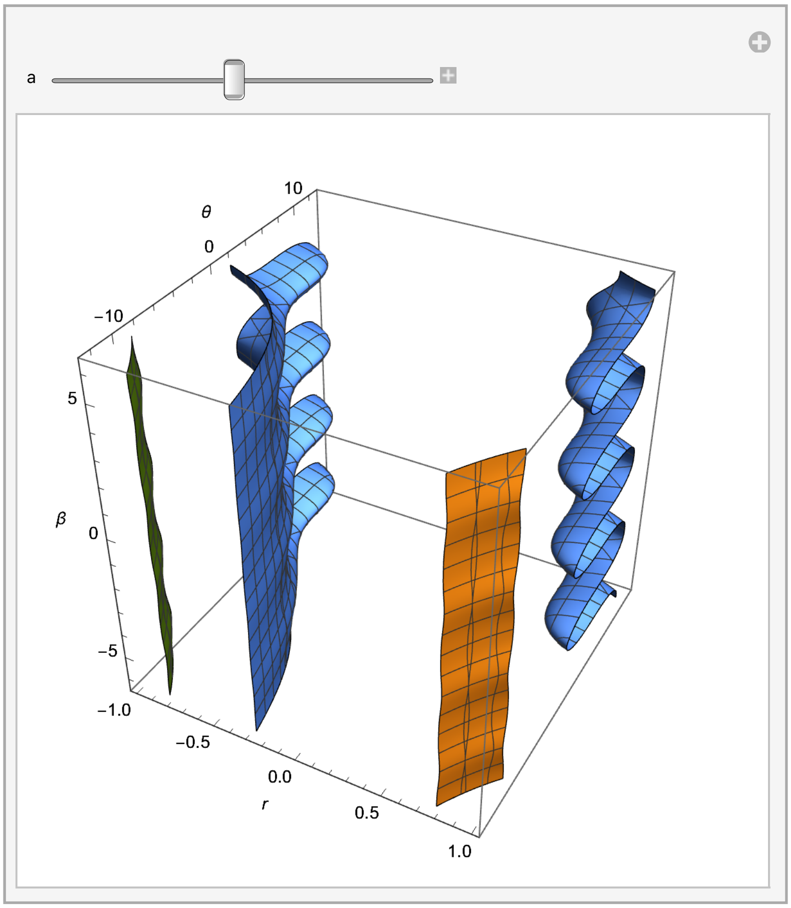
```
-ⅈ Log[Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]]
Manipulate[ContourPlot3D[
  (4 / 3) π (Sqrt[4 π r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) - r^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2] / (2 π))^3 -
   (4 / 3) π ((2 π r - r θ) / (2 π))^3 -
   ⅈ Log[Cos[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])]],
  {r, -1, 1}, {θ, -4 π, 4 π}, {β, -2 π, 2 π}, AxesLabel → Automatic], {a, 0, 4}]
```



$$\text{Manipulate}\Big[\text{ContourPlot3D}\Big[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\text{^}3-$$

$$(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\text{^}3,\ \{r,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\},$$

$$\{\beta,-2\,\pi,2\,\pi\},\ \text{AxesLabel}\to\text{Automatic}\Big],\ \{a,0,4\}\Big]$$



$$\text{Plot3D}\Big[(4/3)\,\pi\,(r)\text{^}3-(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}}{2\,\pi}\right)\text{^}3,$$

$$\{r,-1,1\},\ \{\eta,-1,1\},\ \text{AxesLabel}\to\text{Automatic}\Big]$$

$$\text{Manipulate}\left[\text{Plot3D}\left[(4/3)\,\pi\,(r)\,{}^\wedge 3 - (4/3)\,\pi\left(\frac{2\,\pi\, r - r\,\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}}{2\,\pi}\right){}^\wedge 3 + a,\right.\right.$$

$$\left.\left.\{r, -1, 1\}, \{\eta, -1, 1\}, , \text{AxesLabel} \to \text{Automatic}\right], \{a, 0, 4\}\right]$$

a

$$\text{Plot3D}\left[\frac{1}{3}\,(4\,\pi)\; r^3 - \frac{1}{3}\,(4\,\pi)\left(\frac{(2\,\pi)\; r - \frac{r\left((2\,\pi)\;\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)\right)}{r^2}}{2\,\pi}\right)^3 + \text{FE`a\$\$671},\right.$$

$$\left.\{r, -1, 1\}, \{\eta, -1, 1\}, \text{Null}, \text{AxesLabel} \to \text{Automatic}\right]$$

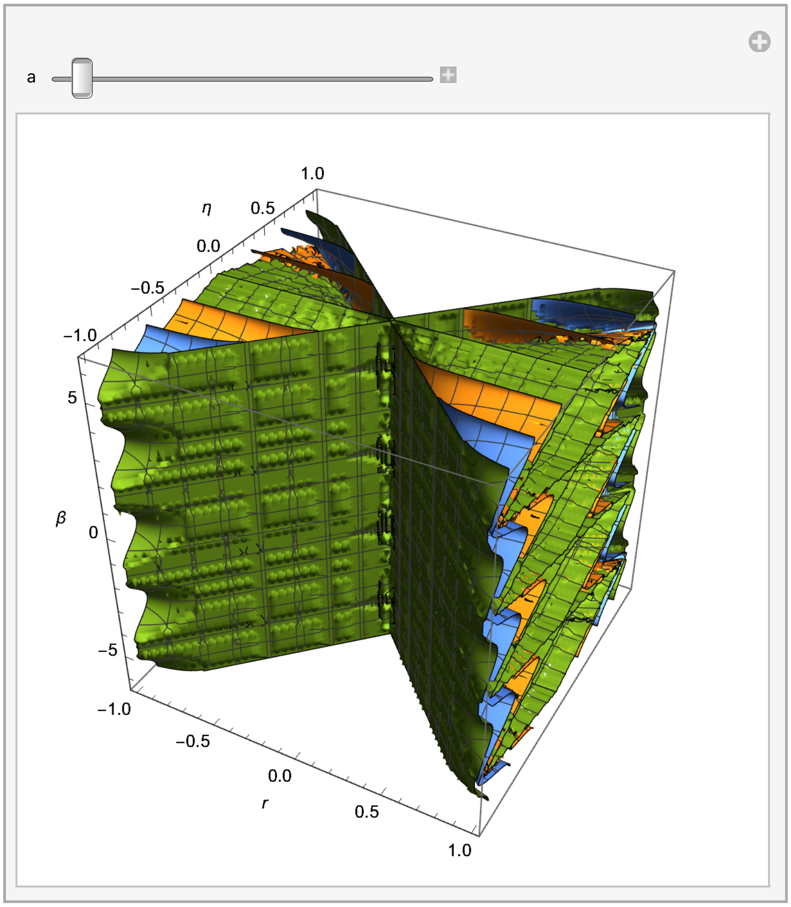
Plot3D: Options expected (instead of Null) beyond position 3 in

$$\text{Plot3D}\left[\frac{1}{3}(4\,\pi)\, r^3 - \frac{1}{3}(4\,\pi)\left(\frac{\text{Times}[\ll 2 \gg] + \text{Times}[\ll 2 \gg]}{\text{Times}[\ll 2 \gg]}\right)^3 + \text{FE`a\$\$671}, \{r, -1, 1\}, \{\eta, -1, 1\}, \text{Null}, \text{AxesLabel} \to \right.$$

$\left.\text{Automatic}\right]$. An option must be a rule or a list of rules.

$$\text{Manipulate}\left[\text{ContourPlot3D}\left[\frac{\sqrt{4\,\pi\, r^2\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right) - r^2\left(\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}\right)^2}}{2\,\pi} + a,\right.\right.$$

$$\left.\left.\{r, -1, 1\}, \{\eta, -1, 1\}, \{\beta, -2\,\pi, 2\,\pi\}, \text{AxesLabel} \to \text{Automatic}\right], \{a, 0, 4\}\right]$$



Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

General: Further output of Power::infy will be suppressed during this calculation.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

General: Further output of Infinity::indet will be suppressed during this calculation.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

Power: Infinite expression $\frac{1}{0.}$ encountered.

Infinity: Indeterminate expression 0. ComplexInfinity encountered.

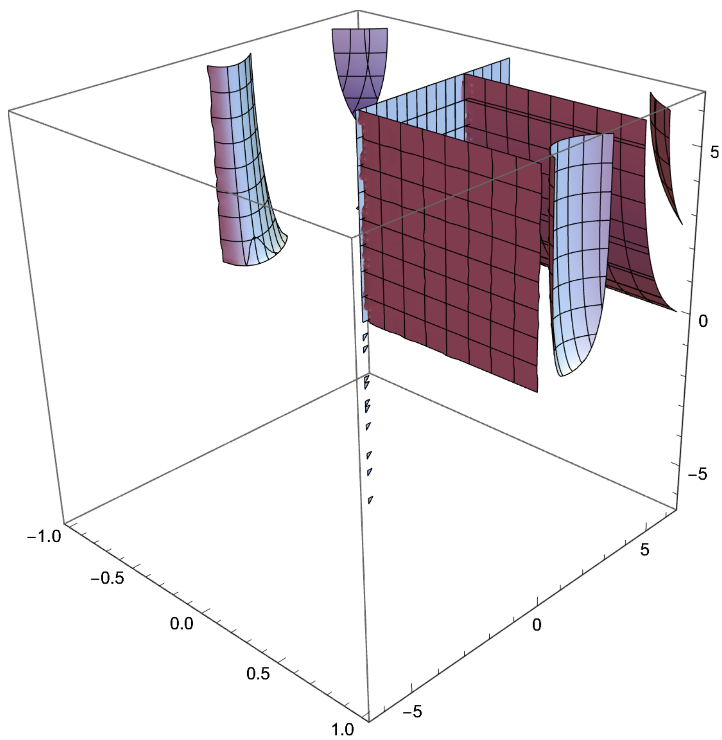
... Power: Infinite expression $\frac{1}{0.}$ encountered.

... General: Further output of Power::infy will be suppressed during this calculation.

... Infinity: Indeterminate expression 0. ComplexInfinity encountered.

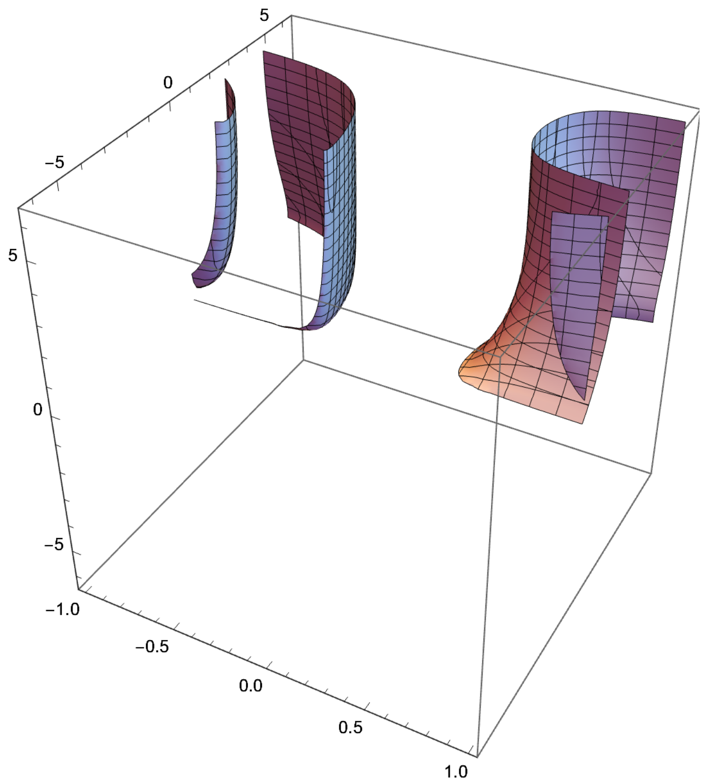
... General: Further output of Infinity::indet will be suppressed during this calculation.

$$\text{ContourPlot3D}\Big[(1/3)\ \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\pi\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 - (1/3)\ \frac{r - \frac{r\,\theta}{2\,\pi}\,\sqrt{4\,\pi - \theta_1}\,\sqrt{\theta_1}}{2\,\pi}\,\pi\left(\sqrt{\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 - \left(\frac{r - \frac{r\,\theta}{2\,\pi}\,\sqrt{4\,\pi - \theta_1}\,\sqrt{\theta_1}}{2\,\pi}\right)\text{^}2}\right)\text{^}2,$$
$$\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\theta_1, -2\,\pi, 2\,\pi\}\Big]$$

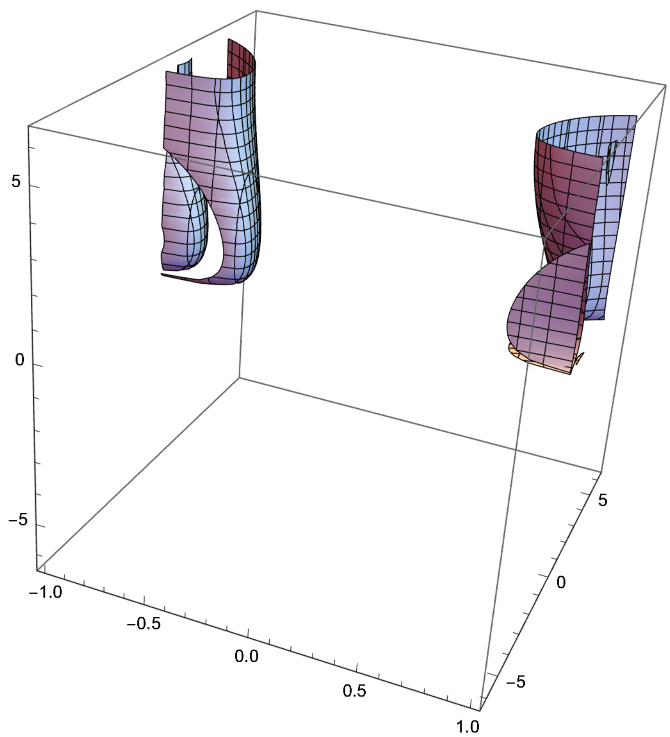


```
ContourPlot3D[(1 / 3) Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π) π (r - r θ/(2 π))^2 -
  (1 / 3) ((r - r θ/(2 π)) Sqrt[4 π - θ1] Sqrt[θ1])/(2 π) π (Sqrt[(r - r θ/(2 π))^2 - ((r - r θ/(2 π)) Sqrt[4 π - θ1] Sqrt[θ1]/(2 π))^2])^2,
  {r, -1, 1}, {θ, -2 π, 2 π}, {θ1, -2 π, 2 π}]
```

$$\text{ContourPlot3D}\left[(1/3)\ \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\ \pi \left(r - \frac{r\theta}{2\pi}\right)\text{^}2 - (1/3)\ \frac{\left(r-\frac{r\theta}{2\pi}\right)\sqrt{4\pi-\theta_1}\ \sqrt{\theta_1}}{2\pi}\ \pi\left(\sqrt{\left(r-\frac{r\theta}{2\pi}\right)\text{^}2 - \left(\frac{r-\frac{r\theta}{2\pi}\ \sqrt{4\pi-\theta_1}\ \sqrt{\theta_1}}{2\pi}\right)\text{^}2}\right)\text{^}2,\ \{r,-1,1\},\ \{\theta,-2\pi,2\pi\},\ \{\theta_1,-2\pi,2\pi\}\right]$$



$$\text{ContourPlot3D}\Big[(1/3)\ \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \pi\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 -$$
$$(1/3)\ \frac{\left(r - \frac{r\,\theta}{2\,\pi}\right)\ \sqrt{4\,\pi - \theta_1}\ \sqrt{\theta_1}}{2\,\pi}\ \pi\left(\sqrt{\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 - \left(\frac{\left(r - \frac{r\,\theta}{2\,\pi}\right)\ \sqrt{4\,\pi - \theta_1}\ \sqrt{\theta_1}}{2\,\pi}\right)\text{^}2}\right)\text{^}2,$$
$$\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\theta_1, -2\,\pi, 2\,\pi\}\Big]$$



$$\text{Solve}\Big[\eta_1 == \frac{r_1\ \sqrt{4\,\pi - \theta_1}\ \sqrt{\theta_1}}{2\,\pi},$$

$$\text{ContourPlot3D}\Big[(1/3)\ \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \pi\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 -$$
$$(1/3)\ \frac{r - \frac{r\,\theta}{2\,\pi}\ \sqrt{4\,\pi - \theta_1}\ \sqrt{\theta_1}}{2\,\pi}\ \pi\left(\sqrt{\left(r - \frac{r\,\theta}{2\,\pi}\right)\text{^}2 - \left(\frac{r - \frac{r\,\theta}{2\,\pi}\ \sqrt{4\,\pi - \theta_1}\ \sqrt{\theta_1}}{2\,\pi}\right)\text{^}2}\right)\text{^}2,$$
$$\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\theta_1, -2\,\pi, 2\,\pi\}\Big]$$

No Time, only True

The time variable has helped us so far, but now, we see that there is

only something called true. See the Paper by Parker Emmerson and Andrew Berisha on Unified Theory for an explanation of the origin of the equations used below.

by Parker Emmerson and Andrew Berisha

$$\text{Solve}\Big[v == \frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ (-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3)}{(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4)^{3/2}} - \frac{\sqrt{\pi}\ (4\pi-2\theta)}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \theta\Big] \tag{228}$$

$$\Big\{\Big\{\theta\to\frac{1}{6}$$

$$\Big(12\pi-\sqrt{}\Big(144\pi^2-12\ \Big(9\pi^2+\frac{3}{2}\sqrt{}\Big(36\pi^4-\frac{8\ (\pi+12\pi^4 v^2)}{3\ v^2}+\Big(16\times 2^{1/3}\pi^2\ (1+144$$

$$\pi^3 v^2)\Big)\Big/\Big(3\ v^2\ \Big(128\pi^3+27\,648\pi^6 v^2+110\,592\pi^9 v^4+$$

$$\sqrt{}\Big(-226\,492\,416\pi^{12}v^4-42\,807\,066\,624\pi^{15}v^6+$$

$$12\,230\,590\,464\pi^{18}v^8\Big)\Big)^{1/3}\Big)+\frac{1}{3\times 2^{1/3}v^2}$$

$$\Big(128\pi^3+27\,648\pi^6 v^2+110\,592\pi^9 v^4+\sqrt{}\Big(-226\,492\,416\pi^{12}v^4-$$

$$42\,807\,066\,624\pi^{15}v^6+12\,230\,590\,464\pi^{18}v^8\Big)\Big)^{1/3}\Big)-$$

$$\frac{3}{2}\sqrt{}\Big(72\pi^4-\frac{16\ (\pi+12\pi^4 v^2)}{3\ v^2}-\Big(16\times 2^{1/3}\pi^2\ (1+144\pi^3 v^2)\Big)\Big/$$

$$\Big(3\ v^2\ \Big(128\pi^3+27\,648\pi^6 v^2+110\,592\pi^9 v^4+$$

$$\sqrt{}\Big(-226\,492\,416\pi^{12}v^4-42\,807\,066\,624\pi^{15}v^6+$$

$$12\,230\,590\,464\pi^{18}v^8\Big)\Big)^{1/3}\Big)-\frac{1}{3\times 2^{1/3}v^2}$$

$$\Big(128\pi^3+27\,648\pi^6 v^2+110\,592\pi^9 v^4+\sqrt{}\Big(-226\,492\,416\pi^{12}$$

$$v^4-42\,807\,066\,624\pi^{15}v^6+12\,230\,590\,464\pi^{18}v^8\Big)\Big)^{1/3}-$$

$$\Big(-1728\pi^6+\frac{192\pi^2\ (\pi+12\pi^4 v^2)}{v^2}-\frac{256\ (-\pi^3+2\pi^6 v^2)}{v^2}\Big)\Big/$$

$$\Big(4\sqrt{}\Big(36\pi^4-\frac{8\ (\pi+12\pi^4 v^2)}{3\ v^2}+\Big(16\times 2^{1/3}\pi^2\ (1+144\pi^3 v^2)\Big)\Big/$$

$$\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.\right.$$

$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.$$

$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\Theta\to\frac{1}{6}\,\left(12\,\pi+\sqrt{\left(144\,\pi^2-12\,\left(9\,\pi^2+\frac{3}{2}\,\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\right.}\right.\right.}\right.$$

$$\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+\right.\right.$$

$$110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\right.}$$

$$\left.\left.\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)+\frac{1}{3\times 2^{1/3}\,v^2}$$

$$\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-\right.}\right.$$

$$\left.\left.\left.42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\right)-$$

$$\frac{3}{2}\,\sqrt{\left(72\,\pi^4-\frac{16\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\right.}$$

$$\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.\right.$$

$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)-\frac{1}{3\times 2^{1/3}\,v^2}$$

$$\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\right.}\right.$$

$$\left.\left.v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}-$$

$$\left(-1728\,\pi^6+\frac{192\,\pi^2\,\left(\pi+12\,\pi^4\,v^2\right)}{v^2}-\frac{256\,\left(-\pi^3+2\,\pi^6\,v^2\right)}{v^2}\right)\Big/$$

$$\left(4\,\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\right.}\right.$$

$$\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.\right.$$

$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\theta\to\frac{1}{6}\Bigg(12\,\pi-\sqrt{\Bigg(144\,\pi^2-12\Bigg(9\,\pi^2+\frac{3}{2}\sqrt{\Bigg(36\,\pi^4-\frac{8\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+}}$$

$$\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/\Bigg(3\,v^2\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}\Bigg)+\frac{1}{3\times 2^{1/3}\,v^2}$$

$$\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}\Bigg)+$$

$$\frac{3}{2}\sqrt{\Bigg(72\,\pi^4-\frac{16\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/}$$

$$\Bigg(3\,v^2\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}\Bigg)-\frac{1}{3\times 2^{1/3}\,v^2}$$

$$\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}-$$

$$\left(-1728\,\pi^6+\frac{192\,\pi^2\left(\pi+12\,\pi^4\,v^2\right)}{v^2}-\frac{256\left(-\pi^3+2\,\pi^6\,v^2\right)}{v^2}\right)\Big/$$

$$\Bigg(4\sqrt{\Bigg(36\,\pi^4-\frac{8\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/}$$

$$\Bigg(3\,v^2\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\Bigg)^{1/3}\Bigg)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Bigg(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{1}{6}\Big(12\,\pi+\sqrt{\Big(144\,\pi^2-12\,\Big(9\,\pi^2+\frac{3}{2}\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+}}$$

$$\big(16\times2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+$$

$$110\,592\,\pi^9\,v^4+\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624}$$

$$\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}\Big)+\frac{1}{3\times2^{1/3}\,v^2}$$

$$\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}\Big)+$$

$$\frac{3}{2}\sqrt{\Big(72\,\pi^4-\frac{16\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}-\big(16\times2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}\Big)-\frac{1}{3\times2^{1/3}\,v^2}$$

$$\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\big(-226\,492\,416\,\pi^{12}}$$

$$v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}-$$

$$\Big(-1728\,\pi^6+\frac{192\,\pi^2\,(\pi+12\,\pi^4\,v^2)}{v^2}-\frac{256\,(-\pi^3+2\,\pi^6\,v^2)}{v^2}\Big)\Big/$$

$$\Big(4\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+\big(16\times2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times2^{1/3}\,v^2}\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)}\Big)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{1}{6}\Big(12\,\pi-\sqrt{\Big(144\,\pi^2+12\,\Big(-9\,\pi^2+\frac{3}{2}\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+}}$$

$$(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2))\,/\,(3\,v^2\,(128\,\pi^3+27\,648\,\pi^6\,v^2+$$

$$110\,592\,\pi^9\,v^4+\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3})+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3})-$$

$$\frac{3}{2}\sqrt{(72\,\pi^4-\frac{16\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}-(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2))\,/}$$

$$(3\,v^2\,(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3})-\frac{1}{3\times 2^{1/3}\,v^2}$$

$$(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{(-226\,492\,416\,\pi^{12}}$$

$$v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3}+$$

$$(-1728\,\pi^6+\frac{192\,\pi^2\,(\pi+12\,\pi^4\,v^2)}{v^2}-\frac{256\,(-\pi^3+2\,\pi^6\,v^2)}{v^2})\,/$$

$$(4\sqrt{(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2))\,/}$$

$$(3\,v^2\,(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3})+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8))^{1/3}))))))\},$$

$$\{\theta\to\frac{1}{6}\,(12\,\pi+\sqrt{(144\,\pi^2+12\,(-9\,\pi^2+\frac{3}{2}\sqrt{(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+}}$$

$$(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2))\,/\,(3\,v^2\,(128\,\pi^3+27\,648\,\pi^6\,v^2+$$

$$110\,592\,\pi^9\,v^4+\sqrt{(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\big) +$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 +$$

$$12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\Big) -$$

$$\frac{3}{2}\sqrt{}\Bigg(72\,\pi^4 - \frac{16\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} - \big(16\times 2^{1/3}\,\pi^2\,(1 + 144\,\pi^3\,v^2)\big)\Big/$$

$$\big(3\,v^2\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 +$$

$$12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\big) - \frac{1}{3\times 2^{1/3}\,v^2}$$

$$\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{}\,(-226\,492\,416\,\pi^{12}$$

$$v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3} +$$

$$\left(-1728\,\pi^6 + \frac{192\,\pi^2\,(\pi + 12\,\pi^4\,v^2)}{v^2} - \frac{256\,(-\pi^3 + 2\,\pi^6\,v^2)}{v^2}\right)\Big/$$

$$\Bigg(4\sqrt{}\Bigg(36\,\pi^4 - \frac{8\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} + \big(16\times 2^{1/3}\,\pi^2\,(1 + 144\,\pi^3\,v^2)\big)\Big/$$

$$\big(3\,v^2\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 +$$

$$12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\big) +$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 +$$

$$12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Big\{\theta \to \frac{1}{6}\,\Bigg(12\,\pi - \sqrt{}\Bigg(144\,\pi^2 + 12\,\Bigg(-9\,\pi^2 + \frac{3}{2}\sqrt{}\Bigg(36\,\pi^4 - \frac{8\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} +$$

$$\big(16\times 2^{1/3}\,\pi^2\,(1 + 144\,\pi^3\,v^2)\big)\Big/\big(3\,v^2\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 +$$

$$110\,592\,\pi^9\,v^4 + \sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^4 -$$

$$42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8)\big)^{1/3}\big) +$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$
$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Bigg)+$$
$$\frac{3}{2}\sqrt{\left(72\,\pi^4-\frac{16\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\right/}$$
$$\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.\right.$$
$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$
$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)-\frac{1}{3\times 2^{1/3}\,v^2}$$
$$\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\right.}\right.$$
$$\left.\left.v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}+$$
$$\left(-1728\,\pi^6+\frac{192\,\pi^2\,\left(\pi+12\,\pi^4\,v^2\right)}{v^2}-\frac{256\,\left(-\pi^3+2\,\pi^6\,v^2\right)}{v^2}\right)\Bigg/$$
$$\left(4\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\right/}\right.$$
$$\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.\right.$$
$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$
$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)+$$
$$\frac{1}{3\times 2^{1/3}\,v^2}\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.$$
$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$
$$\left.\left.12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$
$$\Big\{\theta\to\frac{1}{6}\,\left(12\,\pi+\sqrt{\left(144\,\pi^2+12\,\left(-9\,\pi^2+\frac{3}{2}\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\right.}\right.\right.}\right.$$
$$\left(16\times 2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+\right.\right.$$
$$110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-\right.}$$
$$\left.\left.42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)\right)^{1/3}\Big)+$$
$$\frac{1}{3\times 2^{1/3}\,v^2}\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\right.$$
$$\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+\right.}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}\Big)+$$

$$\frac{3}{2}\sqrt{\Big(72\,\pi^4-\frac{16\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}-\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}\Big)-\frac{1}{3\times 2^{1/3}\,v^2}$$

$$\big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\big(-226\,492\,416\,\pi^{12}}$$

$$v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}+$$

$$\Big(-1728\,\pi^6+\frac{192\,\pi^2\,(\pi+12\,\pi^4\,v^2)}{v^2}-\frac{256\,(-\pi^3+2\,\pi^6\,v^2)}{v^2}\Big)\Big/$$

$$\Big(4\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big\}\Big\}$$

$$\text{Solve}\Big[v==-\frac{\sqrt{\pi}\,\sqrt{4\,\pi\,\theta-\theta^2}\,\left(-32\,\pi^3+48\,\pi^2\,\theta-24\,\pi\,\theta^2+4\,\theta^3\right)}{\left(16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\,(4\,\pi-2\,\theta)}{\sqrt{4\,\pi\,\theta-\theta^2}\,\sqrt{16\,\pi^4-32\,\pi^3\,\theta+24\,\pi^2\,\theta^2-8\,\pi\,\theta^3+\theta^4}},\ \theta\Big] \tag{230}$$

$$\Big\{\Big\{\theta\to$$

$$\frac{1}{6}\Big(12\,\pi-\sqrt{\Big(144\,\pi^2-12\,\Big(9\,\pi^2+\frac{3}{2}\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}}$$

$$\Big(3\,v^2\,\big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\big)\big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\Bigg)-$$

$$\frac{3}{2}\sqrt{\left(72\,\pi^4-\frac{16\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)-\frac{1}{3\times 2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}-\left(-1728\,\pi^6+\frac{192\,\pi^2\left(\pi+12\,\pi^4\,v^2\right)}{v^2}-\frac{256\left(-\pi^3+2\,\pi^6\,v^2\right)}{v^2}\right)\Big/\left(4\sqrt{\left(36\,\pi^4-\frac{8\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)}\right)\right)}\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\theta\to\frac{1}{6}\left(12\,\pi+\sqrt{\left(144\,\pi^2-12\left(9\,\pi^2+\frac{3}{2}\sqrt{\left(36\,\pi^4-\frac{8\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)}-\right.\right.}\right.$$

$$\frac{3}{2}\sqrt{\left(72\,\pi^4-\frac{16\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times 2^{1/3}\,\pi^2\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-\right.}\right.\right.\right.}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3} -$$

$$\left(-1728\,\pi^6 + \frac{192\,\pi^2\,(\pi + 12\,\pi^4\,v^2)}{v^2} - \frac{256\,(-\pi^3 + 2\,\pi^6\,v^2)}{v^2}\right)\Big/$$

$$\left(4\sqrt{\left(36\,\pi^4 - \frac{8\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} + \Big(16\times 2^{1/3}\,\pi^2\,\big(1 + 144\,\pi^3\,v^2\big)\Big)\Big/\right.}\right.$$

$$\Big(3\,v^2\,\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4 -}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 +$$

$$\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 +}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta \to \frac{1}{6}\left(12\,\pi - \sqrt{\left(144\,\pi^2 - 12\left(9\,\pi^2 + \frac{3}{2}\sqrt{\left(36\,\pi^4 - \frac{8\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} + \Big(16\times 2^{1/3}\,\pi^2\,\big(1 + 144\,\pi^3\right.}\right.}\right.$$

$$v^2\big)\Big)\Big/\Big(3\,v^2\,\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big) +$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big) +$$

$$\frac{3}{2}\sqrt{\left(72\,\pi^4 - \frac{16\,(\pi + 12\,\pi^4\,v^2)}{3\,v^2} - \Big(16\times 2^{1/3}\,\pi^2\,\big(1 + 144\,\pi^3\,v^2\big)\Big)\Big/\right.}$$

$$\Big(3\,v^2\,\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4 -}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big) -$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\Big(128\,\pi^3 + 27\,648\,\pi^6\,v^2 + 110\,592\,\pi^9\,v^4 + \sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4 - 42\,807\,066\,624\,\pi^{15}\,v^6 + 12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3} -$$

$$\left(-1728\,\pi^6 + \frac{192\,\pi^2\,(\pi + 12\,\pi^4\,v^2)}{v^2} - \frac{256\,(-\pi^3 + 2\,\pi^6\,v^2)}{v^2}\right)\Big/$$

$$\left(4\sqrt{\left(36\pi^4-\frac{8\left(\pi+12\pi^4 v^2\right)}{3v^2}+\left(16\times 2^{1/3}\pi^2\left(1+144\pi^3 v^2\right)\right)\Big/\left(3v^2\left(128\pi^3+27648\pi^6 v^2+110592\pi^9 v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}v^2}\left(128\pi^3+27648\pi^6 v^2+110592\pi^9 v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)}\right)\right)\right)\right)\right)\Big\},$$

$$\Big\{\theta\to\frac{1}{6}\left(12\pi+\sqrt{\left(144\pi^2-12\left(9\pi^2+\frac{3}{2}\sqrt{\left(36\pi^4-\frac{8\left(\pi+12\pi^4v^2\right)}{3v^2}+\left(16\times 2^{1/3}\pi^2\left(1+144\pi^3 v^2\right)\right)\Big/\left(3v^2\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}v^2}\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)}+\right.\right.}\right.$$

$$\frac{3}{2}\sqrt{\left(72\pi^4-\frac{16\left(\pi+12\pi^4v^2\right)}{3v^2}-\left(16\times 2^{1/3}\pi^2\left(1+144\pi^3v^2\right)\right)\Big/\left(3v^2\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)-\frac{1}{3\times 2^{1/3}v^2}\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}-\left(-1728\pi^6+\frac{192\pi^2\left(\pi+12\pi^4v^2\right)}{v^2}-\frac{256\left(-\pi^3+2\pi^6v^2\right)}{v^2}\right)\Big/\left(4\sqrt{\left(36\pi^4-\frac{8\left(\pi+12\pi^4v^2\right)}{3v^2}+\left(16\times 2^{1/3}\pi^2\left(1+144\pi^3v^2\right)\right)\Big/\left(3v^2\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+12230590464\pi^{18}v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times 2^{1/3}v^2}\left(128\pi^3+27648\pi^6v^2+110592\pi^9v^4+\sqrt{\left(-226492416\pi^{12}v^4-42807066624\pi^{15}v^6+\right.\right.}\right.}\right.}$$

$$12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}))))))))\},$$

$$\{\theta \to \frac{1}{6}\,(12\,\pi - \sqrt{}\,(144\,\pi^{2} + 12\,(-9\,\pi^{2} + \frac{3}{2}\,\sqrt{}\,(36\,\pi^{4} - \frac{8\,(\pi + 12\,\pi^{4}\,v^{2})}{3\,v^{2}} +$$

$$(16 \times 2^{1/3}\,\pi^{2}\,(1 + 144\,\pi^{3}\,v^{2}))\,/$$

$$(3\,v^{2}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} + \sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^{4} -$$

$$42\,807\,066\,624\,\pi^{15}\,v^{6} + 12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}) +$$

$$\frac{1}{3 \times 2^{1/3}\,v^{2}}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} + \sqrt{}\,(-226\,492\,416$$

$$\pi^{12}\,v^{4} - 42\,807\,066\,624\,\pi^{15}\,v^{6} + 12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}) -$$

$$\frac{3}{2}\,\sqrt{}\,(72\,\pi^{4} - \frac{16\,(\pi + 12\,\pi^{4}\,v^{2})}{3\,v^{2}} - (16 \times 2^{1/3}\,\pi^{2}\,(1 + 144\,\pi^{3}\,v^{2}))\,/$$

$$(3\,v^{2}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} + \sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^{4} -$$

$$42\,807\,066\,624\,\pi^{15}\,v^{6} + 12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}) -$$

$$\frac{1}{3 \times 2^{1/3}\,v^{2}}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} + \sqrt{}\,(-226\,492\,416$$

$$\pi^{12}\,v^{4} - 42\,807\,066\,624\,\pi^{15}\,v^{6} + 12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3} +$$

$$(-1728\,\pi^{6} + \frac{192\,\pi^{2}\,(\pi + 12\,\pi^{4}\,v^{2})}{v^{2}} - \frac{256\,(-\pi^{3} + 2\,\pi^{6}\,v^{2})}{v^{2}})\,/$$

$$(4\,\sqrt{}\,(36\,\pi^{4} - \frac{8\,(\pi + 12\,\pi^{4}\,v^{2})}{3\,v^{2}} + (16 \times 2^{1/3}\,\pi^{2}\,(1 + 144\,\pi^{3}\,v^{2}))\,/$$

$$(3\,v^{2}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} + \sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^{4} -$$

$$42\,807\,066\,624\,\pi^{15}\,v^{6} + 12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}) +$$

$$\frac{1}{3 \times 2^{1/3}\,v^{2}}\,(128\,\pi^{3} + 27\,648\,\pi^{6}\,v^{2} + 110\,592\,\pi^{9}\,v^{4} +$$

$$\sqrt{}\,(-226\,492\,416\,\pi^{12}\,v^{4} - 42\,807\,066\,624\,\pi^{15}\,v^{6} +$$

$$12\,230\,590\,464\,\pi^{18}\,v^{8}))^{1/3}))))))))\},$$

$$\{\theta \to \frac{1}{6}\,(12\,\pi + \sqrt{}\,(144\,\pi^{2} + 12\,(-9\,\pi^{2} + \frac{3}{2}\,\sqrt{}\,(36\,\pi^{4} - \frac{8\,(\pi + 12\,\pi^{4}\,v^{2})}{3\,v^{2}} +$$

$$(16 \times 2^{1/3}\,\pi^{2}\,(1 + 144\,\pi^{3}\,v^{2}))\,/$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)-$$

$$\frac{3}{2}\sqrt{\Big(72\,\pi^4-\frac{16\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}-\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)-$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}+$$

$$\Big(-1728\,\pi^6+\frac{192\,\pi^2\,(\pi+12\,\pi^4\,v^2)}{v^2}-\frac{256\,(-\pi^3+2\,\pi^6\,v^2)}{v^2}\Big)\Big/$$

$$\Big(4\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/}$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+$$

$$\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+}$$

$$12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big\},$$

$$\Big\{\theta\to\frac{1}{6}\,\Big(12\,\pi-\sqrt{\Big(144\,\pi^2+12\,\Big(-9\,\pi^2+\frac{3}{2}\sqrt{\Big(36\,\pi^4-\frac{8\,(\pi+12\,\pi^4\,v^2)}{3\,v^2}+}$$

$$\big(16\times 2^{1/3}\,\pi^2\,(1+144\,\pi^3\,v^2)\big)\Big/$$

$$\Big(3\,v^2\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416\,\pi^{12}\,v^4-}$$

$$42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)+$$

$$\frac{1}{3\times 2^{1/3}\,v^2}\,\Big(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\Big(-226\,492\,416}$$

$$\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\Big)\Big)^{1/3}\Big)+$$

$$\frac{3}{2}\sqrt{\left(72\,\pi^4-\frac{16\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)-\frac{1}{3\times2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}+\left(-1728\,\pi^6+\frac{192\,\pi^2\,\left(\pi+12\,\pi^4\,v^2\right)}{v^2}-\frac{256\,\left(-\pi^3+2\,\pi^6\,v^2\right)}{v^2}\right)\Big/\left(4\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)}\right)\right)}\Bigg)\Bigg)\Bigg)\Bigg\},$$

$$\Bigg\{\theta\to\frac{1}{6}\Bigg(12\,\pi+\sqrt{\Bigg(144\,\pi^2+12\,\Bigg(-9\,\pi^2+\frac{3}{2}\sqrt{\left(36\,\pi^4-\frac{8\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}+\left(16\times2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)+\frac{1}{3\times2^{1/3}\,v^2}\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)}+$$

$$\frac{3}{2}\sqrt{\left(72\,\pi^4-\frac{16\,\left(\pi+12\,\pi^4\,v^2\right)}{3\,v^2}-\left(16\times2^{1/3}\,\pi^2\,\left(1+144\,\pi^3\,v^2\right)\right)\Big/\left(3\,v^2\,\left(128\,\pi^3+27\,648\,\pi^6\,v^2+110\,592\,\pi^9\,v^4+\sqrt{\left(-226\,492\,416\,\pi^{12}\,v^4-42\,807\,066\,624\,\pi^{15}\,v^6+12\,230\,590\,464\,\pi^{18}\,v^8\right)}\right)^{1/3}\right)-\right.}$$

$$\frac{1}{3 \times 2^{1/3}\, v^2} \left(128\,\pi^3 + 27\,648\,\pi^6\, v^2 + 110\,592\,\pi^9\, v^4 + \sqrt{\left(-226\,492\,416\,\pi^{12}\, v^4 - 42\,807\,066\,624\,\pi^{15}\, v^6 + 12\,230\,590\,464\,\pi^{18}\, v^8\right)}\right)^{1/3} +$$

$$\left(-1728\,\pi^6 + \frac{192\,\pi^2\,(\pi + 12\,\pi^4\, v^2)}{v^2} - \frac{256\,(-\pi^3 + 2\,\pi^6\, v^2)}{v^2}\right) \Big/$$

$$\left(4\sqrt{\left(36\,\pi^4 - \frac{8\,(\pi + 12\,\pi^4\, v^2)}{3\, v^2} + \left(16 \times 2^{1/3}\,\pi^2\,(1 + 144\,\pi^3\, v^2)\right)\Big/\left(3\, v^2\left(128\,\pi^3 + 27\,648\,\pi^6\, v^2 + 110\,592\,\pi^9\, v^4 + \sqrt{\left(-226\,492\,416\,\pi^{12}\, v^4 - 42\,807\,066\,624\,\pi^{15}\, v^6 + 12\,230\,590\,464\,\pi^{18}\, v^8\right)}\right)^{1/3}\right) + \frac{1}{3 \times 2^{1/3}\, v^2}\left(128\,\pi^3 + 27\,648\,\pi^6\, v^2 + 110\,592\,\pi^9\, v^4 + \sqrt{\left(-226\,492\,416\,\pi^{12}\, v^4 - 42\,807\,066\,624\,\pi^{15}\, v^6 + 12\,230\,590\,464\,\pi^{18}\, v^8\right)}\right)^{1/3}\right)}\right)\Bigg\}\Bigg\}$$

$$\text{D}\left[\left(-\frac{\sqrt{\pi}\,\sqrt{4\,\pi\,\theta - \theta^2}\,(-32\,\pi^3 + 48\,\pi^2\,\theta - 24\,\pi\,\theta^2 + 4\,\theta^3)}{(16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4)^{3/2}} + \frac{\sqrt{\pi}\,(4\,\pi - 2\,\theta)}{\sqrt{4\,\pi\,\theta - \theta^2}\,\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right), \theta\right]$$

$$\text{Simplify}\left[\frac{3\,\sqrt{\pi}\,\sqrt{4\,\pi\,\theta - \theta^2}\,(-32\,\pi^3 + 48\,\pi^2\,\theta - 24\,\pi\,\theta^2 + 4\,\theta^3)^2}{2\,(16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4)^{5/2}} - \frac{\sqrt{\pi}\,\sqrt{4\,\pi\,\theta - \theta^2}\,(48\,\pi^2 - 48\,\pi\,\theta + 12\,\theta^2)}{(16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4)^{3/2}} - \frac{\sqrt{\pi}\,(4\,\pi - 2\,\theta)\,(-32\,\pi^3 + 48\,\pi^2\,\theta - 24\,\pi\,\theta^2 + 4\,\theta^3)}{\sqrt{4\,\pi\,\theta - \theta^2}\,(16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4)^{3/2}} - \frac{\sqrt{\pi}\,(4\,\pi - 2\,\theta)^2}{2\,(4\,\pi\,\theta - \theta^2)^{3/2}\,\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}} - \frac{2\,\sqrt{\pi}}{\sqrt{4\,\pi\,\theta - \theta^2}\,\sqrt{16\,\pi^4 - 32\,\pi^3\,\theta + 24\,\pi^2\,\theta^2 - 8\,\pi\,\theta^3 + \theta^4}}\right]$$

$$-\frac{4\,\sqrt{\pi}\,(8\,\pi^4 - 40\,\pi^3\,\theta - 6\,\pi^2\,\theta^2 + 8\,\pi\,\theta^3 - \theta^4)}{((4\,\pi - \theta)\,\theta)^{3/2}\,(-2\,\pi + \theta)^2\,\sqrt{(-2\,\pi + \theta)^4}}$$

$$\text{Simplify}\Big[-\frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

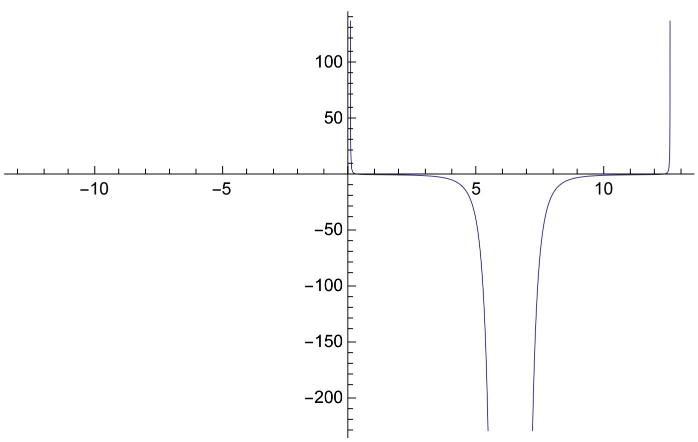
$$\frac{\sqrt{\pi}(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\Big]$$

$$\frac{4\sqrt{\pi}\left(8\pi^4-40\pi^3\theta-6\pi^2\theta^2+8\pi\theta^3-\theta^4\right)}{((4\pi-\theta)\theta)^{3/2}(-2\pi+\theta)^2\sqrt{(-2\pi+\theta)^4}}$$

$$\textbf{Plot}\Big[\frac{4\sqrt{\pi}\left(8\pi^4-40\pi^3\theta-6\pi^2\theta^2+8\pi\theta^3-\theta^4\right)}{((4\pi-\theta)\theta)^{3/2}(-2\pi+\theta)^2\sqrt{(-2\pi+\theta)^4}},\ \{\theta,-13,13\}\Big]$$



This is the inverse of true, and can be simplified in terms of time.

$$\text{Solve}\left[a == \frac{4\sqrt{\pi}\left(8\pi^4 - 40\pi^3\theta - 6\pi^2\theta^2 + 8\pi\theta^3 - \theta^4\right)}{((4\pi-\theta)\,\theta)^{3/2}\,(-2\pi+\theta)^2\,\sqrt{(-2\pi+\theta)^4}}, \theta\right]$$

$$\left\{\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 1\right]\right)}\right\},\right.$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 1\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 2\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 2\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 3\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 3\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 4\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 4\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 5\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 5\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 6\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 6\right]\right)}\right\},$$

$$\left\{\theta \to 2\pi - \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 7\right]\right)}\right\},$$

$$\left.\left\{\theta \to 2\pi + \sqrt{\left(4\pi^2 + \text{Root}\left[1024\pi^9 + 2560\pi^7 \#1 + 1344\pi^5 \#1^2 + \left(-320\pi^3 + 256 a^2 \pi^8\right) \#1^3 + \left(16\pi + 256 a^2 \pi^6\right) \#1^4 + 96 a^2 \pi^4 \#1^5 + 16 a^2 \pi^2 \#1^6 + a^2 \#1^7 \&, 7\right]\right)}\right\}\right\}$$

$$\text{Simplify}\Big[\frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

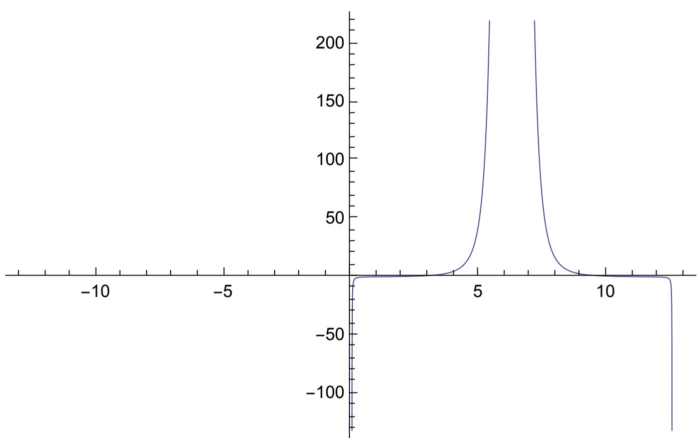
$$\frac{\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\Big]$$

$$-\frac{4\sqrt{\pi}\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{3/2}\,(-2\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}}$$

$$\text{Plot}\Big[-\frac{4\sqrt{\pi}\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{3/2}\,(-2\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}},\{\text{True},-13,13\}\Big] \tag{231}$$



$$\text{Solve}\left[a == -\frac{4\sqrt{\pi}\left(8\pi^4 - 40\pi^3\,\text{True} - 6\pi^2\,\text{True}^2 + 8\pi\,\text{True}^3 - \text{True}^4\right)}{((4\pi - \text{True})\,\text{True})^{3/2}\,(-2\pi + \text{True})^2\,\sqrt{(-2\pi + \text{True})^4}}, \text{True}\right]$$

$\{\{\text{True} \to \text{ComplexInfinity}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 1])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 1])}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 2])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 2])}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 3])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 3])}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 4])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 4])}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 5])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 5])}\},$

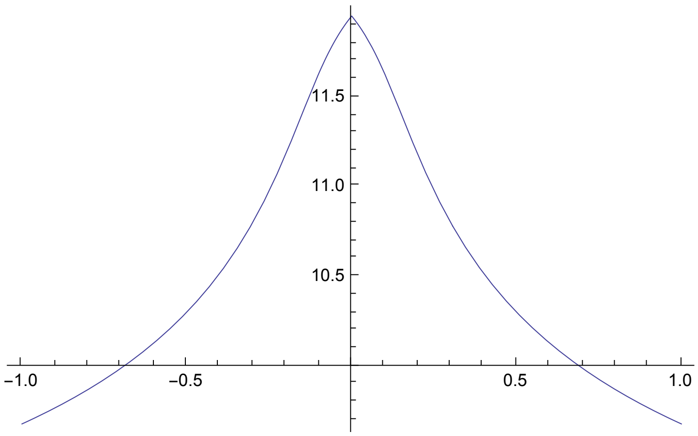
$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 6])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 6])}\},$

$\{\text{True} \to 2\pi - \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 7])}\},$

$\{\text{True} \to 2\pi + \sqrt{(4\pi^2 + \text{Root}[1024\pi^9 + 2560\pi^7\,\#1 + 1344\pi^5\,\#1^2 + (-320\pi^3 + 256a^2\pi^8)\,\#1^3 + (16\pi + 256a^2\pi^6)\,\#1^4 + 96a^2\pi^4\,\#1^5 + 16a^2\pi^2\,\#1^6 + a^2\,\#1^7\,\&, 7])}\}\}$

```
Plot[2 π +
  √ (4 π^2 + Root[1024 π^9 + 2560 π^7 #1 + 1344 π^5 #1^2 + (-320 π^3 + 256 a^2 π^8) #1^3 + (16 π + 256 a^2 π^6)
        #1^4 + 96 a^2 π^4 #1^5 + 16 a^2 π^2 #1^6 + a^2 #1^7 &, 2]), {a, -1, 1}]
```




```
SymbolName[True]
```

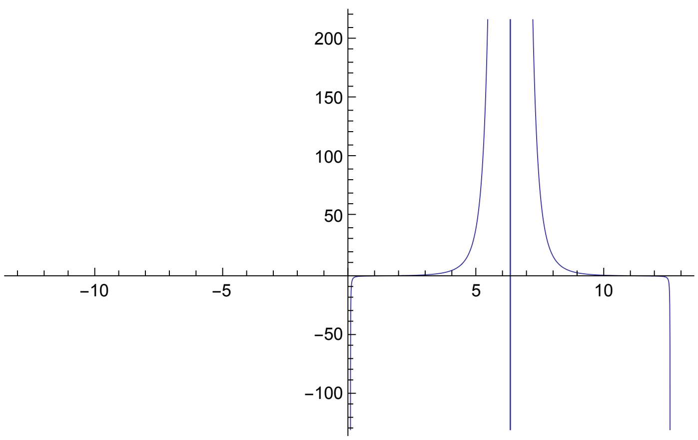
```
True
```

```
Solve[Pi ∈ Algebraics]
```

```
Solve[Algebraics π
  Root[-64 π^3 + (48 π^2 + 16 π^8) #1 + (-12 π - 32 π^7) #1^2 + (1 + 24 π^6) #1^3 - 8 π^5 #1^4 + π^4 #1^5 &, 3]]
```

In terms of true, there is no assymptote at 2 π.

$$\text{Plot}\Big[\frac{3\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-\frac{\sqrt{\pi}\ \sqrt{4\pi\theta-\theta^2}\ \left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-\frac{\sqrt{\pi}\ (4\pi-2\theta)\ \left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\ \left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-\frac{\sqrt{\pi}\ (4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\ \sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\ \{\theta,-13,13\}\Big]$$



For terms of time, there is an assymptote at 2 π.

THIS MEANS THAT THERE IS NO SUCH THING AS TIME, THERE IS ONLY TRUE! And the truth is that the rest of the equations plot emptiness. This is the only one that gives us a graph.

There are only trues,
and time is the inverse of true. Time is false, time is illusion (232)

Disprove Nietze multiply by 0, but keep everything solid

$$1/6\,D\left[\frac{\sqrt{\pi}\,\sqrt{4\pi\theta-\theta^2}\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-\frac{\sqrt{\pi}\,(4\pi-2\theta)}{\sqrt{4\pi\theta-\theta^2}\,\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\right]$$

$$\frac{1}{6}\left(-\frac{3\sqrt{\pi}\,\sqrt{4\pi\theta-\theta^2}\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+\frac{\sqrt{\pi}\,\sqrt{4\pi\theta-\theta^2}\,\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\,(4\pi-2\theta)\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\,\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)$$

$$\text{Simplify}\left[\frac{1}{6}\left(-\frac{3\sqrt{\pi}\,\sqrt{4\pi\theta-\theta^2}\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+\frac{\sqrt{\pi}\,\sqrt{4\pi\theta-\theta^2}\,\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\,(4\pi-2\theta)\,\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\,\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\,\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\right)\right]$$

$$\frac{2\sqrt{\pi}\,\left(8\pi^4-40\pi^3\theta-6\pi^2\theta^2+8\pi\theta^3-\theta^4\right)}{3\,((4\pi-\theta)\,\theta)^{3/2}\,(-2\pi+\theta)^2\,\sqrt{(-2\pi+\theta)^4}}$$

$$\text{Solve}\left[a == \frac{2\sqrt{\pi}\,\left(8\,\pi^4 - 40\,\pi^3\,\theta - 6\,\pi^2\,\theta^2 + 8\,\pi\,\theta^3 - \theta^4\right)}{3\,\left((4\,\pi-\theta)\,\theta\right)^{3/2}\,(-2\,\pi+\theta)^2\,\sqrt{(-2\,\pi+\theta)^4}},\,\theta\right]$$

$$\left\{\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,1\right]\right)}\right\},\right.$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,1\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,2\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,2\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,3\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,3\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,4\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,4\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,5\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,5\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,6\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,6\right]\right)}\right\},$$

$$\left\{\theta \to 2\,\pi - \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,7\right]\right)}\right\},$$

$$\left.\left\{\theta \to 2\,\pi + \sqrt{\left(4\,\pi^2 + \text{Root}\left[256\,\pi^9 + 640\,\pi^7\,\#1 + 336\,\pi^5\,\#1^2 + \left(-80\,\pi^3 + 2304\,a^2\,\pi^8\right)\#1^3 + \left(4\,\pi + 2304\,a^2\,\pi^6\right)\#1^4 + 864\,a^2\,\pi^4\,\#1^5 + 144\,a^2\,\pi^2\,\#1^6 + 9\,a^2\,\#1^7\,\&,\,7\right]\right)}\right\}\right\}$$

$$1/6\times\frac{1}{6}\,\mathrm{D}\Big[\Big(-\frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\Big),\theta\Big]$$

$$\frac{1}{36}\Bigg(\frac{15\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3}{4\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{7/2}}-$$

$$\frac{9\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{9\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{4\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\sqrt{\pi}\,(-48\pi+24\theta)\sqrt{4\pi\theta-\theta^2}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)\left(48\pi^2-48\pi\theta+12\theta^2\right)}{2\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^2\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{4\left(4\pi\theta-\theta^2\right)^{3/2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^3}{4\left(4\pi\theta-\theta^2\right)^{5/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\Bigg)$$

$$\text{Simplify}\Big[\frac{1}{36}\Bigg(\frac{15\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3}{4\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{7/2}}-$$

$$\left(9\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)\right)\Big/$$

$$\left(2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}\right)-$$

$$\frac{9\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{4\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{\sqrt{\pi}\,(-48\pi+24\theta)\sqrt{4\pi\theta-\theta^2}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)\left(48\pi^2-48\pi\theta+12\theta^2\right)}{2\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^2\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{4\left(4\pi\theta-\theta^2\right)^{3/2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^3}{4\left(4\pi\theta-\theta^2\right)^{5/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\Bigg)\Big]$$

$$\frac{\sqrt{\pi}\left(-32\pi^6+128\pi^5\theta-320\pi^4\theta^2+80\pi^3\theta^3+30\pi^2\theta^4-12\pi\theta^5+\theta^6\right)}{3\,(2\pi-\theta)^3\,\theta^2\sqrt{(4\pi-\theta)\,\theta}\,(-4\pi+\theta)^2\sqrt{(-2\pi+\theta)^4}}$$

$$D\Big[\frac{3\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{\sqrt{\pi}\,(4\pi-2\theta)^2}{2\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}-$$

$$\frac{2\sqrt{\pi}}{\sqrt{4\pi\theta-\theta^2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}},\theta\Big]$$

$$-\frac{15\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3}{4\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{7/2}}+$$

$$\frac{9\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{9\sqrt{\pi}\,(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{4\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}\,(-48\pi+24\theta)\sqrt{4\pi\theta-\theta^2}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)\left(48\pi^2-48\pi\theta+12\theta^2\right)}{2\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^2\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{4\left(4\pi\theta-\theta^2\right)^{3/2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)^3}{4\left(4\pi\theta-\theta^2\right)^{5/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+$$

$$\frac{3\sqrt{\pi}\,(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}$$

$$\text{Simplify}\Big[-\frac{15\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^3}{4\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{7/2}}+$$

$$\frac{9\sqrt{\pi}\sqrt{4\pi\theta-\theta^2}\left(48\pi^2-48\pi\theta+12\theta^2\right)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{2\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}+$$

$$\frac{9\sqrt{\pi}(4\pi-2\theta)\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)^2}{4\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{5/2}}-$$

$$\frac{\sqrt{\pi}(-48\pi+24\theta)\sqrt{4\pi\theta-\theta^2}}{\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}-$$

$$\frac{3\sqrt{\pi}(4\pi-2\theta)\left(48\pi^2-48\pi\theta+12\theta^2\right)}{2\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}(4\pi-2\theta)^2\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{4\left(4\pi\theta-\theta^2\right)^{3/2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}\left(-32\pi^3+48\pi^2\theta-24\pi\theta^2+4\theta^3\right)}{\sqrt{4\pi\theta-\theta^2}\left(16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4\right)^{3/2}}+$$

$$\frac{3\sqrt{\pi}(4\pi-2\theta)^3}{4\left(4\pi\theta-\theta^2\right)^{5/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}+$$

$$\frac{3\sqrt{\pi}(4\pi-2\theta)}{\left(4\pi\theta-\theta^2\right)^{3/2}\sqrt{16\pi^4-32\pi^3\theta+24\pi^2\theta^2-8\pi\theta^3+\theta^4}}\Big]$$

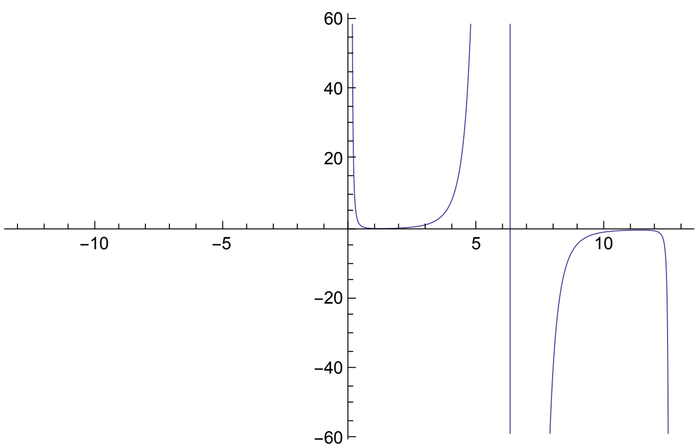
$$\frac{12\sqrt{\pi}\left(32\pi^6-128\pi^5\theta+320\pi^4\theta^2-80\pi^3\theta^3-30\pi^2\theta^4+12\pi\theta^5-\theta^6\right)}{(2\pi-\theta)^3\theta^2\sqrt{(4\pi-\theta)\theta}(-4\pi+\theta)^2\sqrt{(-2\pi+\theta)^4}}$$

$$\text{D}\Big[-\frac{4\sqrt{\pi}\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{3/2}(-2\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}},\text{True}\Big]$$

$$\text{Simplify}\Big[-\frac{4\sqrt{\pi}\left(-40\pi^3-12\pi^2\,\text{True}+24\pi\,\text{True}^2-4\,\text{True}^3\right)}{((4\pi-\text{True})\,\text{True})^{3/2}\,(-2\pi+\text{True})^2\,\sqrt{(-2\pi+\text{True})^4}}+$$
$$\frac{8\sqrt{\pi}\,(-2\pi+\text{True})\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{3/2}\left((-2\pi+\text{True})^4\right)^{3/2}}+$$
$$\frac{8\sqrt{\pi}\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{3/2}\,(-2\pi+\text{True})^3\,\sqrt{(-2\pi+\text{True})^4}}+$$
$$\frac{6\sqrt{\pi}\,(4\pi-2\,\text{True})\left(8\pi^4-40\pi^3\,\text{True}-6\pi^2\,\text{True}^2+8\pi\,\text{True}^3-\text{True}^4\right)}{((4\pi-\text{True})\,\text{True})^{5/2}\,(-2\pi+\text{True})^2\,\sqrt{(-2\pi+\text{True})^4}}\Big]$$

$$\left(12\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/\left((2\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\,\sqrt{(-2\pi+\text{True})^4}\right)$$

$$\text{Plot}\Big[\left(12\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/\left((2\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\,\sqrt{(-2\pi+\text{True})^4}\right),\ \{\text{True},-13,13\}\Big]$$



$$\text{D}\Big[\left(12\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/\left((2\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\,\sqrt{(-2\pi+\text{True})^4}\right),\ \text{True}\Big]$$

$$\text{Plot}\Big[\Big(12\ \sqrt{\pi}\ \big(-128\,\pi^5 + 640\,\pi^4\,\text{True} - 240\,\pi^3\,\text{True}^2 - 120\,\pi^2\,\text{True}^3 + 60\,\pi\,\text{True}^4 - 6\,\text{True}^5\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^3\,\text{True}^2\ \sqrt{(4\,\pi - \text{True})\ \text{True}}\ (-4\,\pi + \text{True})^2\ \sqrt{(-2\,\pi + \text{True})^4}\Big) -$$

$$\Big(24\ \sqrt{\pi}\ (-2\,\pi + \text{True})^3$$

$$\big(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^3\,\text{True}^2\ \sqrt{(4\,\pi - \text{True})\ \text{True}}\ (-4\,\pi + \text{True})^2\ \big((-2\,\pi + \text{True})^4\big)^{3/2}\Big) -$$

$$\Big(24\ \sqrt{\pi}\ \big(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^3\,\text{True}^2\ \sqrt{(4\,\pi - \text{True})\ \text{True}}\ (-4\,\pi + \text{True})^3\ \sqrt{(-2\,\pi + \text{True})^4}\Big) -$$

$$\Big(6\ \sqrt{\pi}\ (4\,\pi - 2\,\text{True})$$

$$\big(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^3\,\text{True}^2\ \big((4\,\pi - \text{True})\ \text{True}\big)^{3/2}\ (-4\,\pi + \text{True})^2\ \sqrt{(-2\,\pi + \text{True})^4}\Big) -$$

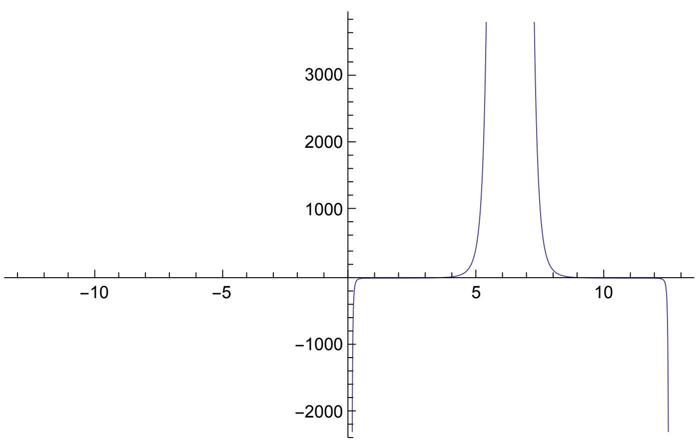
$$\Big(24\ \sqrt{\pi}\ \big(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^3\,\text{True}^3\ \sqrt{(4\,\pi - \text{True})\ \text{True}}\ (-4\,\pi + \text{True})^2\ \sqrt{(-2\,\pi + \text{True})^4}\Big) +$$

$$\Big(36\ \sqrt{\pi}\ \big(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6\big)\Big)\Big/$$

$$\Big((2\,\pi - \text{True})^4\,\text{True}^2\ \sqrt{(4\,\pi - \text{True})\ \text{True}}$$

$$(-4\,\pi + \text{True})^2\ \sqrt{(-2\,\pi + \text{True})^4}\Big),\ \{\text{True},\ -13,\ 13\}\Big]$$



$$\Big\{\Big\{o \to \big(12\sqrt{\pi}\,(-128\,\pi^5 + 640\,\pi^4\,\text{True} - 240\,\pi^3\,\text{True}^2 - 120\,\pi^2\,\text{True}^3 + 60\,\pi\,\text{True}^4 - 6\,\text{True}^5)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(24\sqrt{\pi}\,(-2\,\pi + \text{True})^3\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\big((-2\,\pi + \text{True})^4\big)^{3/2}\Big) - \big(24\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^3\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(6\sqrt{\pi}\,(4\,\pi - 2\,\text{True})\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,((4\,\pi - \text{True})\,\text{True})^{3/2}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(24\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) + \big(36\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big)\Big\}\Big\}$$

$$\mathbf{D}\Big[\big(12\sqrt{\pi}\,(-128\,\pi^5 + 640\,\pi^4\,\text{True} - 240\,\pi^3\,\text{True}^2 - 120\,\pi^2\,\text{True}^3 + 60\,\pi\,\text{True}^4 - 6\,\text{True}^5)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(24\sqrt{\pi}\,(-2\,\pi + \text{True})^3\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\big((-2\,\pi + \text{True})^4\big)^{3/2}\Big) - \big(24\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^3\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(6\sqrt{\pi}\,(4\,\pi - 2\,\text{True})\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^2\,((4\,\pi - \text{True})\,\text{True})^{3/2}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) - \big(24\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big) + \big(36\sqrt{\pi}\,(32\,\pi^6 - 128\,\pi^5\,\text{True} + 320\,\pi^4\,\text{True}^2 - 80\,\pi^3\,\text{True}^3 - 30\,\pi^2\,\text{True}^4 + 12\,\pi\,\text{True}^5 - \text{True}^6)\big) \Big/ \Big((2\,\pi - \text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi - \text{True})\,\text{True}}\,(-4\,\pi + \text{True})^2\,\sqrt{(-2\,\pi + \text{True})^4}\Big),\ \text{True}\Big]$$

$$\frac{12\,\sqrt{\pi}\,\left(640\,\pi^4-480\,\pi^3\,\text{True}-360\,\pi^2\,\text{True}^2+240\,\pi\,\text{True}^3-30\,\text{True}^4\right)}{(2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}}-\Big(48\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$

$$\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)-$$

$$\left(48\,\sqrt{\pi}\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\right)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^3\,\sqrt{(-2\,\pi+\text{True})^4}\right)-\Big(12\,\sqrt{\pi}$$

$$(4\,\pi-2\,\text{True})\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\left((4\,\pi-\text{True})\,\text{True}\right)^{3/2}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)-$$

$$\left(48\,\sqrt{\pi}\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\right)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$

$$\left(72\,\sqrt{\pi}\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\right)\Big/$$

$$\left((2\,\pi-\text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$

$$\Big(144\,\sqrt{\pi}\,(-2\,\pi+\text{True})^6$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{5/2}\right)-$$

$$\Big(72\,\sqrt{\pi}\,(-2\,\pi+\text{True})^2$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$

$$\Big(96\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^3\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$

$$\Big(24\,\sqrt{\pi}\,(4\,\pi-2\,\text{True})\,(-2\,\pi+\text{True})^3$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\left((4\,\pi-\text{True})\,\text{True}\right)^{3/2}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$

$$\Big(96\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)-$$

$$\Big(144\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$

$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$

$$\left((2\,\pi-\text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$

$$\left(72\,\sqrt{\pi}\,\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^4\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$

$$\Big(24\,\sqrt{\pi}\,(4\,\pi-2\,\text{True})$$

$$\left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^2 \left((4 \pi - \text{True}) \text{True}\right)^{3/2} (-4 \pi + \text{True})^3 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(96 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^3 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^3 \sqrt{(-2 \pi + \text{True})^4}\Big) -$$

$$\Big(144 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^4 \text{True}^2 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^3 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(9 \sqrt{\pi} (4 \pi - 2 \text{True})^2$$

$$\left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^2 \left((4 \pi - \text{True}) \text{True}\right)^{5/2} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(24 \sqrt{\pi} (4 \pi - 2 \text{True})$$

$$\left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^3 \left((4 \pi - \text{True}) \text{True}\right)^{3/2} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) -$$

$$\Big(36 \sqrt{\pi} (4 \pi - 2 \text{True})$$

$$\left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^4 \text{True}^2 \left((4 \pi - \text{True}) \text{True}\right)^{3/2} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(12 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^2 \left((4 \pi - \text{True}) \text{True}\right)^{3/2} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(72 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^4 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) -$$

$$\Big(144 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^4 \text{True}^3 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big) +$$

$$\Big(144 \sqrt{\pi} \left(32 \pi^6 - 128 \pi^5 \text{True} + 320 \pi^4 \text{True}^2 - 80 \pi^3 \text{True}^3 - 30 \pi^2 \text{True}^4 + 12 \pi \text{True}^5 - \text{True}^6\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^5 \text{True}^2 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}\Big)$$

$$\textbf{Plot}\Big[\frac{12 \sqrt{\pi} \left(640 \pi^4 - 480 \pi^3 \text{True} - 360 \pi^2 \text{True}^2 + 240 \pi \text{True}^3 - 30 \text{True}^4\right)}{(2 \pi - \text{True})^3 \text{True}^2 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^2 \sqrt{(-2 \pi + \text{True})^4}} -$$

$$\Big(48 \sqrt{\pi} (-2 \pi + \text{True})^3$$

$$\left(-128 \pi^5 + 640 \pi^4 \text{True} - 240 \pi^3 \text{True}^2 - 120 \pi^2 \text{True}^3 + 60 \pi \text{True}^4 - 6 \text{True}^5\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^2 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^2 \left((-2 \pi + \text{True})^4\right)^{3/2}\Big) -$$

$$\Big(48 \sqrt{\pi} \left(-128 \pi^5 + 640 \pi^4 \text{True} - 240 \pi^3 \text{True}^2 - 120 \pi^2 \text{True}^3 + 60 \pi \text{True}^4 - 6 \text{True}^5\right)\Big)\Big/$$

$$\Big((2 \pi - \text{True})^3 \text{True}^2 \sqrt{(4 \pi - \text{True}) \text{True}} (-4 \pi + \text{True})^3 \sqrt{(-2 \pi + \text{True})^4}\Big) -$$

$$\Big(12 \sqrt{\pi} (4 \pi - 2 \text{True})$$

$$\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,((4\,\pi-\text{True})\,\text{True})^{3/2}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)-$$
$$\left(48\,\sqrt{\pi}\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\right)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$
$$\left(72\,\sqrt{\pi}\,\left(-128\,\pi^5+640\,\pi^4\,\text{True}-240\,\pi^3\,\text{True}^2-120\,\pi^2\,\text{True}^3+60\,\pi\,\text{True}^4-6\,\text{True}^5\right)\right)\Big/$$
$$\left((2\,\pi-\text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$
$$\Big(144\,\sqrt{\pi}\,(-2\,\pi+\text{True})^6$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{5/2}\right)-$$
$$\Big(72\,\sqrt{\pi}\,(-2\,\pi+\text{True})^2$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$
$$\Big(96\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^3\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$
$$\Big(24\,\sqrt{\pi}\,(4\,\pi-2\,\text{True})\,(-2\,\pi+\text{True})^3$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,((4\,\pi-\text{True})\,\text{True})^{3/2}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$
$$\Big(96\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^3\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)-$$
$$\Big(144\,\sqrt{\pi}\,(-2\,\pi+\text{True})^3$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^4\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^2\,\left((-2\,\pi+\text{True})^4\right)^{3/2}\right)+$$
$$\left(72\,\sqrt{\pi}\,\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,\sqrt{(4\,\pi-\text{True})\,\text{True}}\,(-4\,\pi+\text{True})^4\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$
$$\Big(24\,\sqrt{\pi}\,(4\,\pi-2\,\text{True})$$
$$\left(32\,\pi^6-128\,\pi^5\,\text{True}+320\,\pi^4\,\text{True}^2-80\,\pi^3\,\text{True}^3-30\,\pi^2\,\text{True}^4+12\,\pi\,\text{True}^5-\text{True}^6\right)\Big)\Big/$$
$$\left((2\,\pi-\text{True})^3\,\text{True}^2\,((4\,\pi-\text{True})\,\text{True})^{3/2}\,(-4\,\pi+\text{True})^3\,\sqrt{(-2\,\pi+\text{True})^4}\right)+$$

$$\left(96\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^3\,\text{True}^3\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^3\sqrt{(-2\pi+\text{True})^4}\right)-\left(144\sqrt{\pi}\right.$$

$$\left.\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^4\,\text{True}^2\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^3\sqrt{(-2\pi+\text{True})^4}\right)+$$

$$\left(9\sqrt{\pi}\,(4\pi-2\,\text{True})^2\right.$$

$$\left.\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^3\,\text{True}^2\,((4\pi-\text{True})\,\text{True})^{5/2}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)+$$

$$\left(24\sqrt{\pi}\,(4\pi-2\,\text{True})\right.$$

$$\left.\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^3\,\text{True}^3\,((4\pi-\text{True})\,\text{True})^{3/2}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)-$$

$$\left(36\sqrt{\pi}\,(4\pi-2\,\text{True})\right.$$

$$\left.\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^4\,\text{True}^2\,((4\pi-\text{True})\,\text{True})^{3/2}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)+$$

$$\left(12\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^3\,\text{True}^2\,((4\pi-\text{True})\,\text{True})^{3/2}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)+$$

$$\left(72\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^3\,\text{True}^4\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)-\left(144\sqrt{\pi}\right.$$

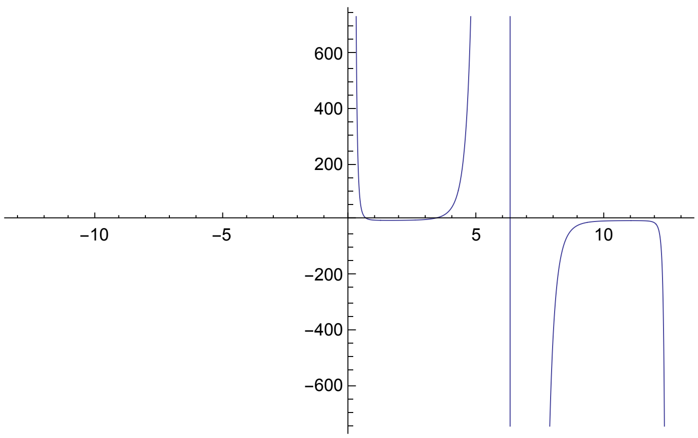
$$\left.\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

$$\left((2\pi-\text{True})^4\,\text{True}^3\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right)+\left(144\right.$$

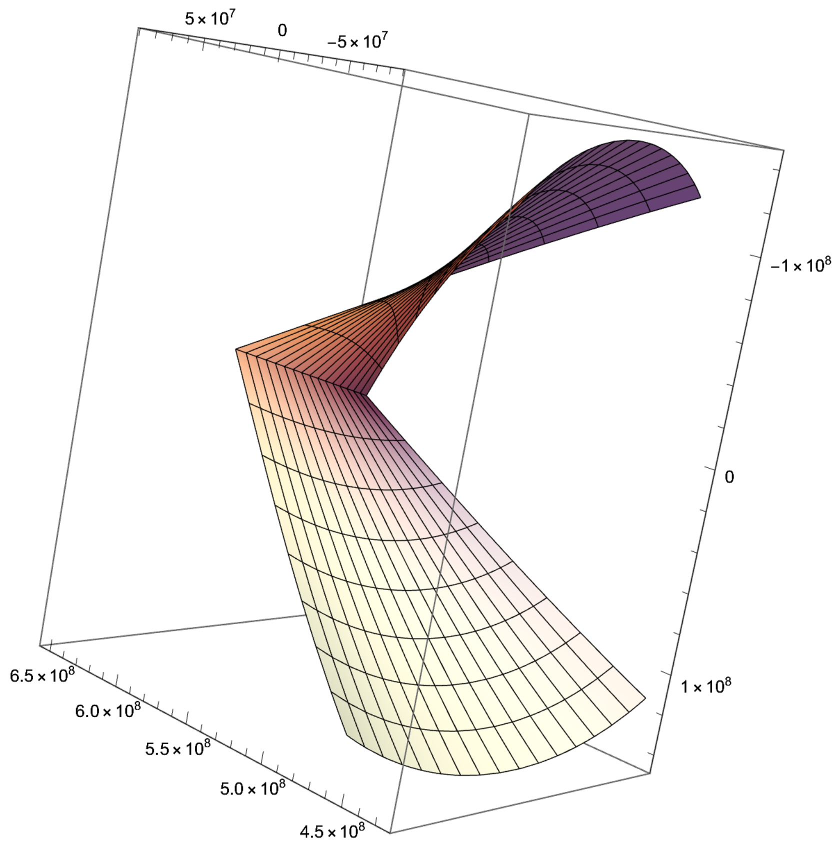
$$\left.\sqrt{\pi}\left(32\pi^6-128\pi^5\,\text{True}+320\pi^4\,\text{True}^2-80\pi^3\,\text{True}^3-30\pi^2\,\text{True}^4+12\pi\,\text{True}^5-\text{True}^6\right)\right)\Big/$$

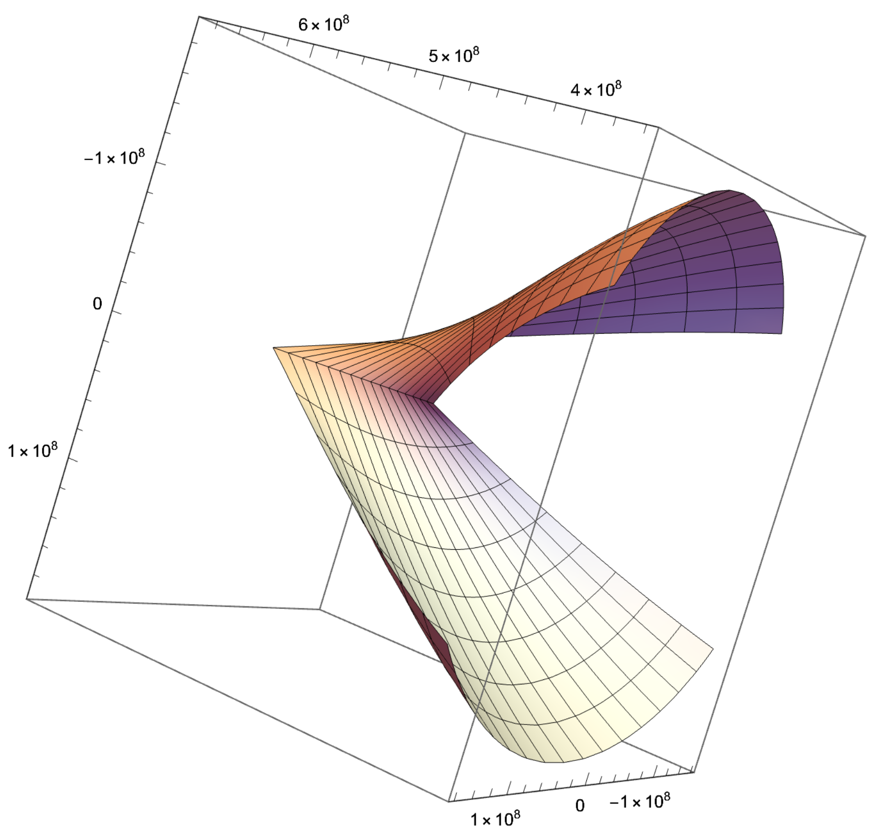
$$\left((2\pi-\text{True})^5\,\text{True}^2\sqrt{(4\pi-\text{True})\,\text{True}}\,(-4\pi+\text{True})^2\sqrt{(-2\pi+\text{True})^4}\right),$$

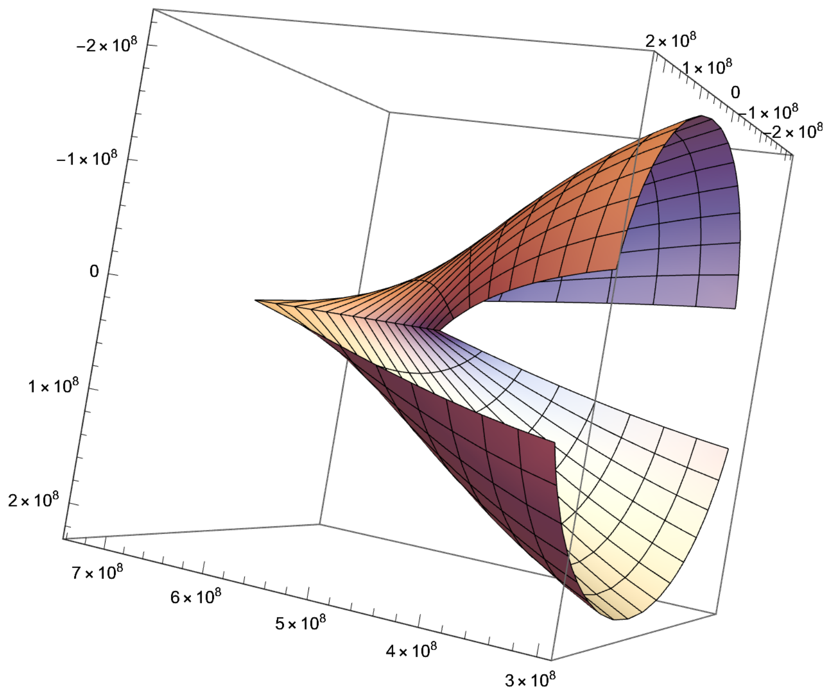
{True, -13, 13}]



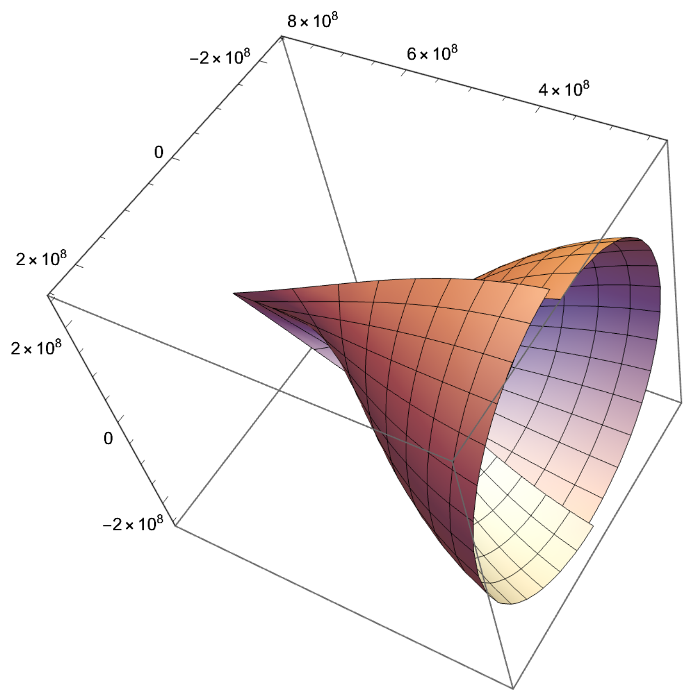

```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
          (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
         2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))^2 +
      39.47841760435743` Sin[β]^2)), {β, -.1 π, .1 π}, {θ, -.2 π, .2 π}]
```


5 × 10^7
0
−5 × 10^7
−1 × 10^8
0
1 × 10^8
6.5 × 10^8
6.0 × 10^8
5.5 × 10^8
5.0 × 10^8
4.5 × 10^8

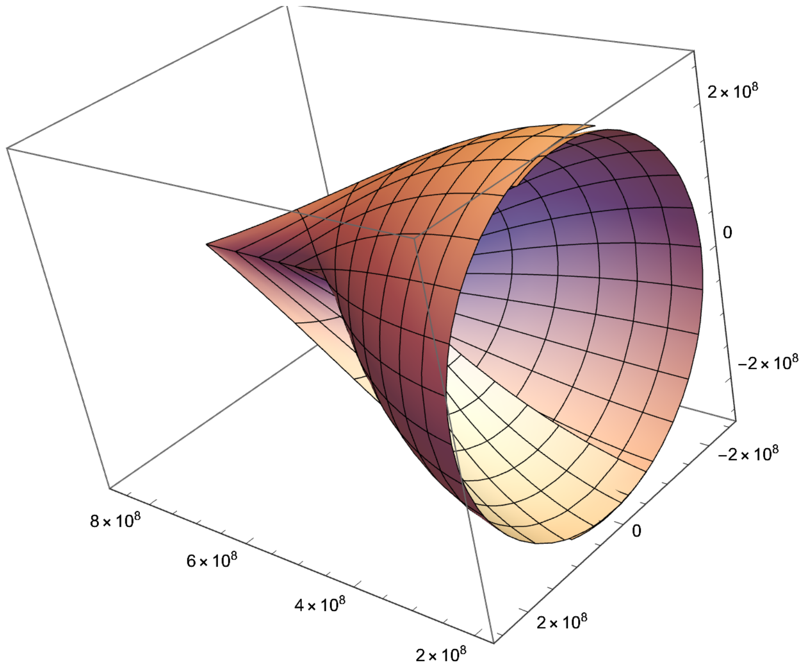

6 × 10^8
5 × 10^8
4 × 10^8
−1 × 10^8
0
1 × 10^8
1 × 10^8
0
−1 × 10^8

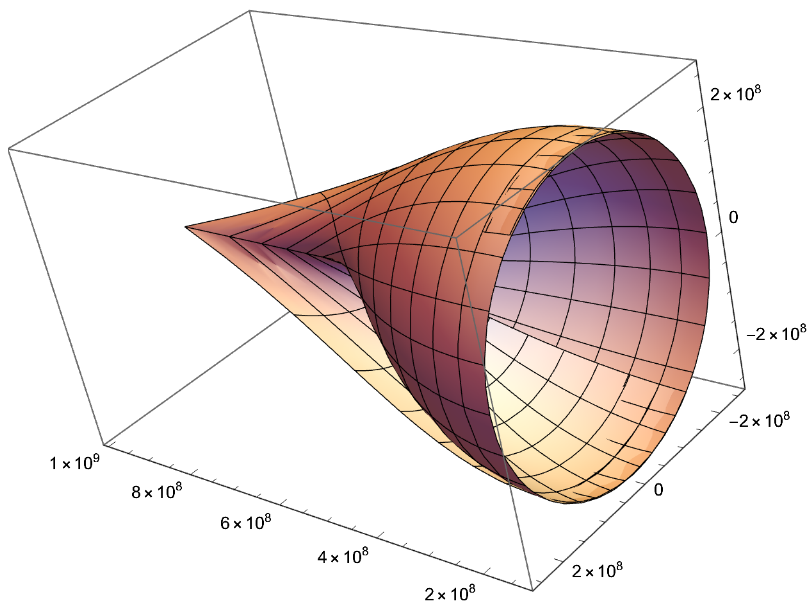


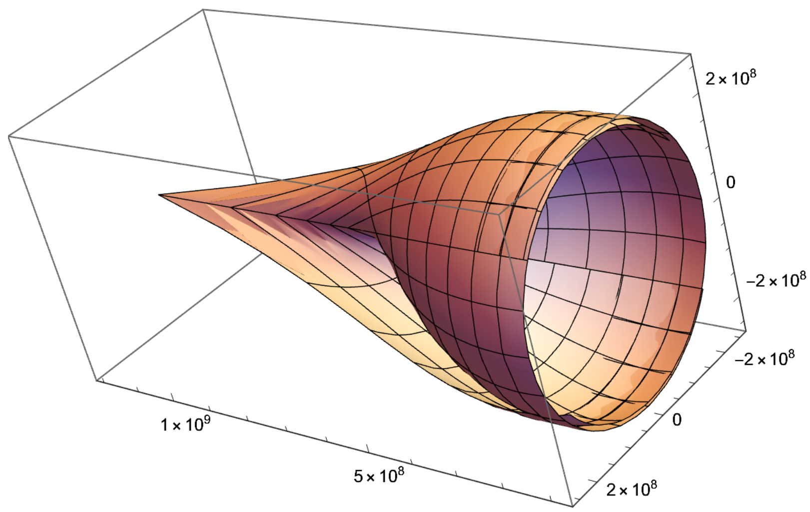
−2 × 10^8
−1 × 10^8
0
1 × 10^8
2 × 10^8
2 × 10^8
1 × 10^8
0
−1 × 10^8
−2 × 10^8
7 × 10^8
6 × 10^8
5 × 10^8
4 × 10^8
3 × 10^8

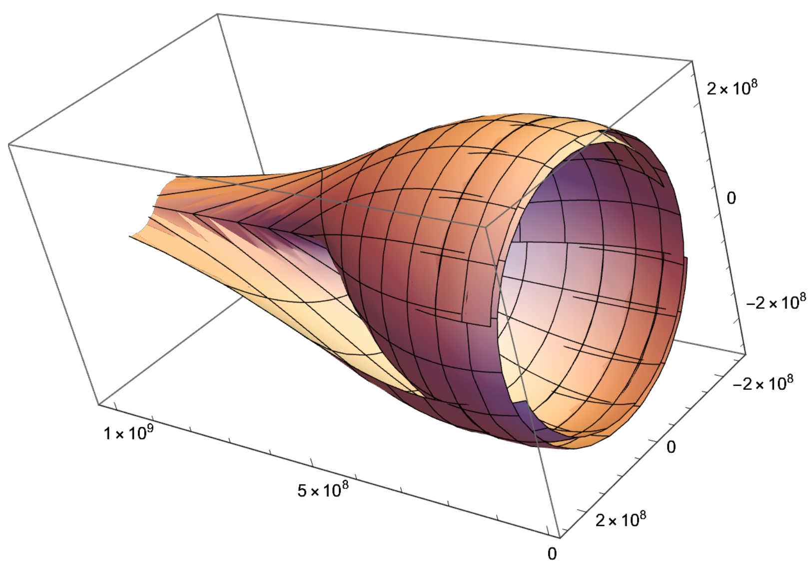


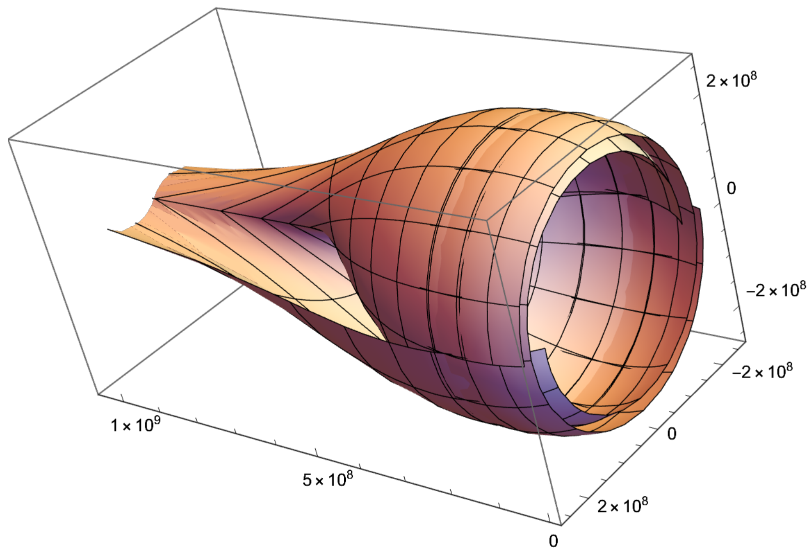
8 × 10^8
6 × 10^8
4 × 10^8
−2 × 10^8
0
2 × 10^8
2 × 10^8
0
−2 × 10^8

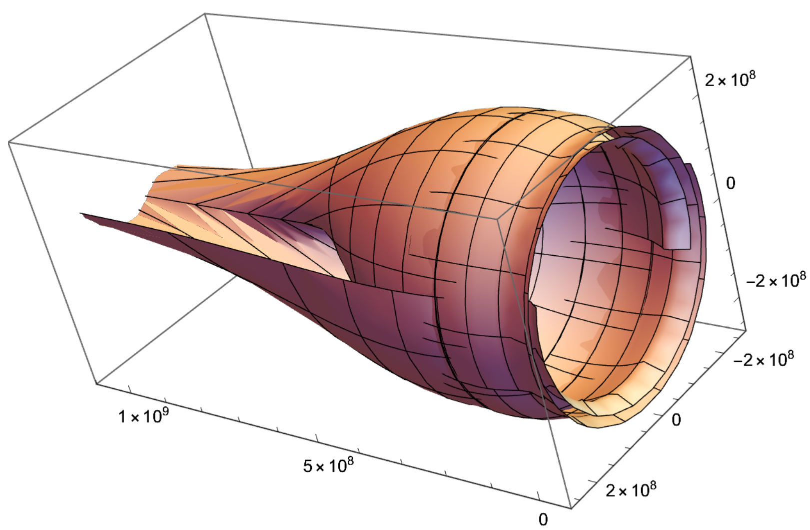

2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8
8 × 10^8
6 × 10^8
4 × 10^8
2 × 10^8

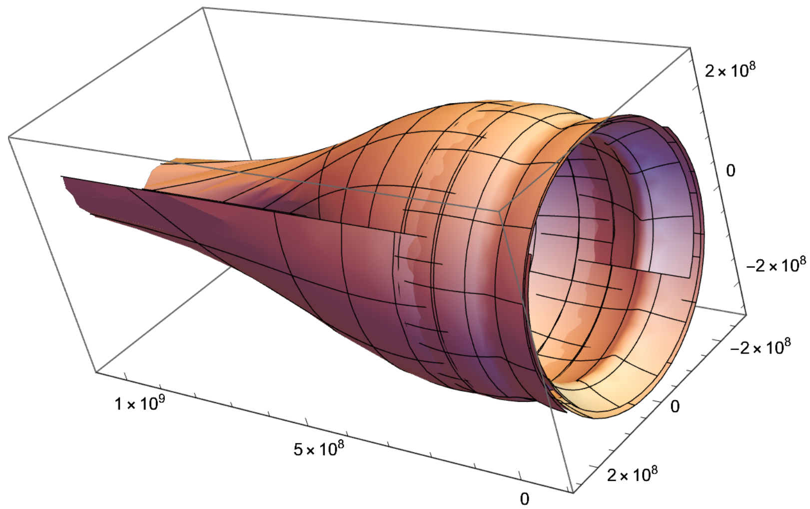

2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8
1 × 10^9
8 × 10^8
6 × 10^8
4 × 10^8
2 × 10^8

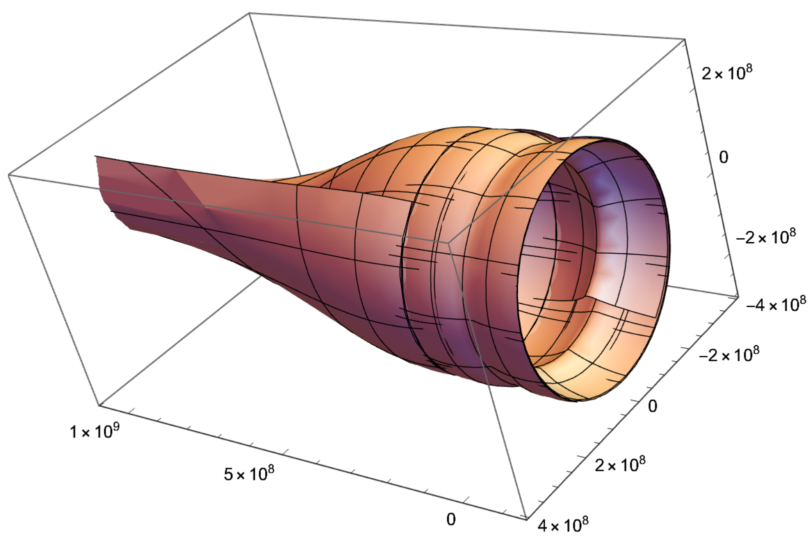

2×10^8
0
−2×10^8
−2×10^8
0
2×10^8
1×10^9
5×10^8

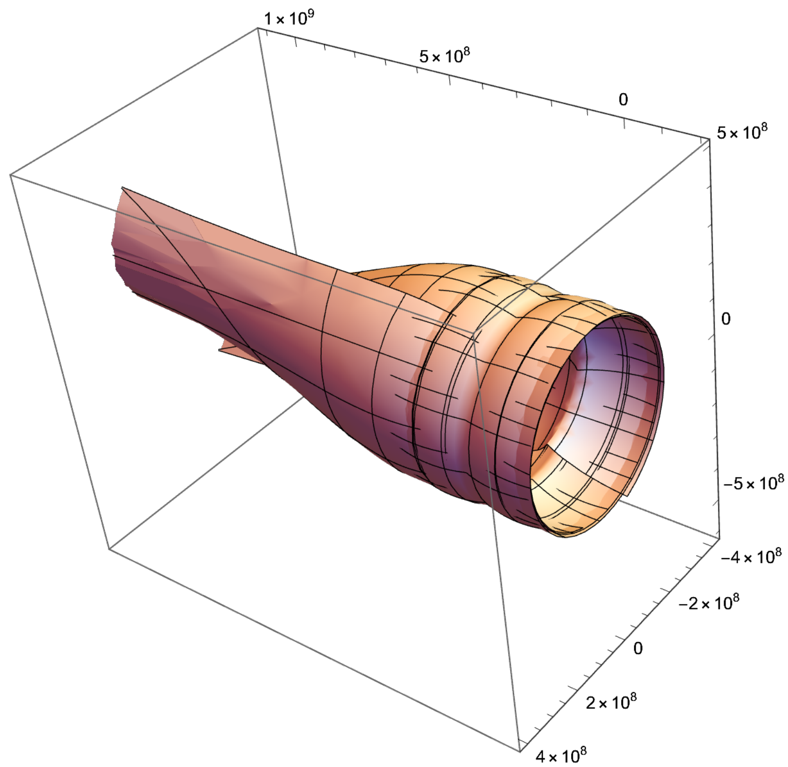

2×10^8
0
−2×10^8
−2×10^8
0
2×10^8
1×10^9
5×10^8
0


2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8
1 × 10^9
5 × 10^8
0

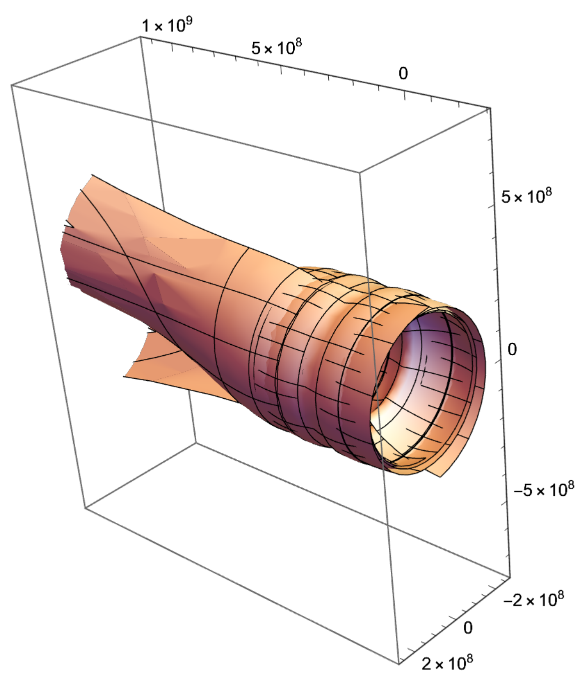

2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8
1 × 10^9
5 × 10^8
0


2 × 10^8
0
−2 × 10^8
−2 × 10^8
0
2 × 10^8
1 × 10^9
5 × 10^8
0

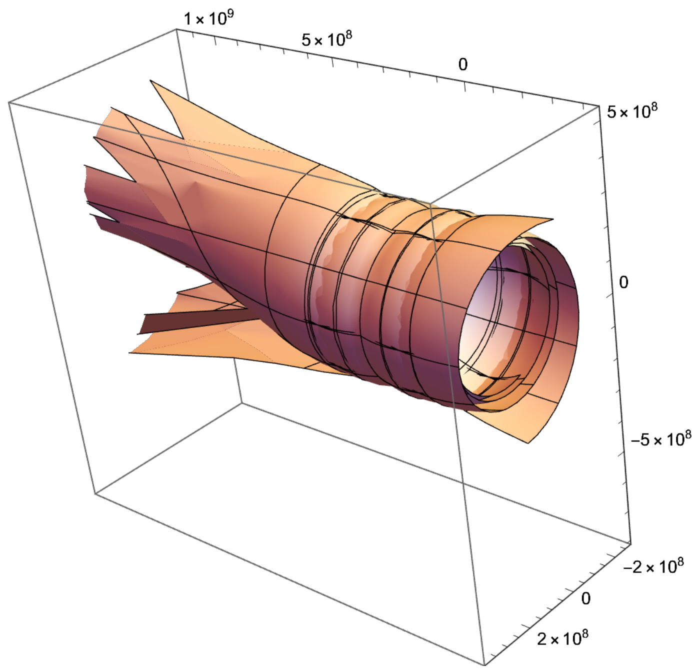

2 × 10^8
0
−2 × 10^8
−4 × 10^8
−2 × 10^8
0
2 × 10^8
4 × 10^8
1 × 10^9
5 × 10^8
0



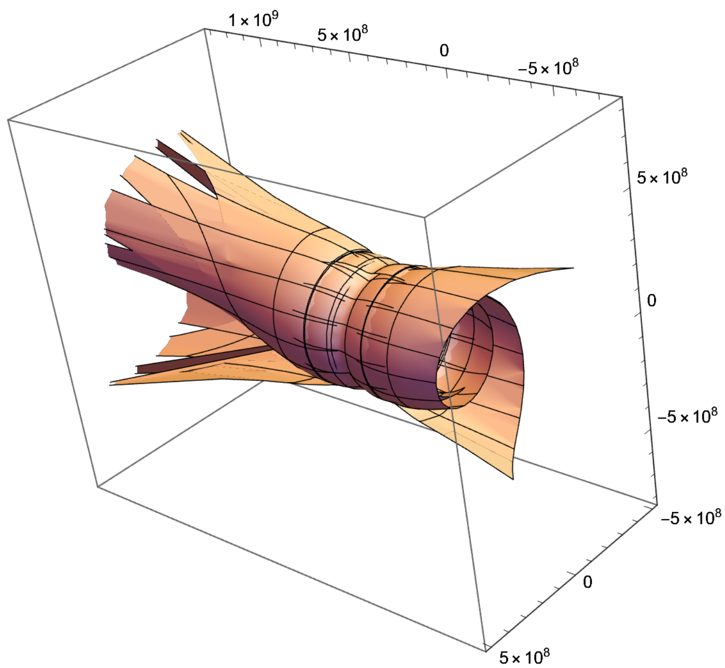
1 × 10^9
5 × 10^8
0
5 × 10^8
0
−5 × 10^8
−4 × 10^8
−2 × 10^8
0
2 × 10^8
4 × 10^8



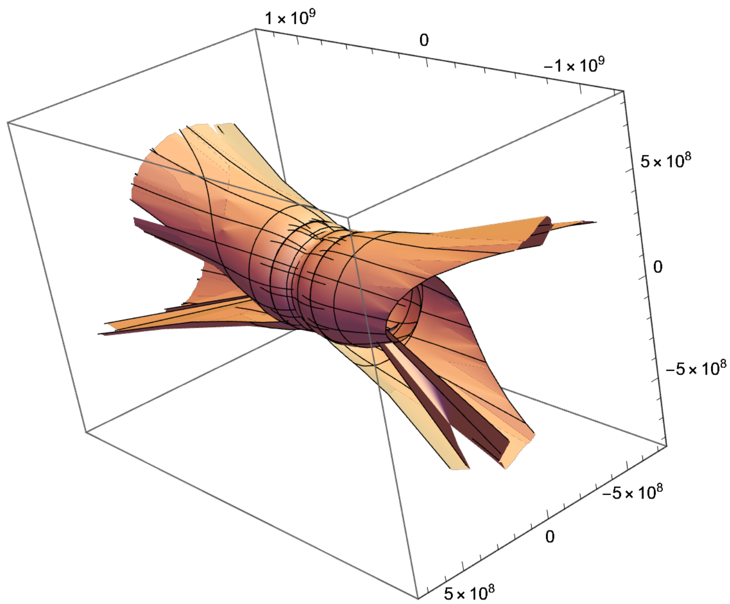
1 × 10^9
5 × 10^8
0
5 × 10^8
0
−5 × 10^8
−2 × 10^8
0
2 × 10^8

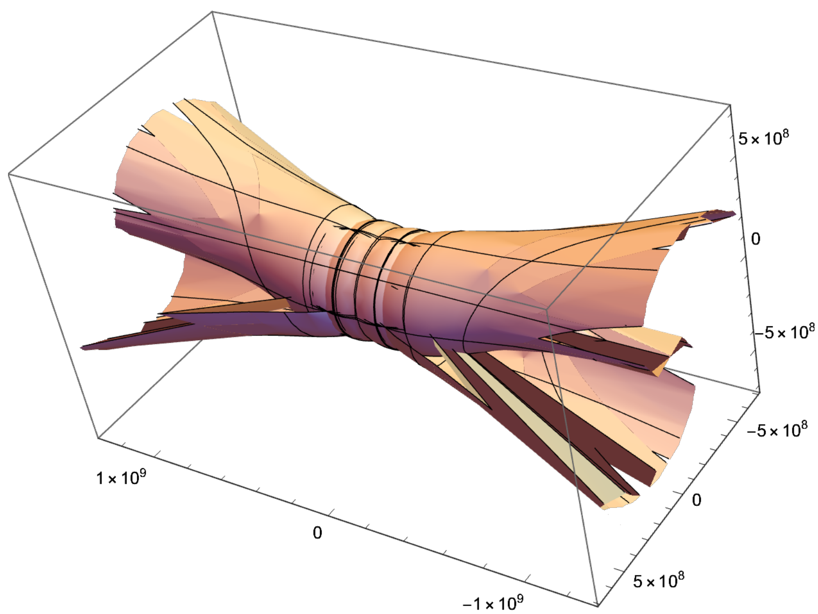


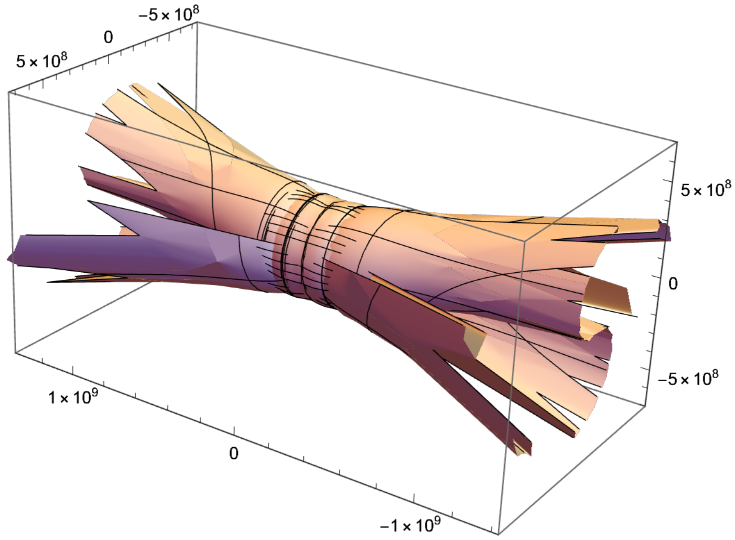
1 × 10^9
5 × 10^8
0
5 × 10^8
0
−5 × 10^8
−2 × 10^8
0
2 × 10^8



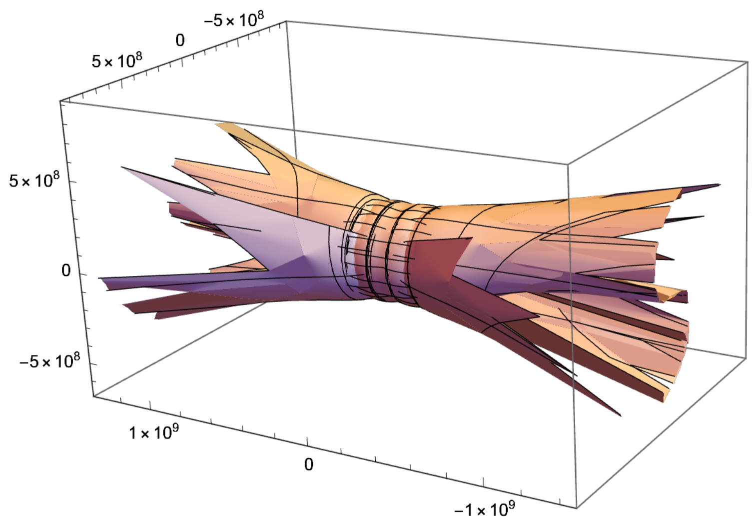
1 × 10^9
5 × 10^8
0
−5 × 10^8
5 × 10^8
0
−5 × 10^8
−5 × 10^8
0
5 × 10^8


1 × 10^9
0
−1 × 10^9
5 × 10^8
0
−5 × 10^8
−5 × 10^8
0
5 × 10^8

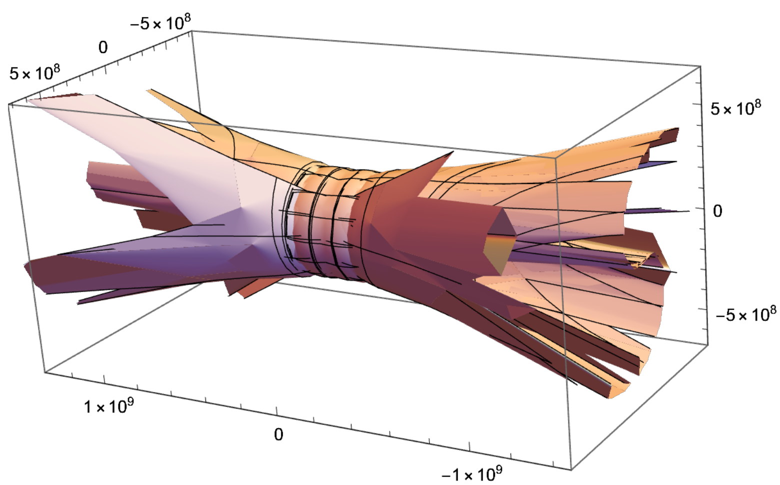

5 × 10^8
0
−5 × 10^8
−5 × 10^8
0
5 × 10^8
1 × 10^9
0
−1 × 10^9



-5 × 10^8
0
5 × 10^8
5 × 10^8
0
-5 × 10^8
1 × 10^9
0
-1 × 10^9



-5 × 10^8
0
5 × 10^8
5 × 10^8
0
-5 × 10^8
1 × 10^9
0
-1 × 10^9



-5 × 10^8
0
5 × 10^8
5 × 10^8
0
-5 × 10^8
1 × 10^9
0
-1 × 10^9

samples are going to change during motion through the environment. "how do they give me details of an object," the mostion through the environment would not be noticeable unless the surface has some support. Virtual surfaces require virtual hardware, however,
describing how something moves in general through the gradient of spacetime,
certain solutions to the velocity of the point location can only be solved when the exact speed of light is plugged into the equation."how do they give me nesting in a regular way"

$$\text{Abs}\left[\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right]+\text{Abs}\left[\frac{2\pi\left(r^2-\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right] = \text{The change of time}$$

$$\text{Simplify}\left[\text{Abs}\left[\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right]+\text{Abs}\left[\frac{2\pi\left(r^2-\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right]\right]$$

$$2\pi\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]\right)$$

$$\text{Solve}\left[2\pi\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]\right) == c\,\frac{1080\,\theta}{\pi\sqrt{1-\frac{v^2}{c^2}}},\ \eta\right]$$

$$\Big\{\Big\{\eta\to -\left(r\sqrt{\left(-c^4\pi^8+2c^2\pi^8v^2-\pi^8v^4+145\,800\,c^6\pi^4\theta^2-145\,800\,c^4\pi^4v^2\theta^2-5\,314\,410\,000\,c^8\theta^4\right)}\right)\Big/\left(\pi^2\sqrt{-c^4\pi^4+2c^2\pi^4v^2-\pi^4v^4+72\,900\,c^6\theta^2-72\,900\,c^4v^2\theta^2}\right)\Big\},\ \Big\{\eta\to \left(r\sqrt{\left(-c^4\pi^8+2c^2\pi^8v^2-\pi^8v^4+145\,800\,c^6\pi^4\theta^2-145\,800\,c^4\pi^4v^2\theta^2-5\,314\,410\,000\,c^8\theta^4\right)}\right)\Big/\left(\pi^2\sqrt{-c^4\pi^4+2c^2\pi^4v^2-\pi^4v^4+72\,900\,c^6\theta^2-72\,900\,c^4v^2\theta^2}\right)\Big\}\Big\}$$

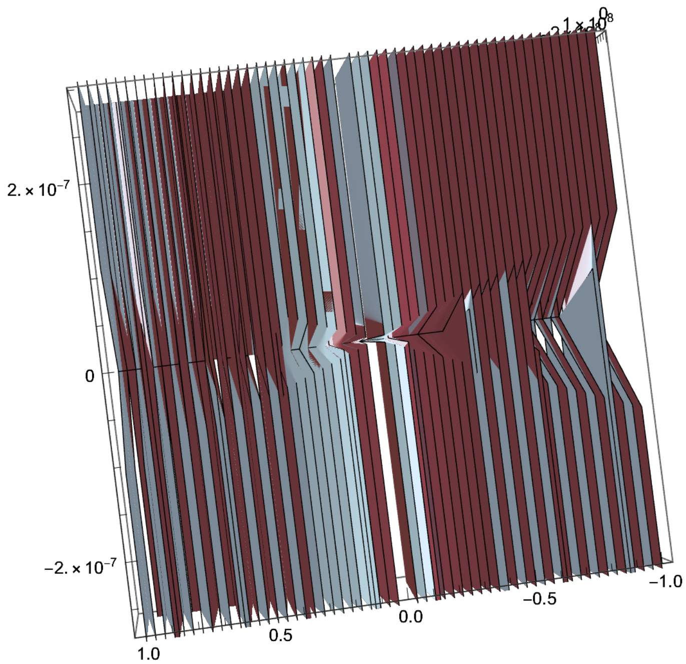
$$\text{Solve}\left[2\pi\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]\right) == c\,\frac{1080\,\theta}{\pi\sqrt{1-\frac{v^2}{c^2}}},\ v\right]$$

$$\left\{\left\{v\to-\frac{c\sqrt{\pi^4-\frac{291\,600\,c^2\theta^2}{\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]\right)^2}}}{\pi^2}\right\},\ \left\{v\to\frac{c\sqrt{\pi^4-\frac{291\,600\,c^2\theta^2}{\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\eta^2}}{r^2}\right]\right)^2}}}{\pi^2}\right\}\right\}$$

$$\eta = \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}$$

```
c := (2.99792458 * 10^8)
```

$$\text{RevolutionPlot3D}\left[\frac{c\sqrt{\pi^4-\frac{291600\,c^2\,\theta^2}{\left(\text{Abs}\left[1-\frac{\sqrt{r^4-r^2\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}{r^2}\right]+\text{Abs}\left[1+\frac{\sqrt{r^4-r^2\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)^2}}{r^2}\right]\right)^2}}}{\pi^2},\ \{r,-1,1\},\ \{\theta,-4\pi,4\pi\}\right]$$



Three Principles of Acceleration in a Space Defined by Light

by Parker Matthew Davis Emmerson

©Parker Emmerson October 11, 2009

The parameters of a cone through an expression relating a difference in circumferences to an arc length of the initial position. Please note that while this goes on in the unit circle, certain things are going on in the complex sphere.

$C = 2\pi r$

This is the circumference of our initial circle of radius r

$C_2 = 2\pi r_1$

This is the circumference of our second circle,

the base of the cone, of radius r_1

$r^2 = r_1^2 + \eta^2$

This is the initial radius squared expressed as the slant of the cone in terms of the height of the cone, η, and the radius of the base of the cone, r_1

$r = \sqrt{(r_1^2 + \eta^2)}$

$s = \theta r$

$s / \theta = r$

The arc length taken out of a circle at a given time is =

$t = C - C_2 = 2\pi r - 2\pi r_1 = \theta r \quad \rightarrow$ Equation 7

$r_1^2 == r^2 - \eta^2$

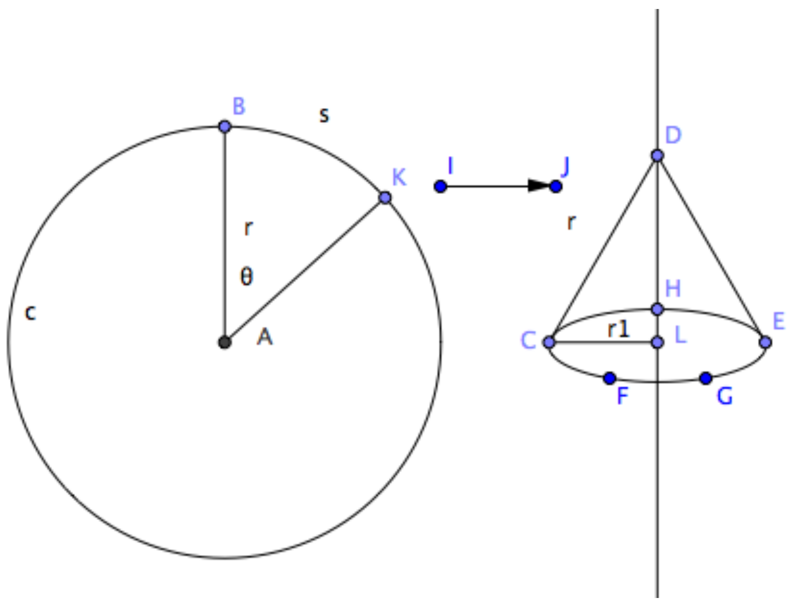
$r_1 = \sqrt{(r^2 - \eta^2)}$

$\eta \leq r$

$\tau =$ time

1 second = 6 degrees

$\tau = 6\,(180/\pi)\,\theta$



I will now do some algebra to conclude what the height of the cone is in terms of the initial parameters. It can eventually be reduced to a single variable.

II. Proof

Solve[r_1^2 + η^2 == r^2, η]

$$\left\{\left\{\eta \to -\sqrt{r^2 - r_1^2}\right\}, \left\{\eta \to \sqrt{r^2 - r_1^2}\right\}\right\} \tag{234}$$

We say that the amount of $\theta r =$ s, taken out of the circle is the change in the circle's circumference that is the base of the cone. The change is equal to $s = 2\pi r - 2\pi r_1$.

Notice that $\theta =$ $((2\pi r)/r) - ((2\pi r_1)/r)$, because we divide by r on both sides.

We will focus on the positive solutions for the height of the cone.

$\text{Solve}\left[\eta == \sqrt{r^2 - r_1^2}, r_1\right]$

$$\left\{\left\{r_1 \to -\sqrt{r^2 - \eta^2}\right\}, \left\{r_1 \to \sqrt{r^2 - \eta^2}\right\}\right\} \quad (235)$$

This is the change in circumference with the substituted expression for r_1 in terms of h and r.

$$r\,\theta == s == 2\pi\,(r) - 2\pi\sqrt{((r)\wedge 2 - \eta\wedge 2)} = 2\pi\,(r) - 2\pi\,r_1 \quad (236)$$

$\theta == (2\pi r)/r - (2\pi r\ _1)/r) = ((2\pi r)/r) - \left(\left(2\pi\sqrt{-\eta^2 + r^2}\right)\Big/ r\right)\Big)$

$\text{Solve}\left[\theta * r == 2\pi\,(r) - 2\pi\sqrt{((r)\wedge 2 - \eta\wedge 2)}, \eta\right]$

$$\left\{\left\{\eta \to -\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right\}, \left\{\eta \to \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right\}\right\}$$

$\text{Solve}\left[\eta == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, r\right]$

$$\left\{\left\{r \to -\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}, \left\{r \to \frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}\right\}\right\}$$

In polar coordinates, it can be said that $r_1 = r\,\text{Cos}[\theta]$, and that $\eta = r\,\text{Sin}[\theta]$ (237)

$$\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}} = r = \frac{2\pi * r * \text{Sin}[\theta]}{\sqrt{4\pi\theta - \theta^2}} \quad (238)$$

c := (2.99792458 * 10^8)

$$\eta := \text{rate} * \text{time} = c * \tau = \text{height of cone} \quad (239)$$

$\tau := 6\left(\theta_{\text{degrees}}\right) = 6\,((180/\pi)\,\theta)$, because if theta were in radians to begin with, we would have to convert that number of radians to degrees. This way,
both our thetas are in radians,
but our result accounts for the constant of the degrees involved in measuring time.

(180 / π)

$$r = \frac{2 * c * \tau * \pi}{\sqrt{4\pi\theta - \theta)^2}} = \frac{2 * c * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}$$

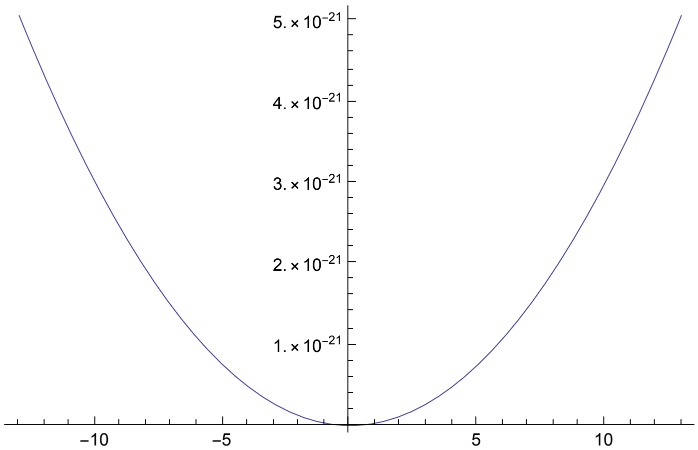
$\text{Solve}\left[r == \frac{2 * c * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}, \theta\right]$

$$\left\{\left\{\theta \to \frac{4\pi r^2}{4\,665\,600\,c^2 + r^2}\right\}\right\}$$

$$\text{Solve}\left[r == \frac{2 * c * 6\,((180/\pi)\,\theta) * \pi}{\sqrt{4\pi\theta - (\theta)^2}}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{4\pi r^2}{4\,665\,600\,c^2 + r^2}\right\}\right\}$$

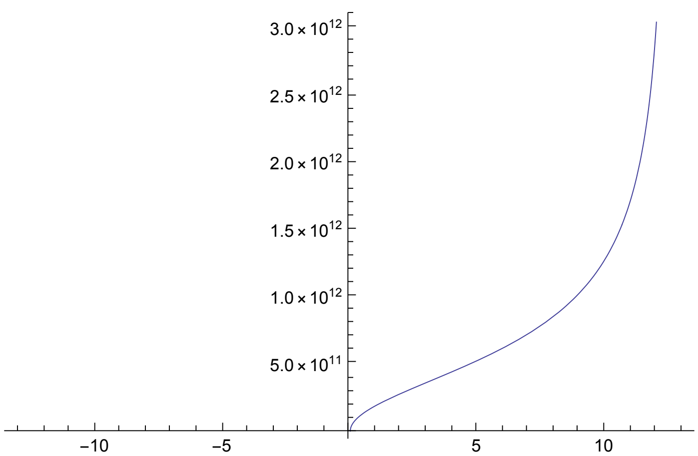
$$\text{Plot}\left[\frac{4\pi r^2}{4\,665\,600\,c^2 + r^2}, \{r, -13, 13\}\right]$$



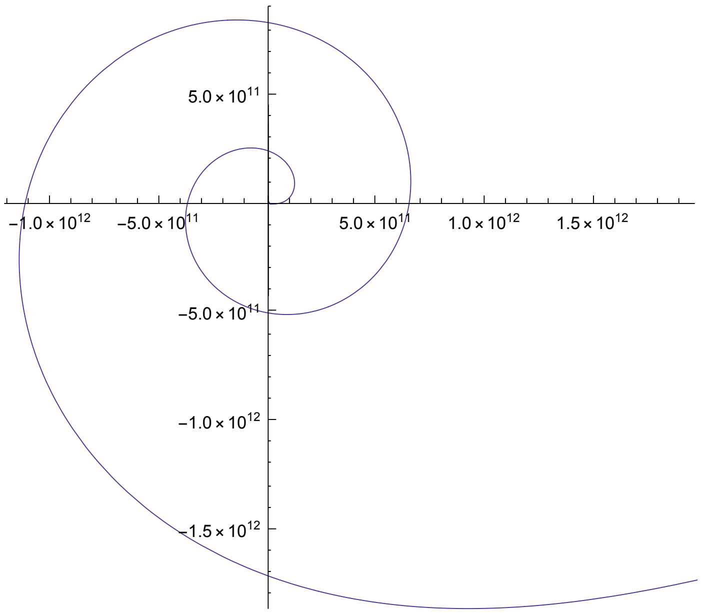
$$\text{Solve}\left[\theta == \frac{4\pi r^2}{4\,665\,600\,c^2 + r^2}, r\right]$$

$$\left\{\left\{r \to -\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi - \theta}}\right\}, \left\{r \to \frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi - \theta}}\right\}\right\}$$

$$\text{Plot}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi - \theta}}, \{\theta, -13, 13\}\right]$$



$$\text{PolarPlot}\left[\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}}, \{\theta, -13, 13\}\right]$$



$$r := \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}};\ \eta = r\,\text{Sin}[\theta]$$

$$\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}} = \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta - \theta^2}} = \frac{2\,\pi\, r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta - \theta^2}}$$

$$\text{Solve}\left[\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi - \theta}} == \frac{2\,\pi\, r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, r\right]$$

$$\left\{\left\{r \to \frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\,\pi - \theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}\right\}\right\}$$

III. Why define the space by light? I can' t travel faster than space.

We define the distance, η in terms of the speed of light, but also in terms of its pythagorean correlates. Since the space is a distance described by the speed of light, it is not absurd to think that something can accelerate within this space without going faster than the speed of light.

I. The First Principle, η:

$$\eta == \frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

$$\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

$$\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi} = r\,\text{Sin}[\beta]$$

The expressions for radius in terms of true Pythogorean proofs :

η := r Sin[θ] = r Sin[β] is the special case.

II. The Second Principle, r :

$$r := \frac{2\,\pi\,\eta}{\sqrt{4\,\pi\,\theta-\theta^2}}$$

$$r = \frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}} = \frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}} = \frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}$$

$$\left(\text{Solve}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}} == \frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ r\right]\right)$$

$$\left\{\left\{r \to \frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right\}\right\}$$

The radius, r_1, which is the base of a cone, with slant r and height η.

III. The Third Principle, r_1

$$\left\{\left\{r_1 \to -\sqrt{r^2-\eta^2}\right\},\ \left\{r_1 \to \sqrt{r^2-\eta^2}\right\}\right\}$$

$$\sqrt{r^2-\eta^2} = \sqrt{\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2} =$$

$$\sqrt{\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2} =$$

$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)} =$$

$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)} =$$

$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)} =$$

$$\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)}$$

IV. Deriving Acceleration from the First Principle and Plotting the Correlations: η

$$\eta == \frac{\sqrt{4\,\pi\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

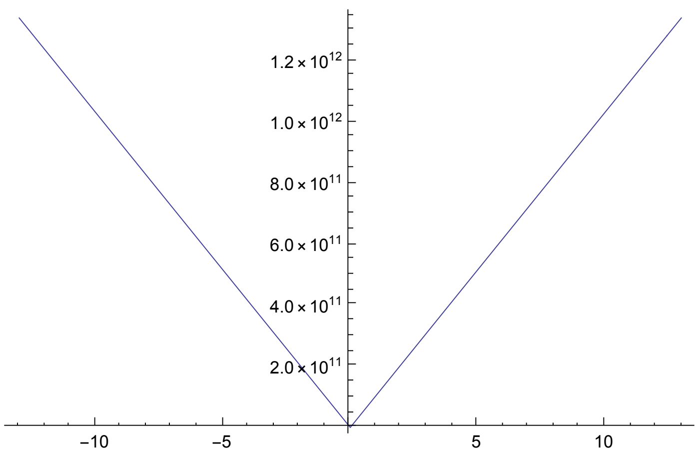
$$\frac{\sqrt{4\,\pi\left(\frac{1080\ c\ \sqrt{\theta}\ \sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Csc}[\theta]}{\pi\ \sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\ c\ \sqrt{\theta}\ \sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Csc}[\theta]}{\pi\ \sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

$$\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta-\left(\frac{2\,\pi\,r\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)^2\theta^2}}{2\,\pi}$$

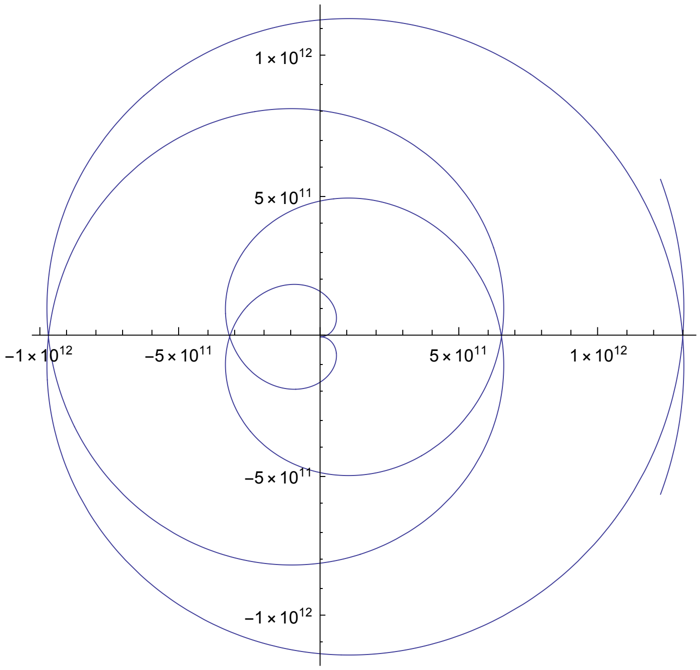
The following will be divided into actual expressions for η of each different possible perspective that I have thought of up to date.

Expression for η No. 1

$$\mathrm{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\,-13,\,13\}\right]$$




```
c := (2.99792458 * 10^8)
```

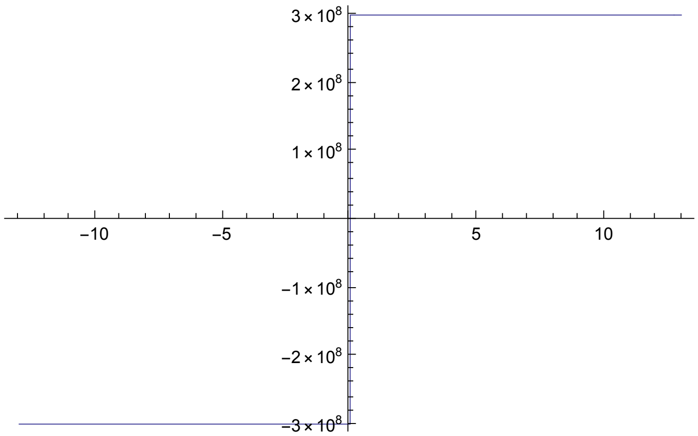
The first and second derivatives of expression for η No. 1

We are taking the derivative with respect to time, and since our time = $\tau = 6\,((180/\pi)\,\theta)$, we multiply by $1/(6\,(180/\pi))$, because only theta is changing, and theta is in terms of radians. For the physical conversions, we must take this factor out of the derivative with respect to time, because it is constant.

$$1\,/\,(6\,(180\,/\,\pi))\ D\left[\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \theta\right]$$

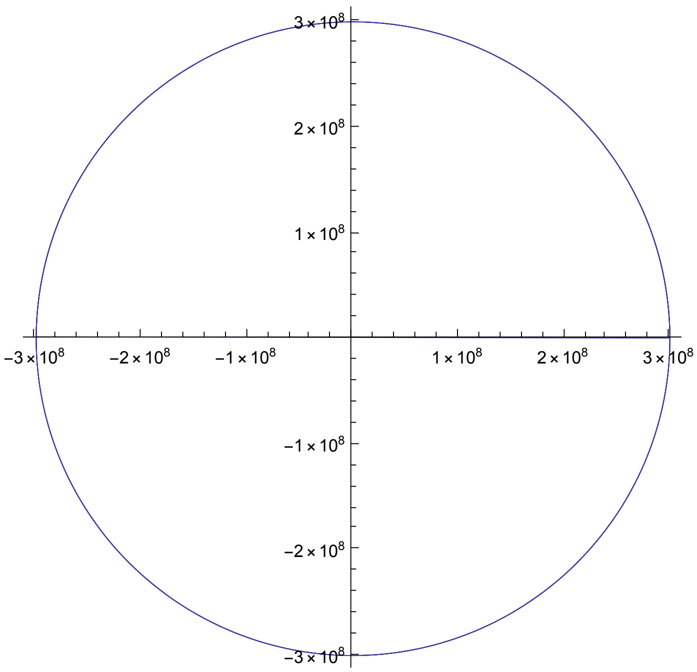
$$\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}}$$

$$\texttt{Plot}\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}},\ \{\theta,\ -13,\ 13\}\right]$$



Light has a constant velocity.

$$\texttt{PolarPlot}\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}},\ \{\theta,\ -13,\ 13\}\right]$$

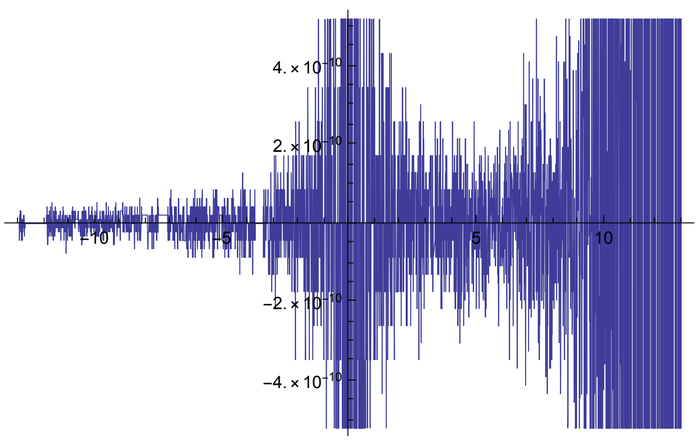


Light travels through its a distance equal to the height of the cone, with a max value of the initial radius, in a perfect circle in polar coordinates.

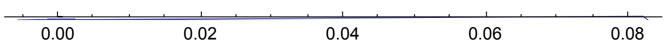
$$1 / (6\,(180 / \pi))\, D\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}},\,\theta\right]$$

$$\frac{1}{1080}\,\pi\left(-\frac{\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}\right)^2}{8640\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}\right)^{3/2}}+\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}\right)\Big/\left(4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}\right)\right)$$

$$\mathrm{Plot}\left[\frac{1}{1080}\,\pi\left(-\frac{\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}\right)^2}{8640\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}\right)^{3/2}}+\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}\right)\Big/\left(4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}\right)\right),\,\{\theta,\,-13,\,13\}\right]$$



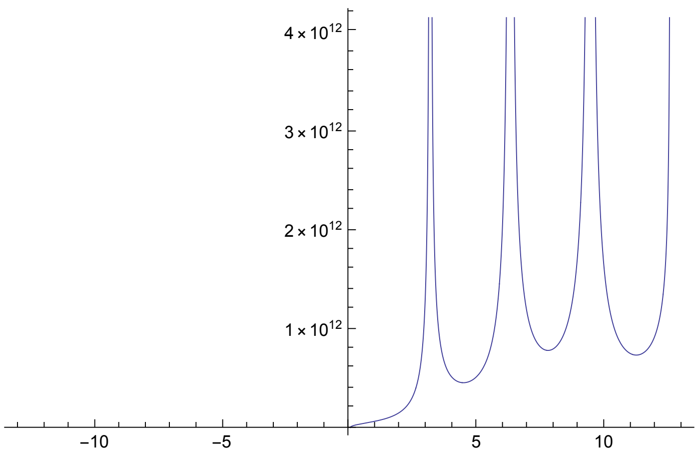
$$\text{PolarPlot}\Big[\frac{1}{1080}\pi\left(-\frac{\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}\right)^2}{8640\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}\right)^{3/2}}+\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}\right)\Big/\left(4320\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}\right)\right),\ \{\theta,-13,13\}\Big]$$



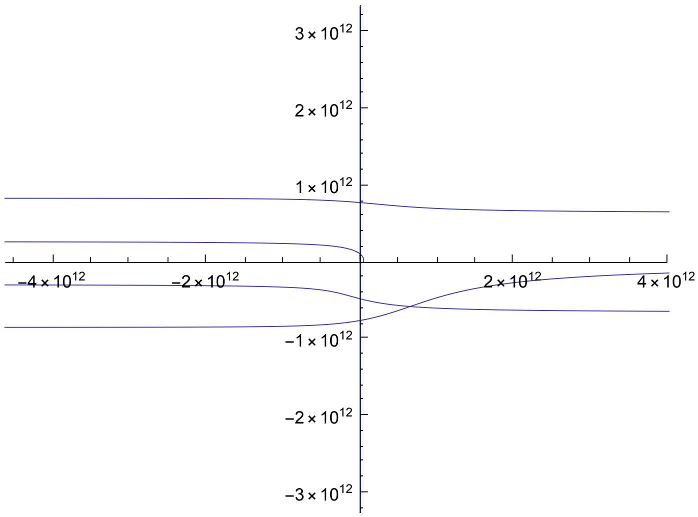
This is one of the most fundamentally interesting graphs I have ever found. What is unseen in the printed version is that when you scroll down the page in mathematica, you see that a line moves across the graph and the graph actually changes just from scrolling.

Expression for η No .2

$$\text{Plot}\Big[\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,-13,13\}\Big]$$



$$\text{PolarPlot}\left[\frac{\sqrt{4\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi},\ \{\theta,-13,13\}\right]$$

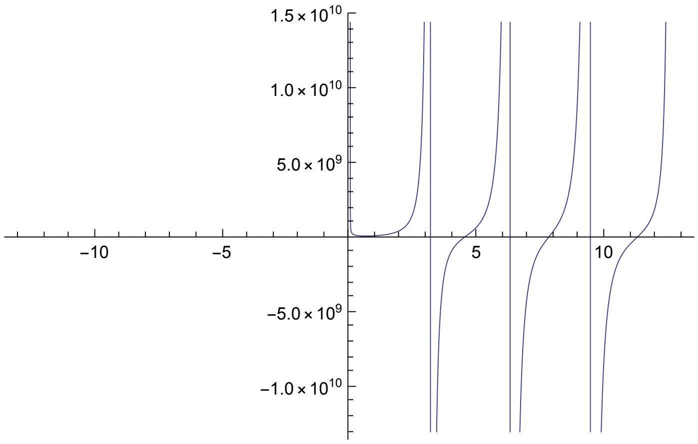


The first and second derivatives of expression for η No. 2

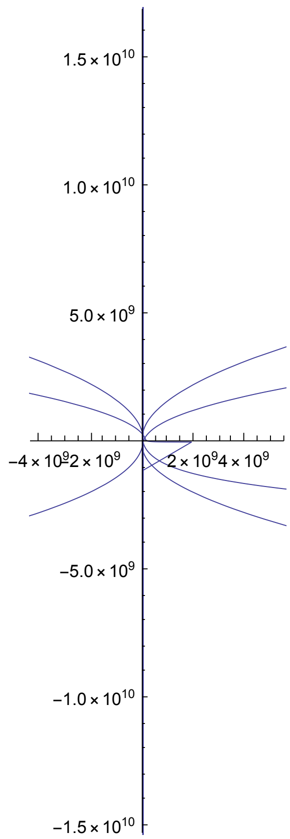
$$1/(6\,(180/\pi))\ \text{D}\left[\frac{\sqrt{4\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi},\ \theta\right]$$

$$\left(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\Bigg/\left(4320\,\sqrt{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right)$$

$$\text{Plot}\left[\left(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\Big/\left(4320\,\sqrt{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right),\{\theta,-13,13\}\right]$$



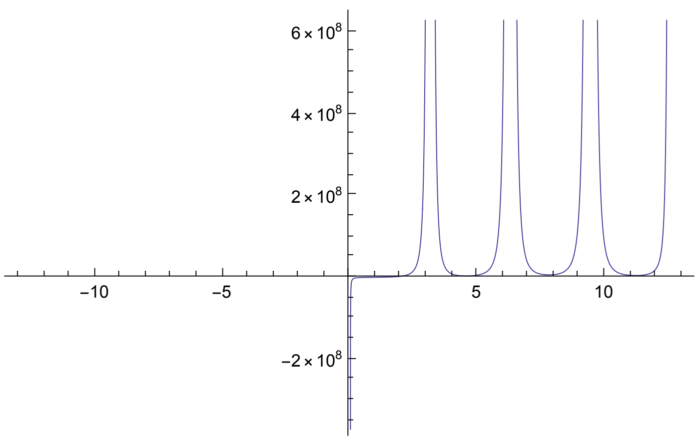
$$\text{PolarPlot}\left[\left(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\Big/\left(4320\sqrt{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right),\{\theta,-13,13\}\right]$$



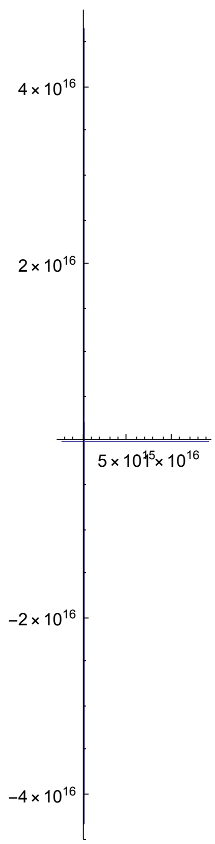
$$1 / (6\ (180 / \pi))\ D\Big[\Big(\frac{13\,996\,800\ c^2\ \theta^2\ Csc[\theta]^2}{\pi} - \frac{4\,665\,600\ c^2\ \theta^3\ Csc[\theta]^2}{\pi^2} - \frac{9\,331\,200\ c^2\ \theta^3\ Cot[\theta]\ Csc[\theta]^2}{\pi} + \frac{2\,332\,800\ c^2\ \theta^4\ Cot[\theta]\ Csc[\theta]^2}{\pi^2}\Big) \Big/ \Big(4320\ \sqrt{\frac{4\,665\,600\ c^2\ \theta^3\ Csc[\theta]^2}{\pi} - \frac{1\,166\,400\ c^2\ \theta^4\ Csc[\theta]^2}{\pi^2}}\Big), \theta\Big]$$

$$\frac{1}{1080}\pi\Bigg(-\Big(\frac{13\,996\,800\ c^2\ \theta^2\ Csc[\theta]^2}{\pi} - \frac{4\,665\,600\ c^2\ \theta^3\ Csc[\theta]^2}{\pi^2} - \frac{9\,331\,200\ c^2\ \theta^3\ Cot[\theta]\ Csc[\theta]^2}{\pi} + \frac{2\,332\,800\ c^2\ \theta^4\ Cot[\theta]\ Csc[\theta]^2}{\pi^2}\Big)^2 \Big/ \Big(8640\ \Big(\frac{4\,665\,600\ c^2\ \theta^3\ Csc[\theta]^2}{\pi} - \frac{1\,166\,400\ c^2\ \theta^4\ Csc[\theta]^2}{\pi^2}\Big)^{3/2}\Big) + \Big(\frac{27\,993\,600\ c^2\ \theta\ Csc[\theta]^2}{\pi} - \frac{13\,996\,800\ c^2\ \theta^2\ Csc[\theta]^2}{\pi^2} - \frac{55\,987\,200\ c^2\ \theta^2\ Cot[\theta]\ Csc[\theta]^2}{\pi} + \frac{18\,662\,400\ c^2\ \theta^3\ Cot[\theta]\ Csc[\theta]^2}{\pi^2} + \frac{18\,662\,400\ c^2\ \theta^3\ Cot[\theta]^2\ Csc[\theta]^2}{\pi} - \frac{4\,665\,600\ c^2\ \theta^4\ Cot[\theta]^2\ Csc[\theta]^2}{\pi^2} + \frac{9\,331\,200\ c^2\ \theta^3\ Csc[\theta]^4}{\pi} - \frac{2\,332\,800\ c^2\ \theta^4\ Csc[\theta]^4}{\pi^2}\Big) \Big/ \Big(4320\ \sqrt{\frac{4\,665\,600\ c^2\ \theta^3\ Csc[\theta]^2}{\pi} - \frac{1\,166\,400\ c^2\ \theta^4\ Csc[\theta]^2}{\pi^2}}\Big)\Bigg)$$

$$\text{Plot}\Big[\frac{1}{1080}\pi\Big(-\Big(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Big)^2\Big/\Big(8640\,\Big(\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}\Big)^{3/2}\Big)+\Big(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Big)\Big/\Big(4320\,\sqrt{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\Big)\Big),\ \{\theta,-13,13\}\Big]$$



$$
\text{PolarPlot}\Big[\frac{1}{1080}\pi
\Bigg(-\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+
\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)^2\Bigg/
\left(8640\left(\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}\right)^{3/2}\right)+
\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+
\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-
\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg/
\left(4320\sqrt{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Big]
$$



We also notice that we can exchange locations of the expressions for r. This gives us different perspectives on what is going on when a body is accelerating through such a space that is defined by traveling

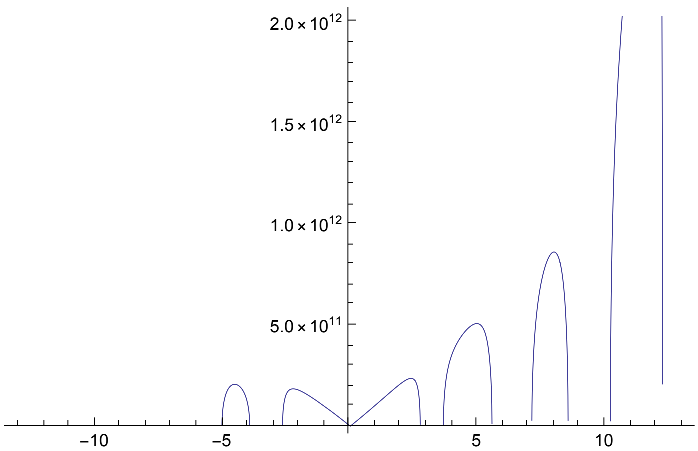
at the speed of light for a certain amount of time within the paremters of our system.

$$\eta == \frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi} =$$

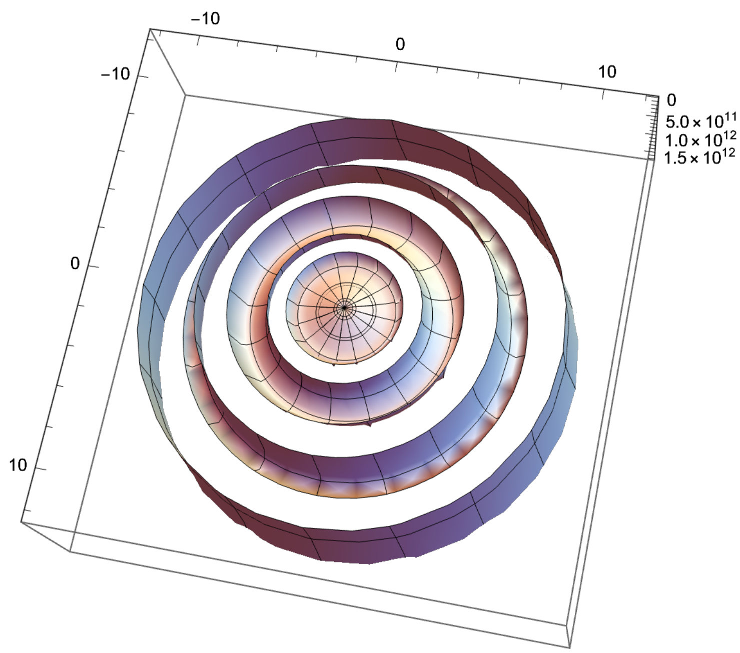
$$\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}$$

Expression for η No. 3

$$\mathrm{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



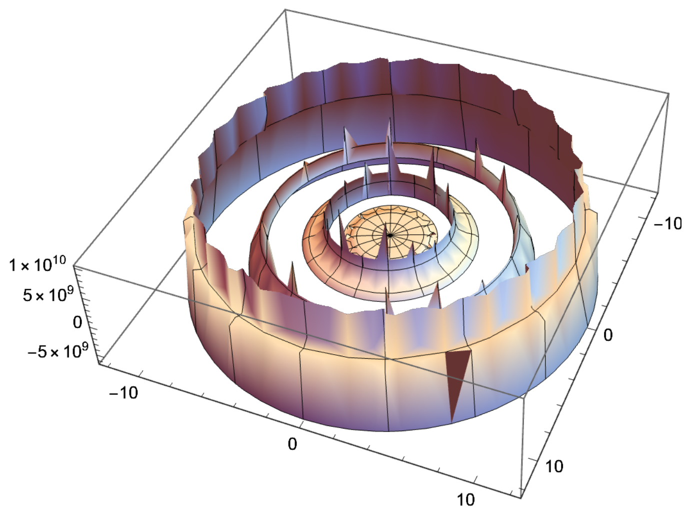
$$\texttt{RevolutionPlot3D}\left[\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



First and Second Derivatives of Expression for Expression for η No. 3

RevolutionPlot3D[

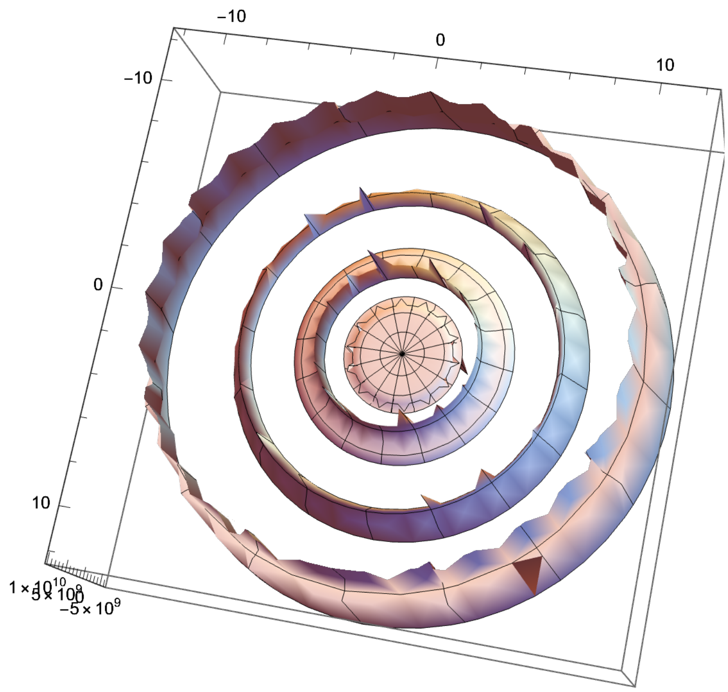
$$\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4320\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}}, \{\theta, -13, 13\}]$$



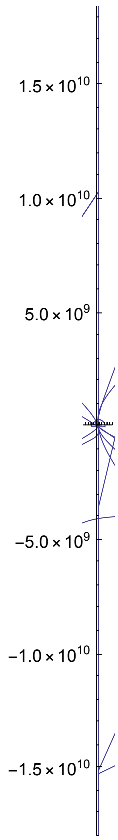
$$1/(6\,(180/\pi))\;D\left[\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}, \theta\right]$$

$$\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4320\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}}$$

$$\text{RevolutionPlot3D}\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}},\,\{\theta,\,-13,\,13\}\right]$$



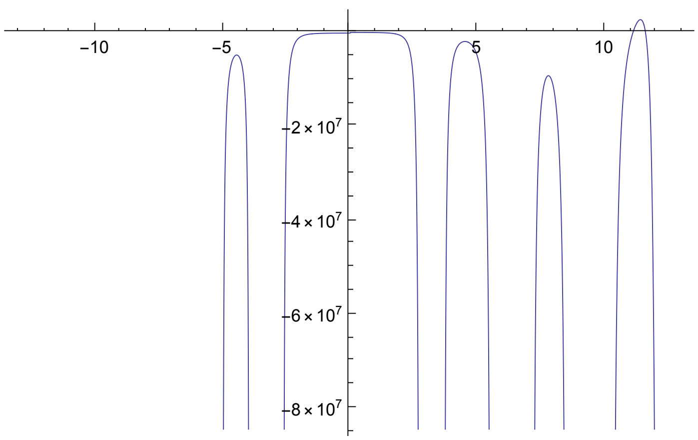
$$\text{PolarPlot}\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}},\ \{\theta,\ -13,\ 13\}\right]$$



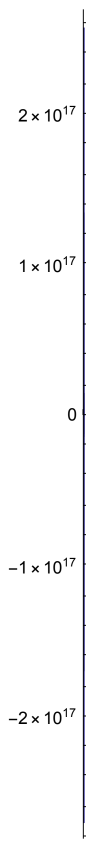
$$1/(6\,(180/\pi))\,D\left[\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}},\theta\right]$$

$$\frac{1}{1080}\,\pi\left(-\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)^2\Big/\left(8640\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)^{3/2}\right)+\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\right)\Big/\left(4320\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}\right)\right)$$

$$\text{Plot}\Bigg[\frac{1}{1080}\pi\left(-\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)^2\Bigg/\left(8640\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}\right)^{3/2}\right)+\left(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\right)\Bigg/\left(4320\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right)\right),\ \{\theta,-13,13\}\Bigg]$$

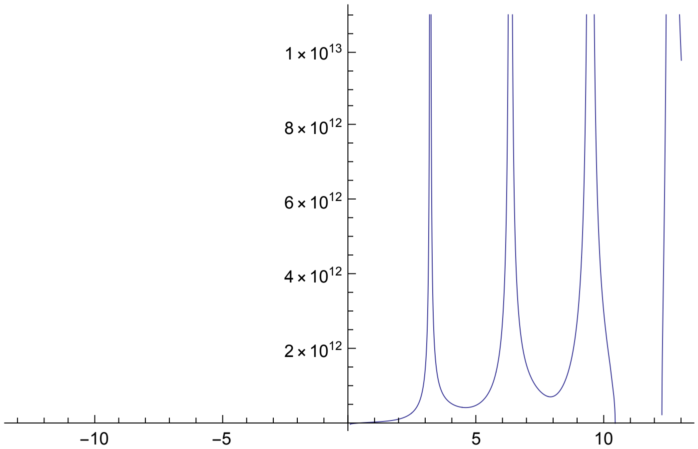


$$\text{PolarPlot}\Big[\frac{1}{1080}\pi\Bigg(-\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)^2\Big/\left(288\,\pi\left(\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}\right)^{3/2}\right)+\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\right)\Big/\left(144\,\pi\,\sqrt{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Big]$$

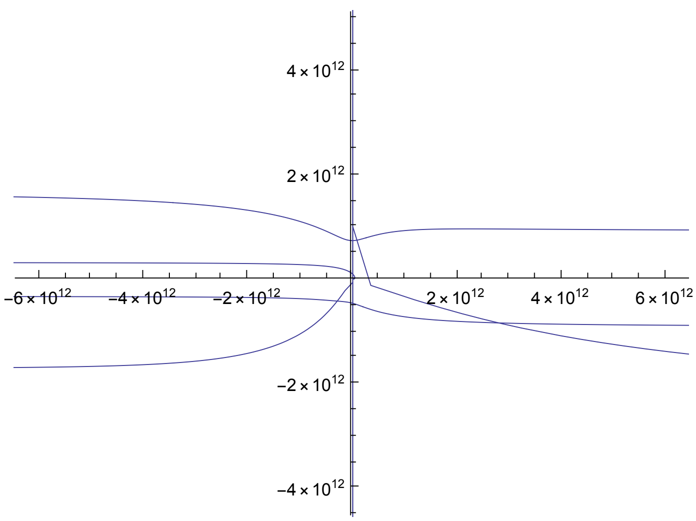


Expression for η No. 4

$$\text{Plot}\left[\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^{2}\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^{2}\theta^{2}}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^{2}\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^{2}\theta^{2}}}{2\,\pi},\ \{\theta,\ -13,\ 13\}\right]$$



The first and second derivatives of expression for η No. 4

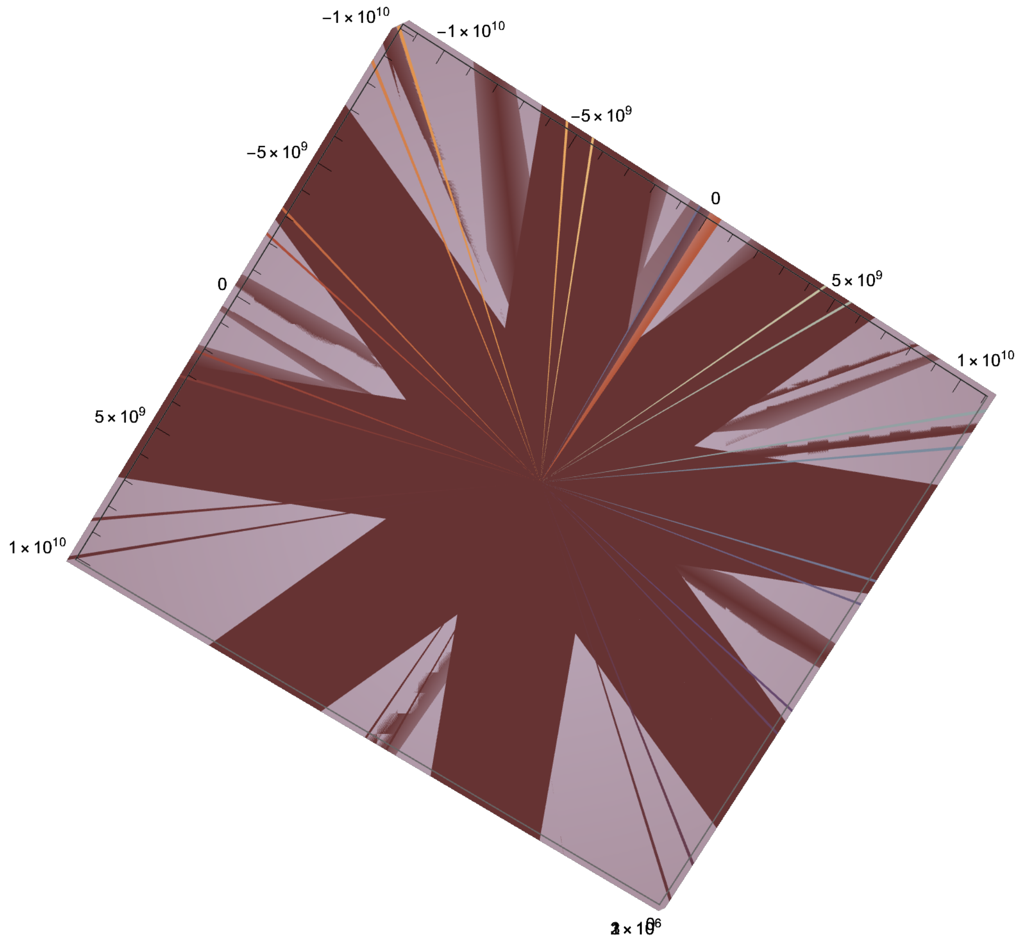
$$\frac{1}{1080}\,\pi\,\text{D}\left[\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^{2}\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^{2}\theta^{2}}}{2\,\pi},\ \theta\right]$$

$$\frac{-\frac{13\,996\,800\,c^{2}\,\theta^{2}}{4\,\pi-\theta}-\frac{4\,665\,600\,c^{2}\,\theta^{3}}{(4\,\pi-\theta)^{2}}+\frac{13\,996\,800\,c^{2}\,\theta^{2}\,\text{Csc}[\theta]^{2}}{\pi}-\frac{9\,331\,200\,c^{2}\,\theta^{3}\,\text{Cot}[\theta]\,\text{Csc}[\theta]^{2}}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^{2}\,\theta^{3}}{4\,\pi-\theta}+\frac{4\,665\,600\,c^{2}\,\theta^{3}\,\text{Csc}[\theta]^{2}}{\pi}}}$$

$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -5\,\pi,\ 5\,\pi\}\right]$$

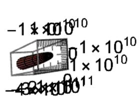
$$\text{RevolutionPlot3D}\left[\left\{\frac{-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}},\right.\right.$$

$$\left.\left.\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400}\right\},\ \{\theta,\ -35,\ 35\}\right]$$

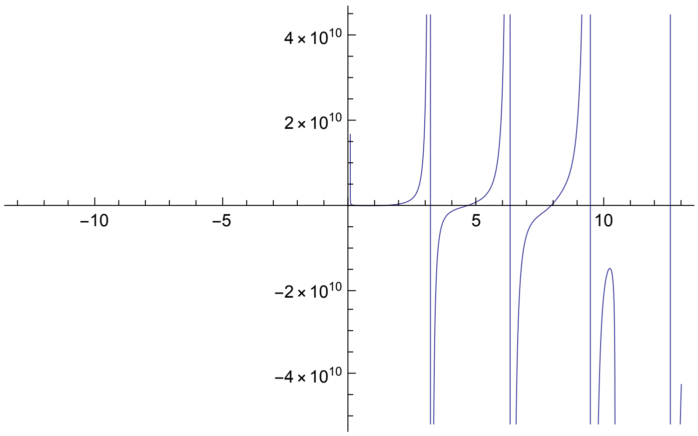


$$\text{RevolutionPlot3D}\left[\left\{\frac{-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}},\right.\right.$$

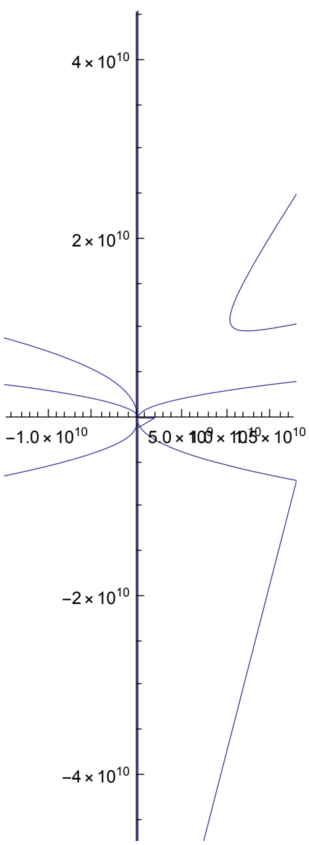
$$\left.\left.\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400}\right\},\ \{\theta,\ -.00072,\ .00072\}\right]$$



$$\text{Plot}\left[\frac{-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}},\ \{\theta,\ -13,\ 13\}\right]$$



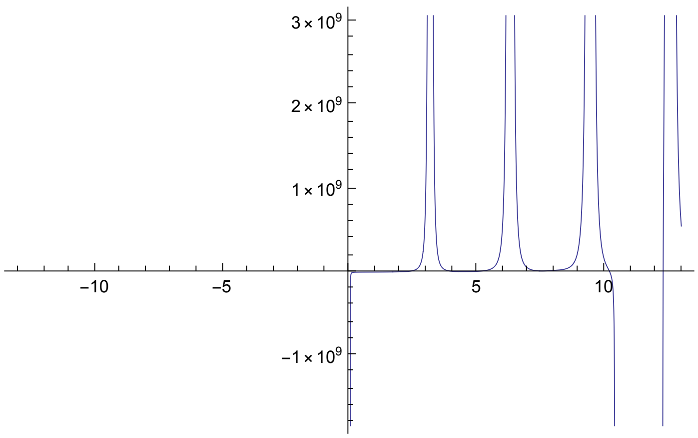
$$\text{PolarPlot}\left[\frac{-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}},\ \{\theta,\ -13,\ 13\}\right]$$



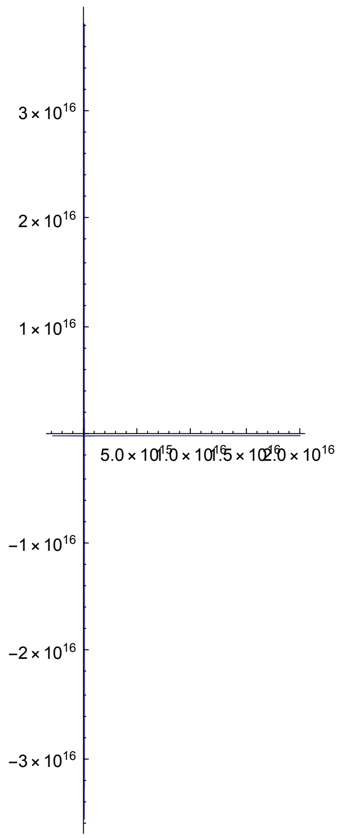
$$\frac{1}{1080}\pi\,\mathrm{D}\left[\frac{-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}}{4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}},\theta\right]$$

$$\frac{1}{1080}\pi\left(-\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}\right)^2\Big/\left(8640\left(-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}\right)^{3/2}\right)+\left(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}\right)\Big/\left(4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}\right)\right)$$

$$\text{Plot}\Big[\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Bigg)^2\Bigg/\left(8640\left(-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}\right)^{3/2}\right)+\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}\Bigg)\Bigg/\left(4320\,\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}\right)\Bigg),\ \{\theta,\ -13,\ 13\}\Big]$$



$$\text{PolarPlot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Bigg)^2\Bigg/\left(8640\left(-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}\right)^{3/2}\right)+\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}\Bigg)\Bigg/\left(4320\sqrt{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}\right)\Bigg),\ \{\theta,-13,13\}\Bigg]$$



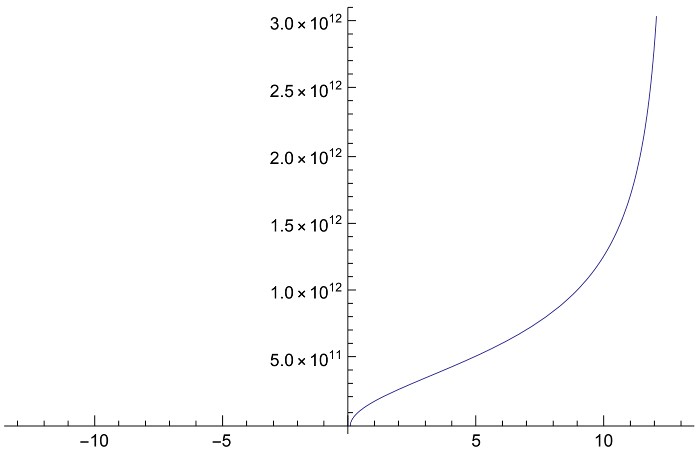
V. Deriving Acceleration from the Second Principle and

Plotting Correlations (r).

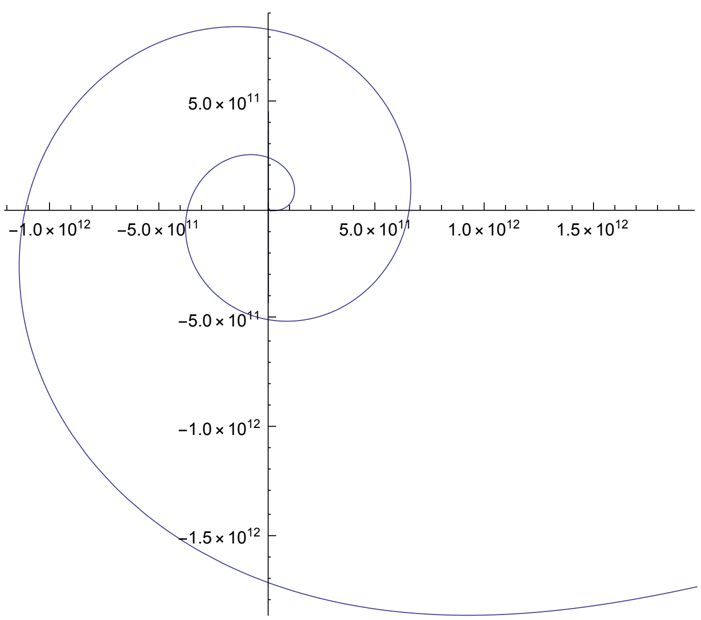
$$r = \frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}} = \frac{2\,\pi\,r\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta - \theta^2}} = \frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}$$

Expression for r, no. 1

$$\mathrm{Plot}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}, \{\theta, -13, 13\}\right]$$



$$\mathrm{PolarPlot}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}, \{\theta, -13, 13\}\right]$$

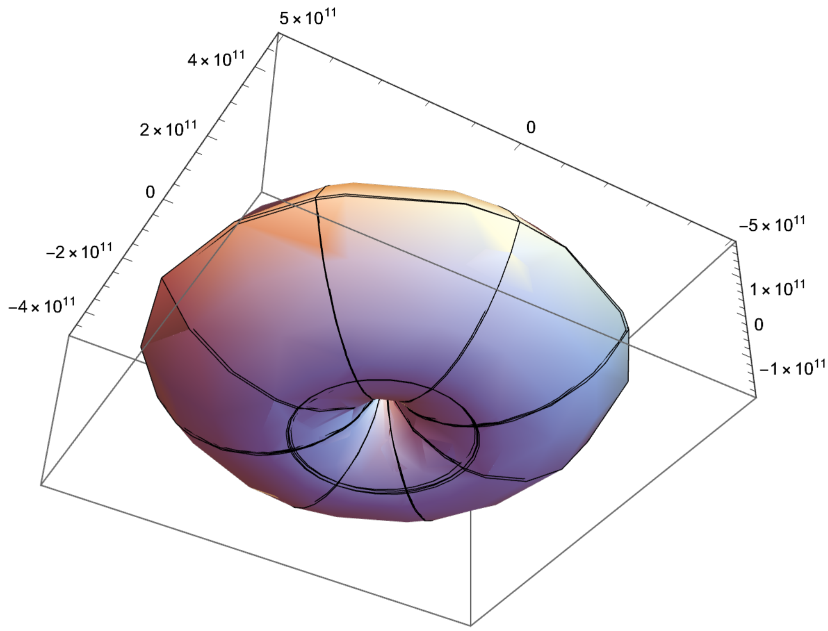


$$\texttt{Solve}\left[\beta == \texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right], \theta\right]$$

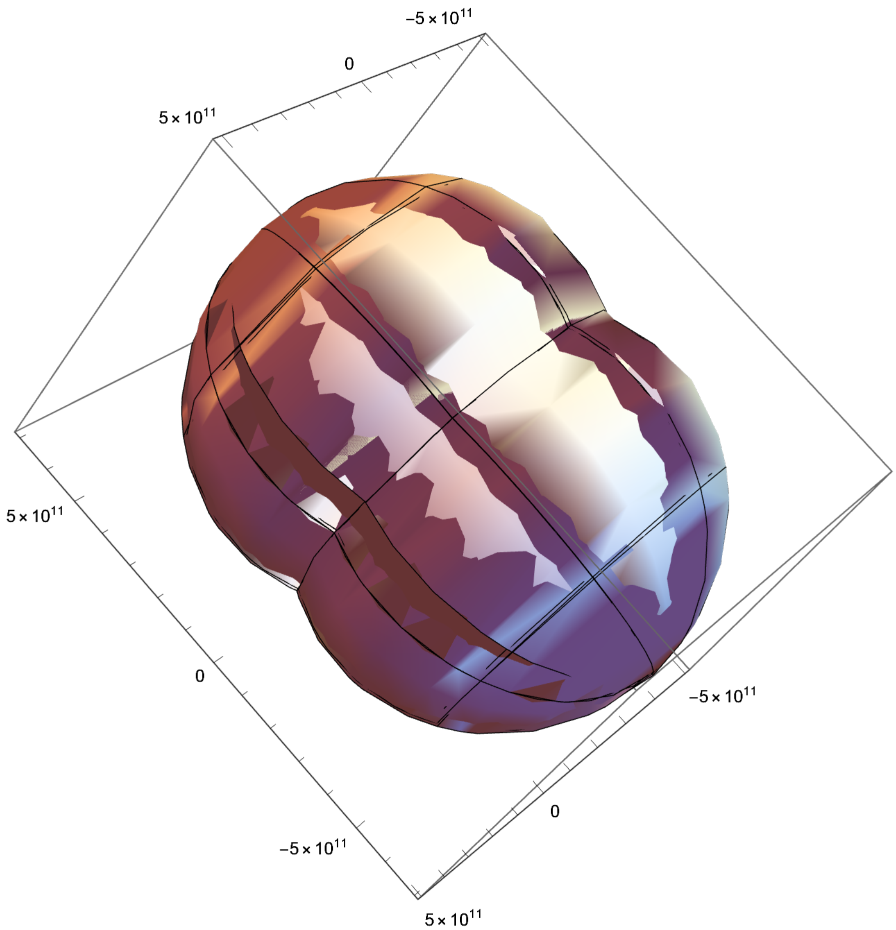
$$\left\{\left\{\theta \to 2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to 2\pi\left(1+\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right\}\right\}$$

```
c := (2.99792458 * 10^8)
```

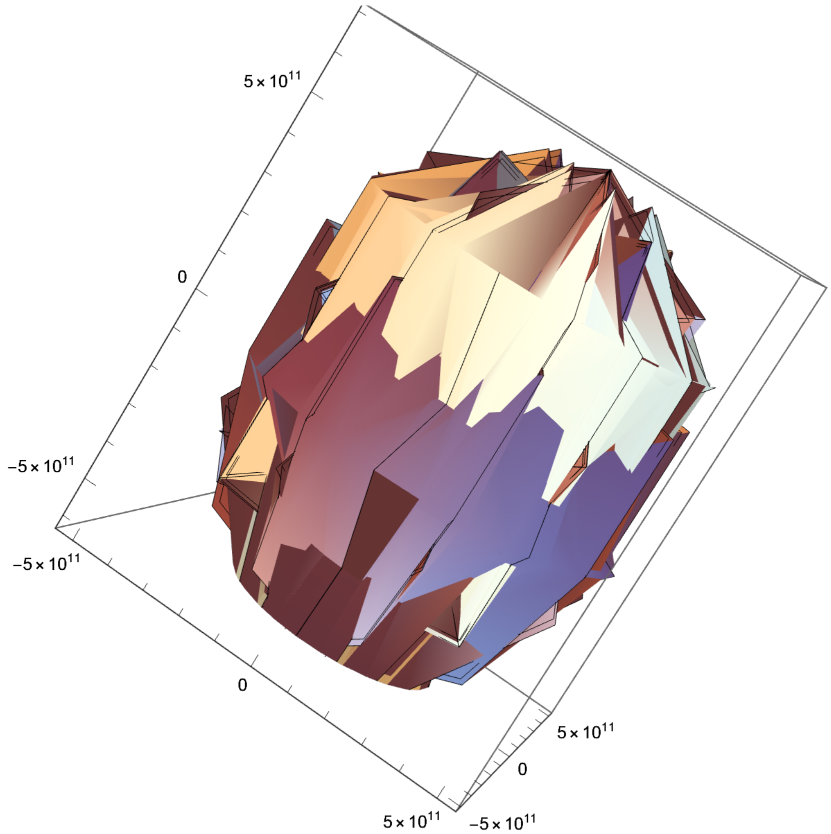
$$\texttt{SphericalPlot3D}\left[\frac{2160\,c\,\sqrt{2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)}}{\sqrt{4\pi-\left(\texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right)}}, \{\beta, -2\pi, 2\pi\}, \{\theta, -4\pi, 4\pi\}\right]$$



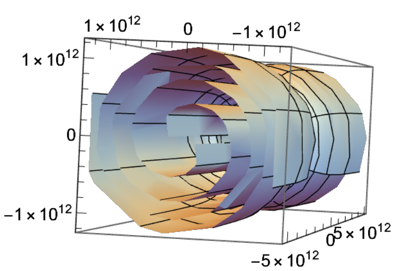
$$\text{SphericalPlot3D}\left[\frac{2160\, c\, \sqrt{2\,\pi\,\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\left(\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right)}},\ \{\beta,\ -2\,\pi,\ 2\,\pi\},\ \{\theta,\ -20\,\pi,\ 20\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2160\ c\ \sqrt{2\ \pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)}}{\sqrt{4\ \pi-\left(\text{ArcSin}\left[\frac{\sqrt{(4\ \pi-\theta)\ \theta}}{2\ \pi}\right]\right)}},\ \{\beta,\ -200\ \pi,\ 200\ \pi\},\ \{\theta,\ -2\ \pi,\ 2\ \pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\ \pi-2\ \pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)}},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -13,\ 13\}\right]$$

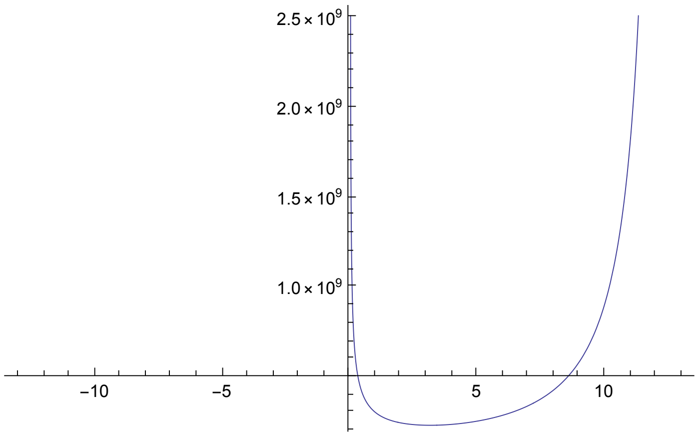


The first and second derivatives of expression for r no. 1

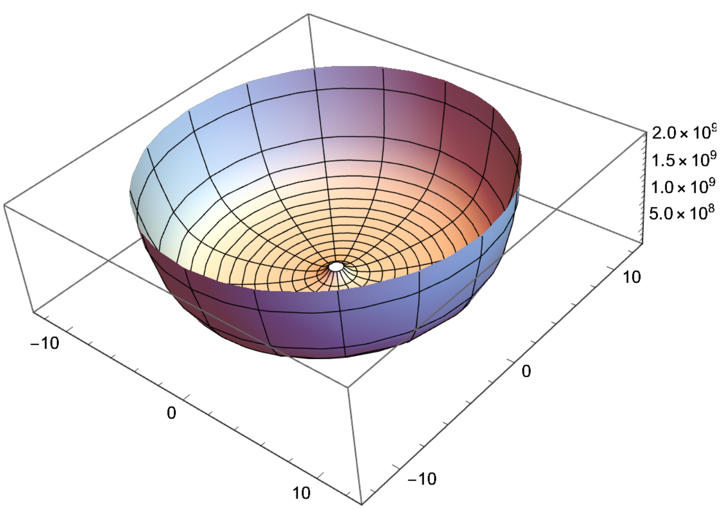
$$\frac{1}{1080}\pi\,\mathrm{D}\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}},\theta\right]$$

$$\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\,\sqrt{\theta}}+\frac{1080\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080}$$

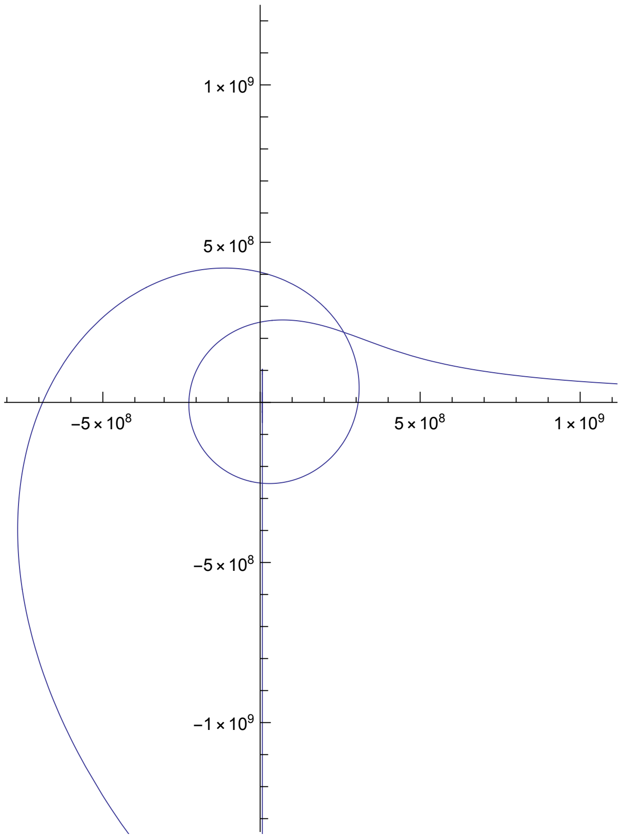
$$\mathrm{Plot}\left[\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\,\sqrt{\theta}}+\frac{1080\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080},\{\theta,-13,13\}\right]$$



$$\mathrm{RevolutionPlot3D}\left[\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\,\sqrt{\theta}}+\frac{1080\,c\,\sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080},\{\theta,-13,13\}\right]$$

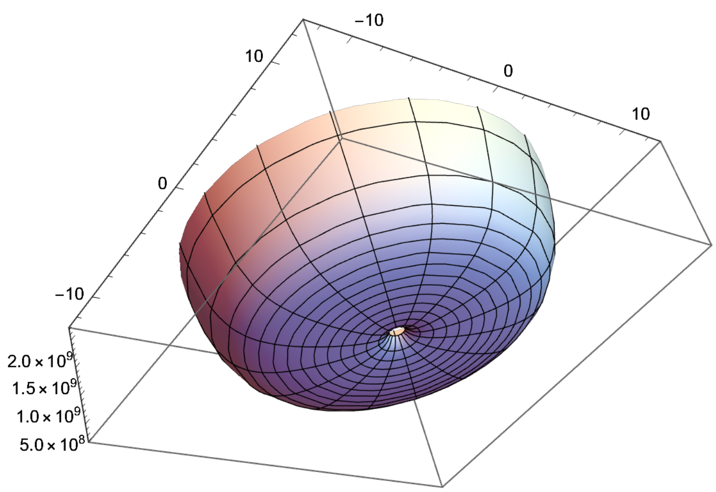


$$\text{PolarPlot}\left[\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\ \sqrt{\theta}}+\frac{1080\,c\ \sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\ \sqrt{\theta}}+\frac{1080\,c\ \sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080},\ \{\beta,\ -13,\ 13\},\ \{\theta,\ -13,\ 13\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{\pi\left(\frac{1080\,c}{\sqrt{4\,\pi-\theta}\ \sqrt{\theta}}+\frac{1080\,c\ \sqrt{\theta}}{(4\,\pi-\theta)^{3/2}}\right)}{1080},\ \{\theta,\ -13,\ 13\}\right]$$

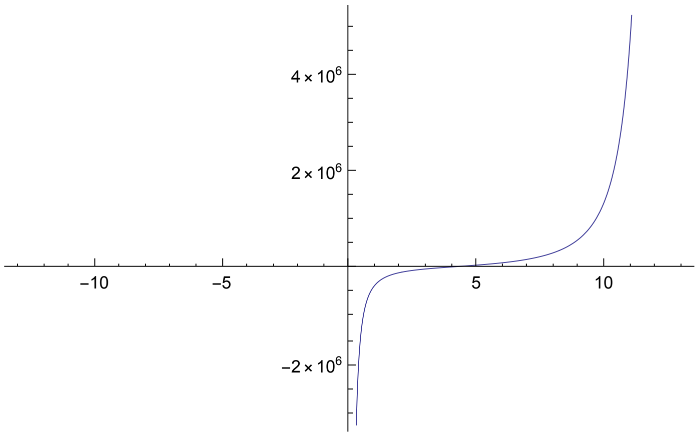


$$\frac{1}{1080}\pi D\left[\frac{1}{1080}\pi D\left[\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}},\theta\right],\theta\right]$$

$$\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1166400}$$

$$\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)$$

$$\text{Plot}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1166400},\{\theta,-13,13\}\right]$$



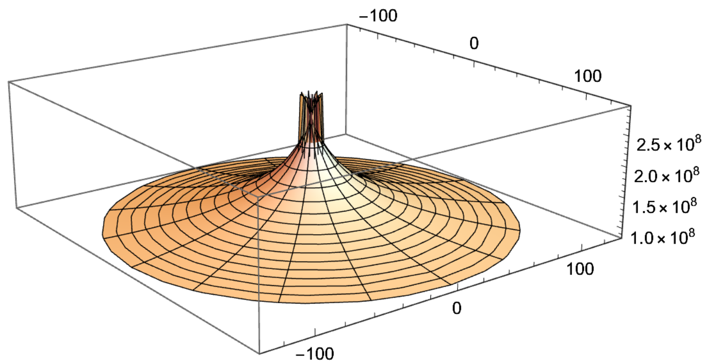

```
c := (2.99792458 * 10^8)
```

$$\text{RevolutionPlot3D}\left[\left\{\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}},\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+\frac{1620\,c\,\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1166400}\right\},\{\theta,-.0000001,.00000001\}\right]$$

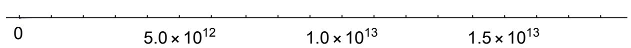
$$\text{Solve}\left[\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}==-(v\hat{}2/c\hat{}2),v\right]$$

$$\left\{\left\{v\to-\frac{2.99792\times10^8\sqrt{12.5664-\frac{39.4784}{12.5664-1.\,\theta}}}{\sqrt{12.5664-1.\,\theta}}\right\},\left\{v\to\frac{2.99792\times10^8\sqrt{12.5664-\frac{39.4784}{12.5664-1.\,\theta}}}{\sqrt{12.5664-1.\,\theta}}\right\}\right\}$$

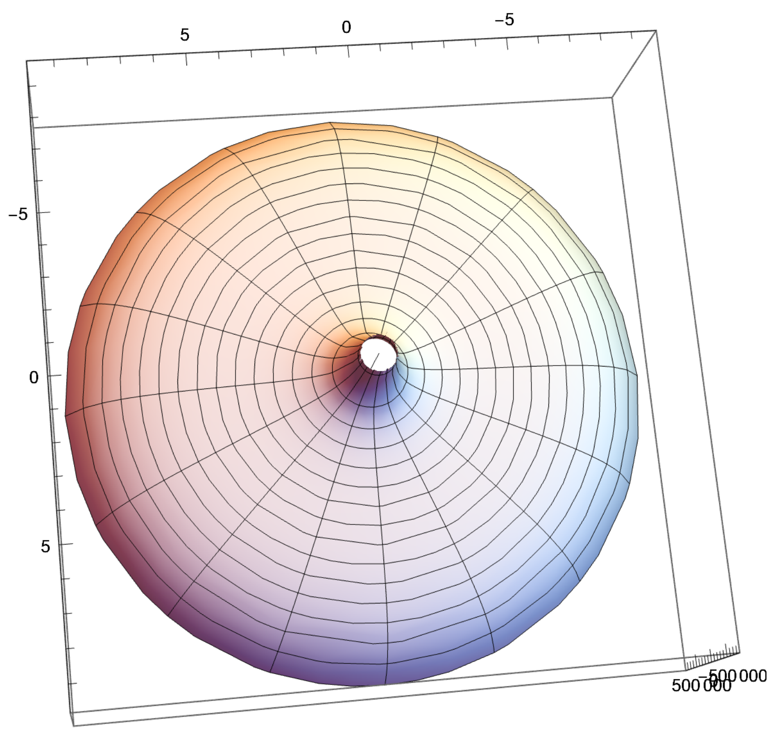
$$\text{RevolutionPlot3D}\left[\frac{2.99792458\grave{}*\hat{}8\,\sqrt{12.566370614359172\grave{} - \frac{39.47841760435743\grave{}}{12.566370614359172\grave{}-1.\grave{}\,\theta}}}{\sqrt{12.566370614359172\grave{}-1.\grave{}\,\theta}},\ \{\theta, -130, 130\}\right]$$



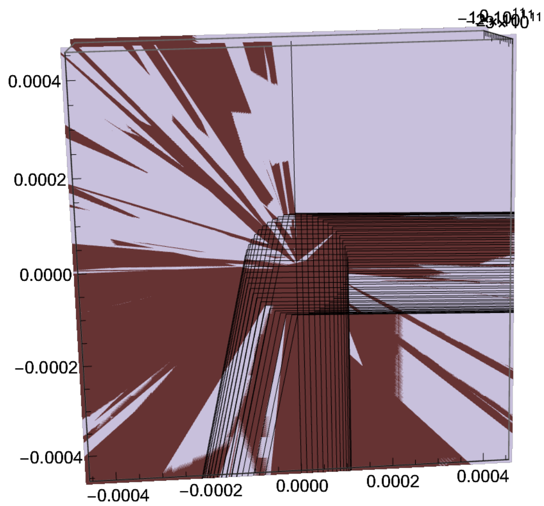
$$\text{PolarPlot}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}} + \frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}} + \frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta, -13, 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}} + \frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}} + \frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta, -3\,\pi, 3\,\pi\}\right]$$

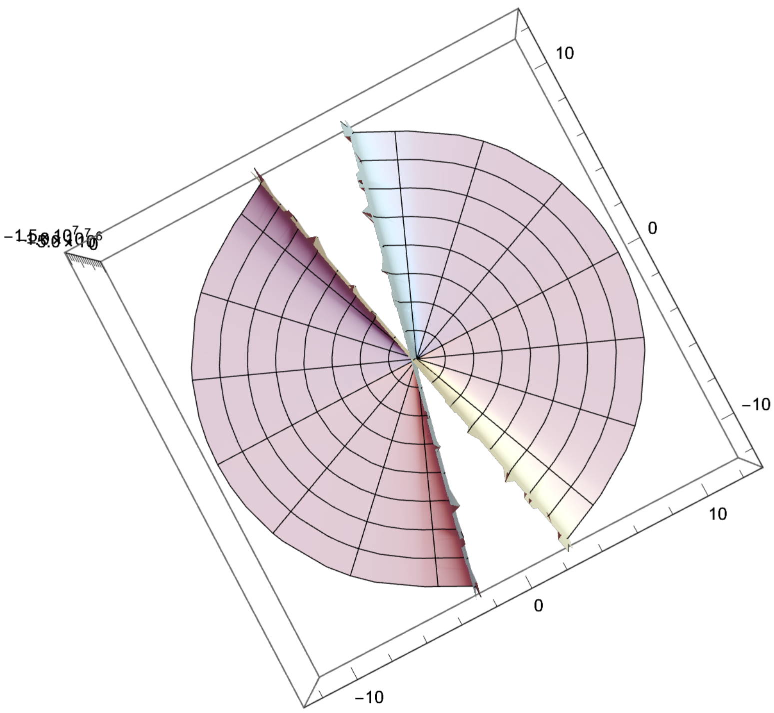


$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



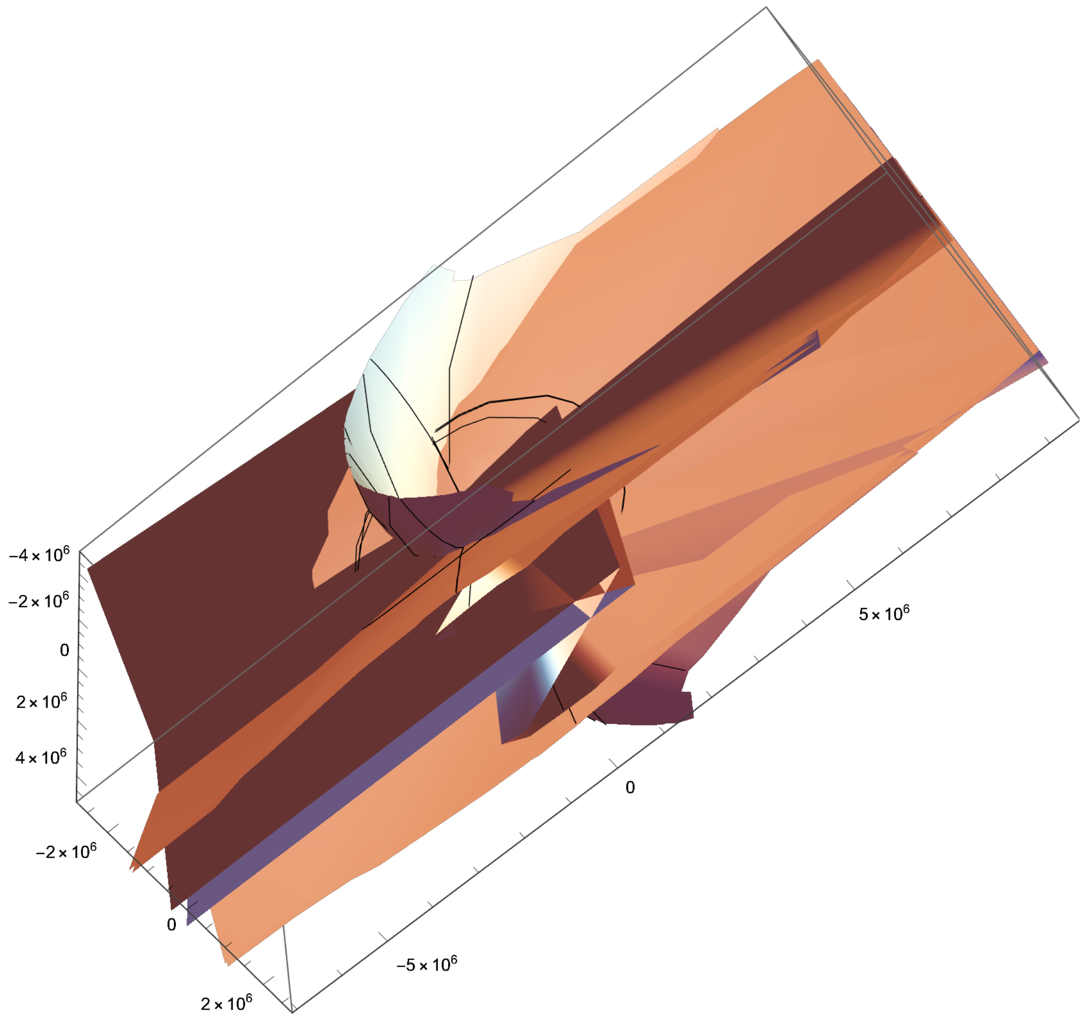
$$\left\{\left\{\theta\to 2\,\pi\left(1-\sqrt{1-\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta\to 2\,\pi\left(1+\sqrt{1-\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\texttt{RevolutionPlot3D}\Big[\frac{1}{1\,166\,400}\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)}\left(2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)^{3/2}}+\frac{1080\,c}{\left(4\pi-2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)}}+\frac{1620\,c\sqrt{2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)}}{\left(4\pi-2\pi\left(1-\sqrt{1-\texttt{Sin}[\beta]^2}\right)\right)^{5/2}}\right),\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\Big]$$

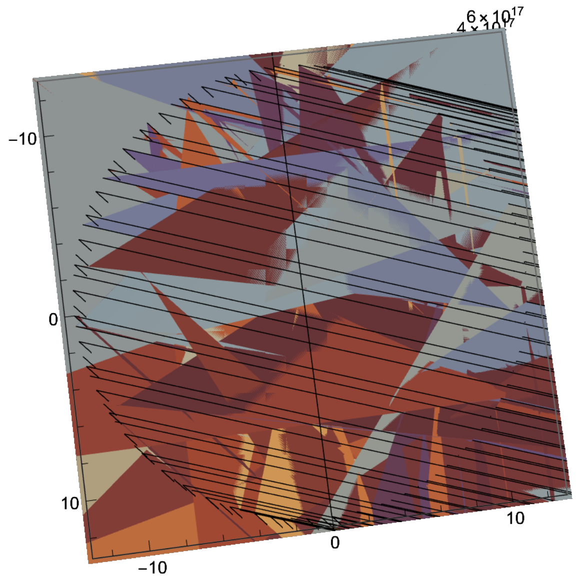


$$\text{SphericalPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\pi-2\pi\left(1-\sqrt{1-\text{Sin}[\beta]^2}\right)}\;2\pi\left(1-\sqrt{1-\text{Sin}[\beta]^2}\right)^{3/2}}+\frac{1080\,c}{(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{1620\,c\sqrt{\theta}}{(4\pi-\theta)^{5/2}}\right)}{1166400},\right.$$

$$\left.\{\theta,-4\pi,4\pi\},\{\beta,-\pi,\pi\}\right]$$

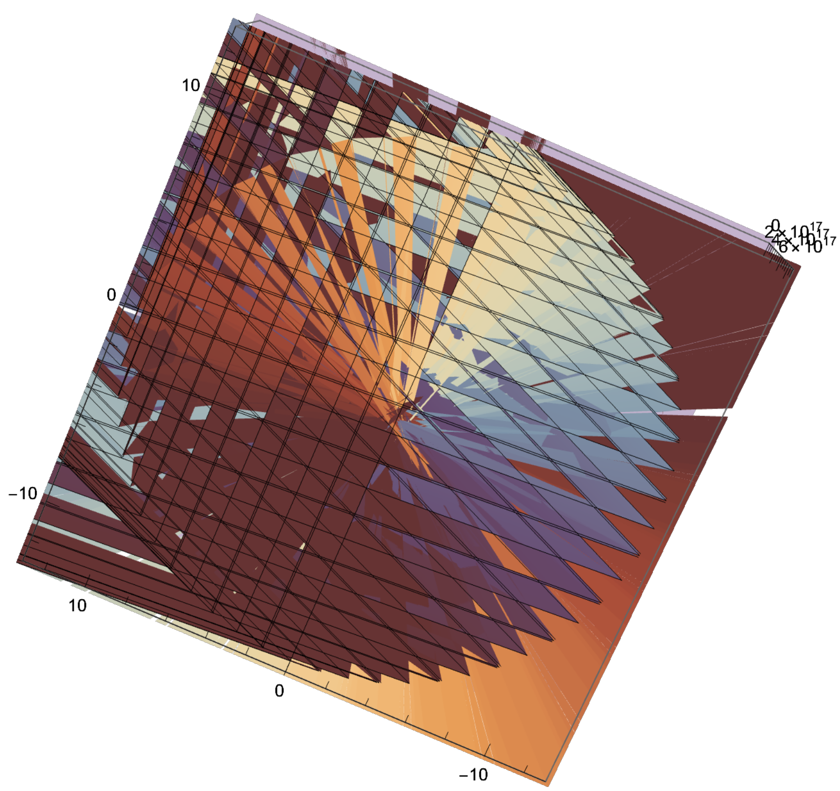


$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -5\,\pi,\ 5\,\pi\}\right]$$



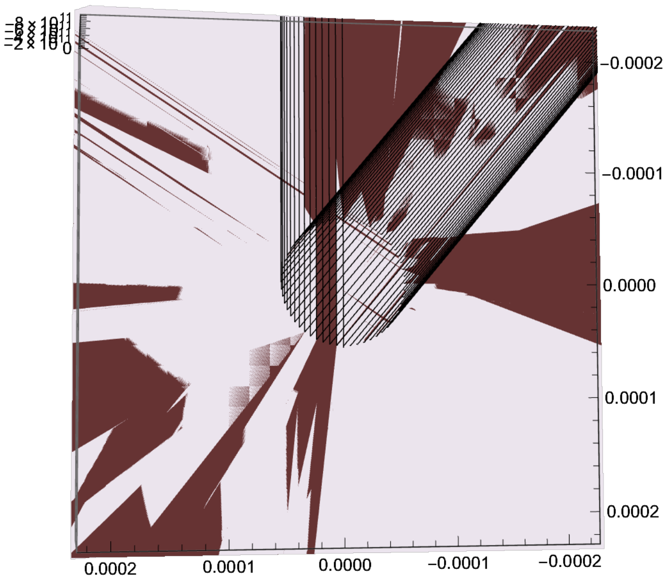

```
c := (2.99792458 * 10 ^ 8)
```

$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$

$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{540\,c}{\sqrt{4\,\pi-\theta}\;\theta^{3/2}}+\frac{1080\,c}{(4\,\pi-\theta)^{3/2}\;\sqrt{\theta}}+\frac{1620\,c\;\sqrt{\theta}}{(4\,\pi-\theta)^{5/2}}\right)}{1\,166\,400},\ \{\theta,\ -\pi,\ \pi\}\right]$$



When $\frac{2\,\pi\,r\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}=r$, we say that $r=1$, or that $r=\sqrt{1+3+5+...\,(2\,n-1)}$,

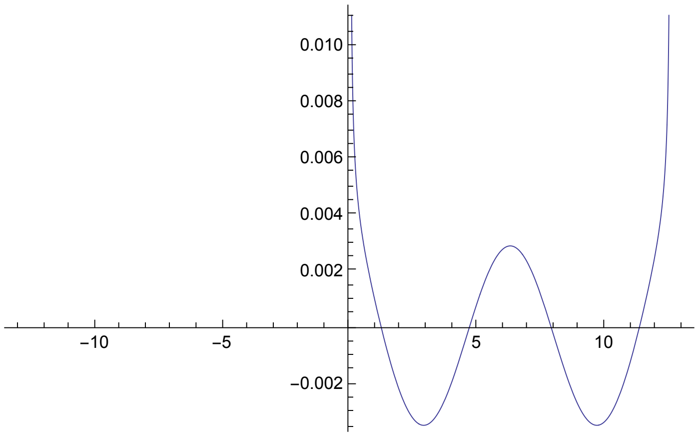
where n is the position in the series of the number.

r = 1

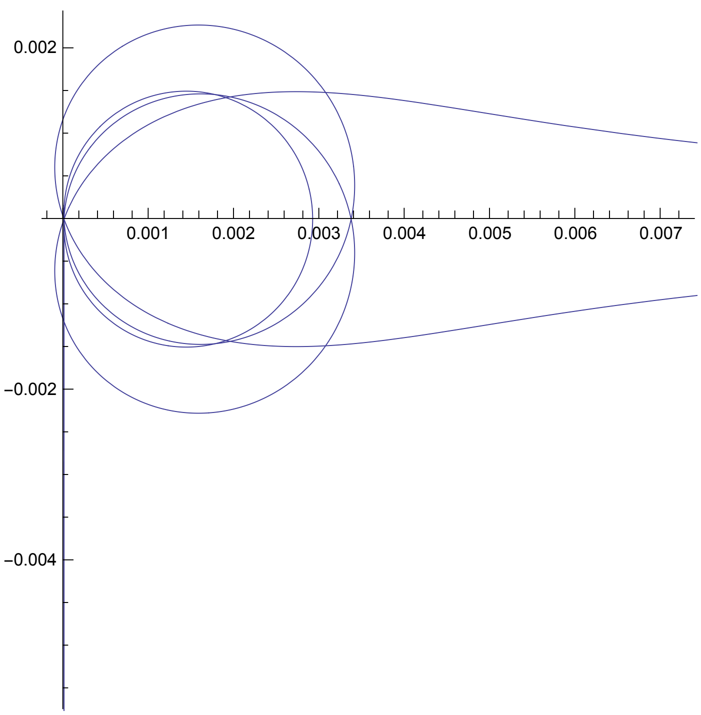
$$\frac{1}{1080}\,\pi\,D\left[\frac{2\,\pi\,\text{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \theta\right]$$

$$\frac{\pi\left(\frac{2\,\pi\,\text{Cos}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}-\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}\right)}{1080}$$

$$\text{Plot}\left[\frac{\pi\left(\frac{2\,\pi\,\text{Cos}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}-\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}\right)}{1080},\,\{\theta,\,-13,\,13\}\right]$$



$$\text{PolarPlot}\left[\frac{\pi\left(\frac{2\,\pi\,\text{Cos}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}-\frac{\pi\,(4\,\pi-2\,\theta)\,\text{Sin}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}\right)}{1080},\,\{\theta,\,-13,\,13\}\right]$$



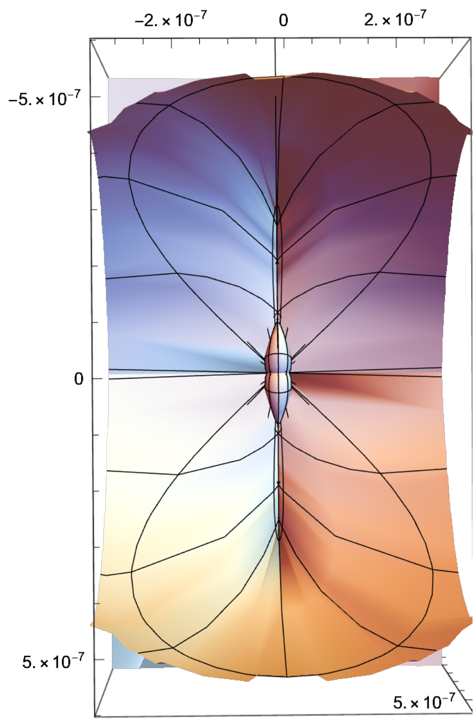
$$r=\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}==\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)$$

$$\frac{1}{1080}\,\pi\,\text{D}\left[\frac{1}{1080}\,\pi\,\text{D}\left[\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\,\theta,\,\beta,\,r\right],\,\theta,\,\beta,\,r\right]$$

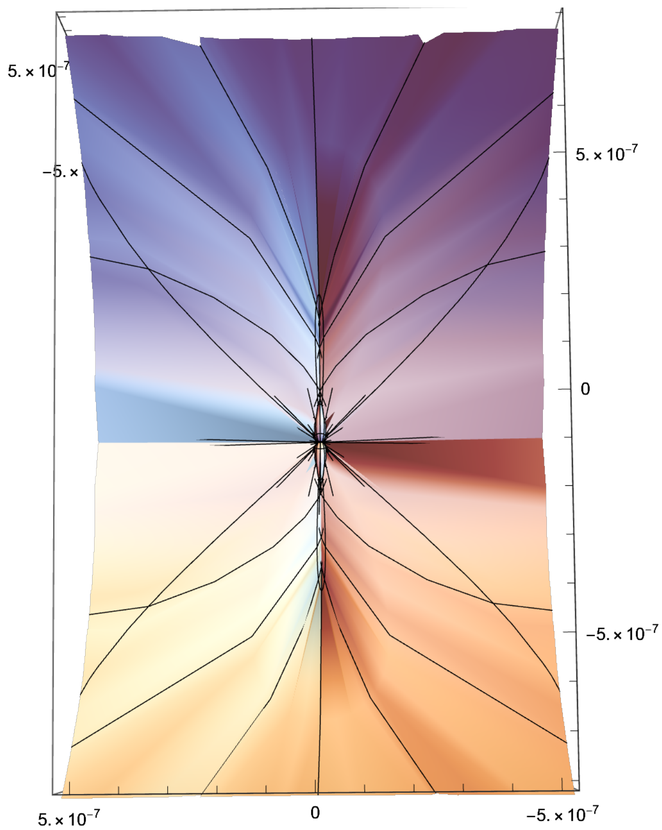
0

$$\frac{1}{1080}\,\pi\,\mathrm{D}\left[\frac{1}{1080}\,\pi\,\mathrm{D}\left[\frac{2\,\pi\,\mathrm{r}\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\,\theta,\,\beta\right],\,\theta,\,\beta\right]$$

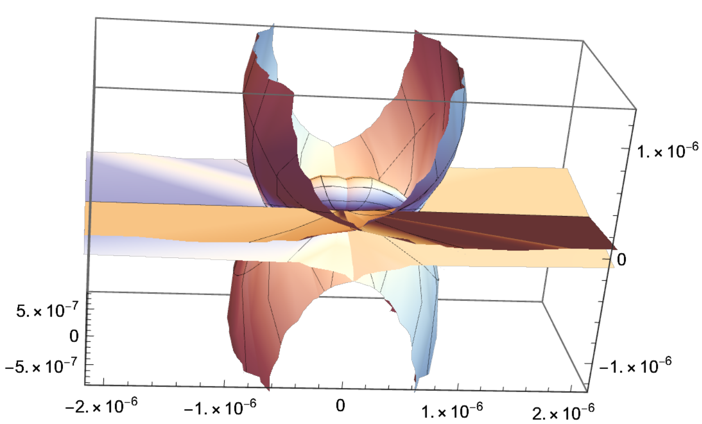
$$\mathrm{SphericalPlot3D}\left[\frac{\pi\left(-\frac{\pi^2\,\frac{\sqrt{\frac{1}{4\,\pi-\theta}+\frac{4\,\pi}{\theta^2}-\frac{3}{\theta}}}{4\,\pi\,\sqrt{\theta}}\,(4\,\pi-2\,\theta)^2\,\mathrm{Sin}[\beta]}{720\,\left(4\,\pi\,\theta-\theta^2\right)^{5/2}}-\frac{\pi^2\,\left(\sqrt{1+\frac{4\,\pi^2}{(4\,\pi-\theta)^2}-\frac{4\,\pi}{4\,\pi-\theta}}\right)\,\mathrm{Sin}[\beta]}{540\,\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}\right)}{1080},\,\{\theta,\,-4\,\pi,\,4\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\pi\left(-\frac{\pi^2\sqrt{1+\frac{4\pi^2}{(4\pi-\theta)^2}-\frac{4\pi}{4\pi-\theta}}\,(4\pi-2\theta)^2\,\text{Sin}[\beta]}{720\left(4\pi\theta-\theta^2\right)^{5/2}}-\frac{\pi^2\left(\frac{\sqrt{\frac{1}{4\pi-\theta}+\frac{4\pi}{\theta^2}-\frac{3}{\theta}}}{4\pi\sqrt{\theta}}\right)\text{Sin}[\beta]}{540\left(4\pi\theta-\theta^2\right)^{3/2}}\right)}{1080},\ \{\theta,-4\pi,4\pi\},\ \{\beta,-\pi,\pi\}\right]$$



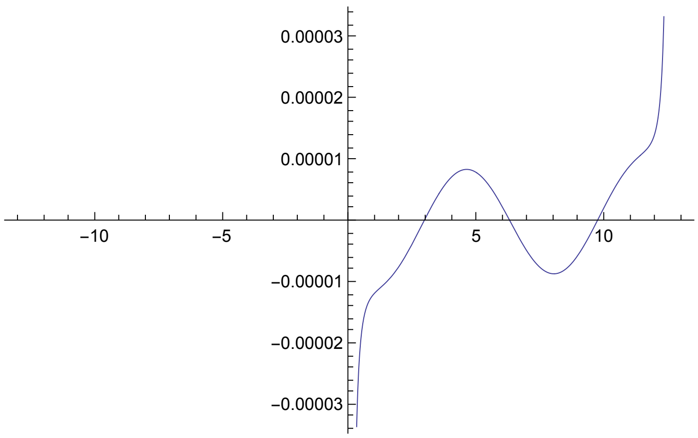
$$\text{SphericalPlot3D}\left[\frac{\pi\left(-\frac{\pi^2\,(4\pi-2\theta)^2\,\text{Sin}[\beta]}{720\left(4\pi\theta-\theta^2\right)^{5/2}}-\frac{\pi^2\,\text{Sin}[\beta]}{540\left(4\pi\theta-\theta^2\right)^{3/2}}\right)}{1080},\ \{\theta,-4\pi,4\pi\},\ \{\beta,-\pi,\pi\}\right]$$



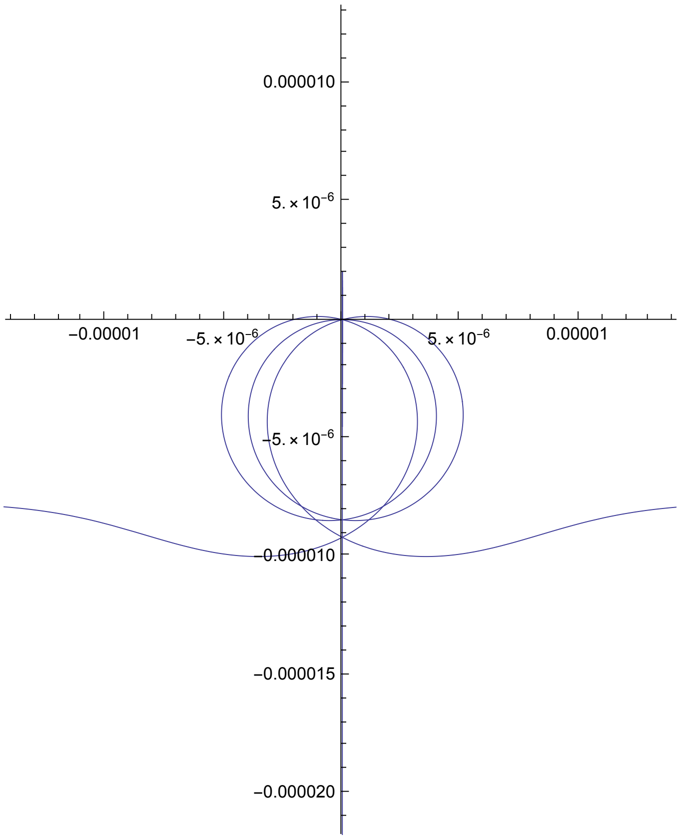
$$\frac{1}{1080}\pi\,\mathrm{D}\Big[\frac{1}{1080}\pi\,\mathrm{D}\Big[\frac{2\,\pi\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\theta\Big],\theta\Big]$$

$$\frac{\pi^2\left(-\frac{2\,\pi\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}+\frac{3\,\pi\,(4\,\pi-2\,\theta)^2\,\mathrm{Sin}[\theta]}{2\,\left(4\,\pi\,\theta-\theta^2\right)^{5/2}}+\frac{2\,\pi\,\mathrm{Sin}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}-\frac{2\,\pi\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{1\,166\,400}$$

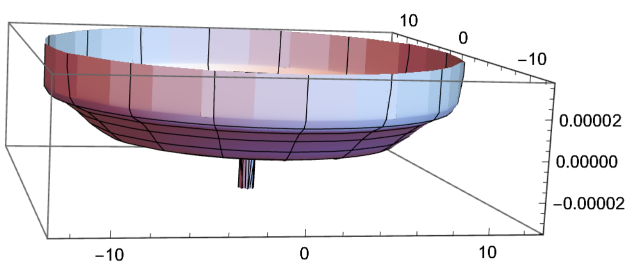
$$\mathrm{Plot}\Big[\frac{\pi^2\left(-\frac{2\,\pi\,(4\,\pi-2\,\theta)\,\mathrm{Cos}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}+\frac{3\,\pi\,(4\,\pi-2\,\theta)^2\,\mathrm{Sin}[\theta]}{2\,\left(4\,\pi\,\theta-\theta^2\right)^{5/2}}+\frac{2\,\pi\,\mathrm{Sin}[\theta]}{\left(4\,\pi\,\theta-\theta^2\right)^{3/2}}-\frac{2\,\pi\,\mathrm{Sin}[\theta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)}{1\,166\,400},\{\theta,-13,13\}\Big]$$



$$\text{PolarPlot}\left[\frac{\pi^2\left(-\frac{2\pi(4\pi-2\theta)\,\text{Cos}[\theta]}{(4\pi\theta-\theta^2)^{3/2}}+\frac{3\pi(4\pi-2\theta)^2\,\text{Sin}[\theta]}{2(4\pi\theta-\theta^2)^{5/2}}+\frac{2\pi\,\text{Sin}[\theta]}{(4\pi\theta-\theta^2)^{3/2}}-\frac{2\pi\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)}{1\,166\,400},\ \{\theta,-13,13\}\right]$$

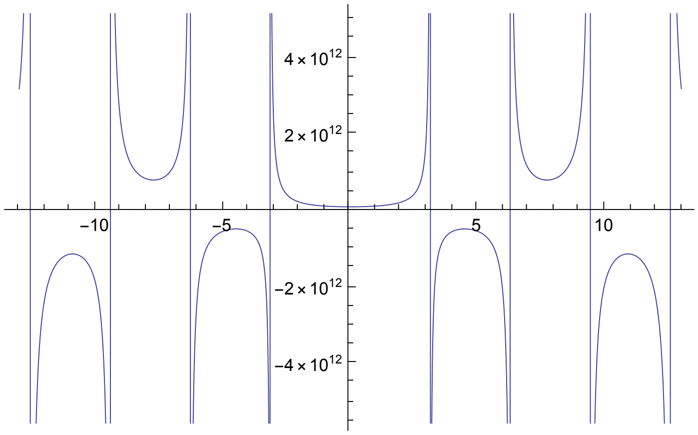


$$\text{RevolutionPlot3D}\left[\frac{\pi^2\left(-\frac{2\pi(4\pi-2\theta)\,\text{Cos}[\theta]}{(4\pi\theta-\theta^2)^{3/2}}+\frac{3\pi(4\pi-2\theta)^2\,\text{Sin}[\theta]}{2(4\pi\theta-\theta^2)^{5/2}}+\frac{2\pi\,\text{Sin}[\theta]}{(4\pi\theta-\theta^2)^{3/2}}-\frac{2\pi\,\text{Sin}[\theta]}{\sqrt{4\pi\theta-\theta^2}}\right)}{1\,166\,400},\ \{\theta,-13,13\}\right]$$

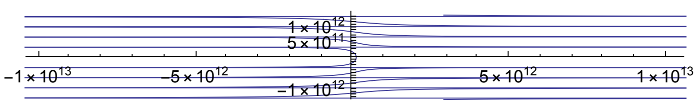


Expression for r no. 3

$$\text{Plot}\left[\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}, \{\theta, -13, 13\}\right]$$



$$\text{PolarPlot}\left[\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}, \{\theta, -13, 13\}\right]$$

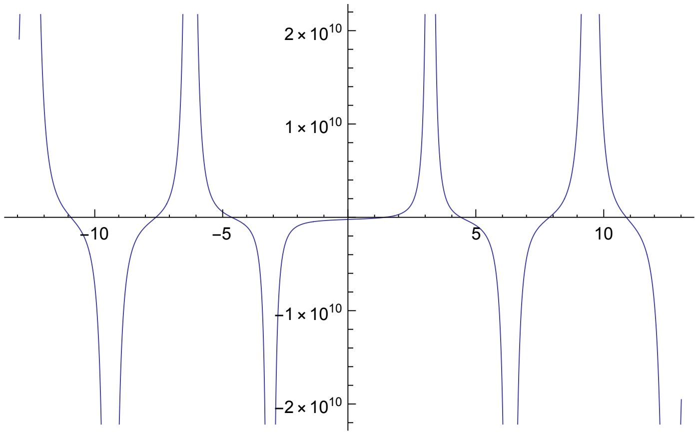


The First and Second Derivatives of expression for r no. 3

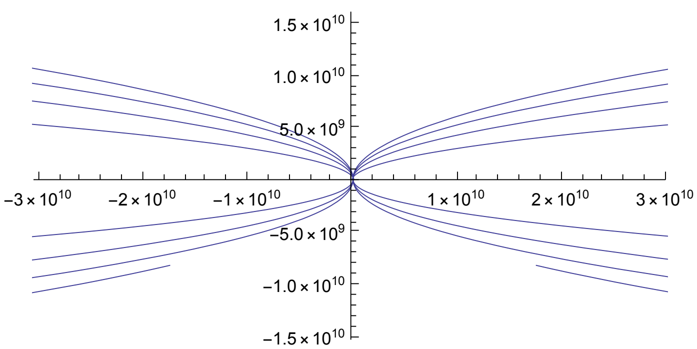
$$\frac{1}{1080}\pi\, D\left[\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}, \theta\right]$$

$$\frac{1}{1080}\pi\left(\frac{540\, c\, (4\pi-2\theta)\, \sqrt{\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}\, \sqrt{(4\pi-\theta)\,\theta}} + \frac{540\, c\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}\, \sqrt{\theta}} + \frac{540\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, (4\pi-\theta)^{3/2}} - \frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Cot}[\theta]\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)$$

$$\text{Plot}\left[\frac{1}{1080}\pi\left(\frac{540\,c\,(4\pi-2\theta)\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\sqrt{(4\pi-\theta)\,\theta}}+\frac{540\,c\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\sqrt{\theta}}+\frac{540\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}}-\frac{1080\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}}\right),\{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\frac{1}{1080}\pi\left(\frac{540\,c\,(4\pi-2\theta)\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\sqrt{(4\pi-\theta)\,\theta}}+\frac{540\,c\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\sqrt{\theta}}+\frac{540\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}}-\frac{1080\,c\sqrt{\theta}\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}}\right),\{\theta,-13,13\}\right]$$



$$\frac{1}{1080}\pi\,\text{D}\left[\frac{1}{1080}\pi\,\text{D}\left[\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}},\theta\right],\theta\right]$$

$$\frac{1}{1\,166\,400}\pi^2$$

$$\left(-\frac{270\,c\,(4\pi-2\theta)^2\,\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,((4\pi-\theta)\,\theta)^{3/2}}+\frac{540\,c\,(4\pi-2\theta)\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}}+\frac{540\,c\,(4\pi-2\theta)\,\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\,\sqrt{(4\pi-\theta)\,\theta}}-\right.$$

$$\frac{1080\,c\,\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{270\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,\theta^{3/2}}+\frac{540\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\,\sqrt{\theta}}+$$

$$\frac{810\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{5/2}}-\frac{1080\,c\,(4\pi-2\theta)\,\sqrt{\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-$$

$$\frac{1080\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}\,\sqrt{\theta}}-\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}}+$$

$$\left.\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}+\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]^3}{\pi\,\sqrt{4\pi-\theta}}\right)$$

$$\text{Plot}\left[\frac{1}{1166400}\pi^2\left(-\frac{270\,c\,(4\pi-2\theta)^2\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,((4\pi-\theta)\,\theta)^{3/2}}+\frac{540\,c\,(4\pi-2\theta)\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}}+\right.\right.$$

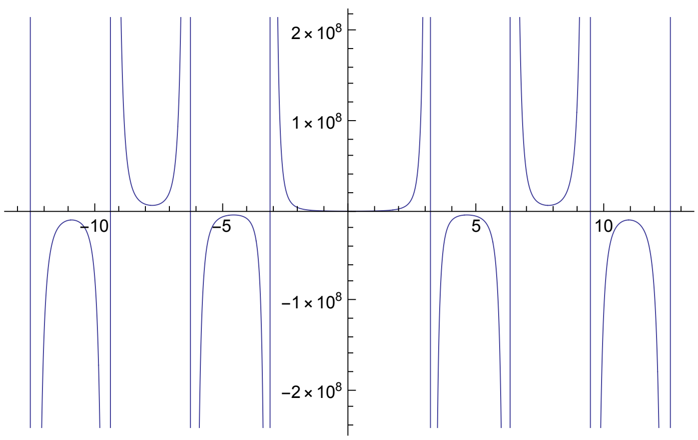
$$\frac{540\,c\,(4\pi-2\theta)\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\sqrt{(4\pi-\theta)\,\theta}}-\frac{1080\,c\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{270\,c\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\theta^{3/2}}+$$

$$\frac{540\,c\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{810\,c\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{5/2}}-$$

$$\frac{1080\,c\,(4\pi-2\theta)\sqrt{\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{1080\,c\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{\theta}}-$$

$$\frac{1080\,c\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}}+\frac{1080\,c\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}}+$$

$$\left.\left.\frac{1080\,c\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]^3}{\pi\sqrt{4\pi-\theta}}\right),\ \{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\Big[\frac{1}{1166400}\pi^2\Big(-\frac{270\,c\,(4\pi-2\theta)^2\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,((4\pi-\theta)\,\theta)^{3/2}}+\frac{540\,c\,(4\pi-2\theta)\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}}+$$

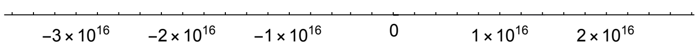
$$\frac{540\,c\,(4\pi-2\theta)\,\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\sqrt{(4\pi-\theta)\,\theta}}-\frac{1080\,c\,\sqrt{\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{270\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\theta^{3/2}}+$$

$$\frac{540\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}\sqrt{\theta}}+\frac{810\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{5/2}}-$$

$$\frac{1080\,c\,(4\pi-2\theta)\,\sqrt{\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{(4\pi-\theta)\,\theta}}-\frac{1080\,c\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}\,\sqrt{\theta}}-$$

$$\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]\,\text{Csc}[\theta]}{\pi\,(4\pi-\theta)^{3/2}}+\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]}{\pi\sqrt{4\pi-\theta}}+$$

$$\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]^3}{\pi\sqrt{4\pi-\theta}}\Big),\ \{\theta,-13,13\}\Big]$$



VI. Deriving Acceleration from the Third Principle and Plotting Correlations.

$$r_1 = \sqrt{r^2 - \eta^2} = \sqrt{\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2} =$$

$$\sqrt{\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2} =$$

$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2\right)} =$$

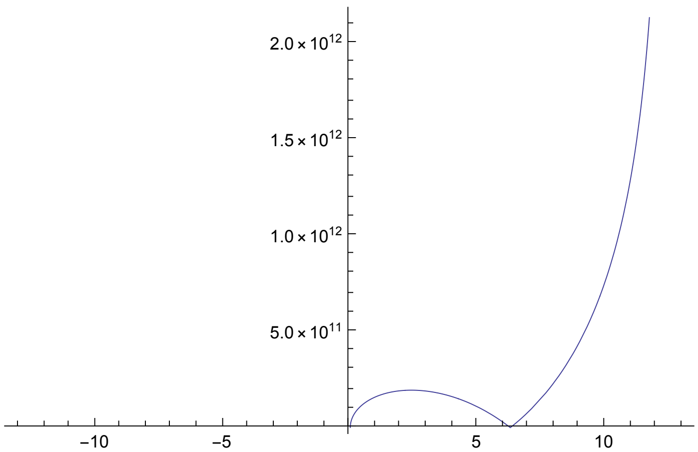
$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2\right)} =$$

$$\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2\right)} =$$

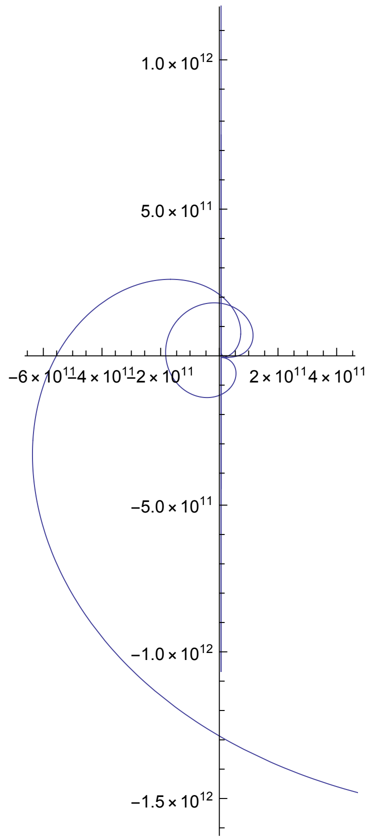
$$\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi - \theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2\right)}$$

Expression for r_1, no. 1

$$\text{Plot}\left[\sqrt{\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\sqrt{\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2},\ \{\theta, -13, 13\}\right]$$



The First Derivative of Expression for r_1, no. 1

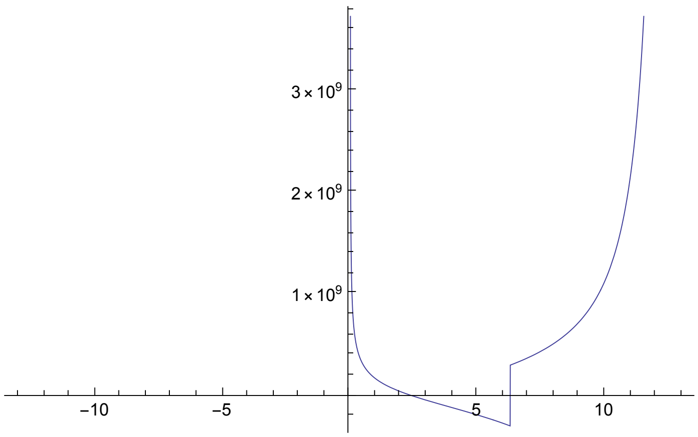
$$\frac{1}{1080}\,\pi\, D\left[\sqrt{\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\,\pi\,\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta - \left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2 \theta^2}}{2\,\pi}\right)^2},\ \theta\right]$$

$$\left(\pi\left(\frac{4\,665\,600\, c^2}{4\,\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta}{(4\,\pi-\theta)^2} - \frac{\frac{37\,324\,800\, c^2\, \pi\, \theta}{4\,\pi-\theta} + \frac{18\,662\,400\, c^2\, \pi\, \theta^2}{(4\,\pi-\theta)^2} - \frac{13\,996\,800\, c^2\, \theta^2}{4\,\pi-\theta} - \frac{4\,665\,600\, c^2\, \theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}\right)\right) \Big/ \left(2160\sqrt{\frac{4\,665\,600\, c^2\, \theta}{4\,\pi-\theta} - \frac{\frac{18\,662\,400\, c^2\, \pi\, \theta^2}{4\,\pi-\theta} - \frac{4\,665\,600\, c^2\, \theta^3}{4\,\pi-\theta}}{4\,\pi^2}}\right)$$

Plot[

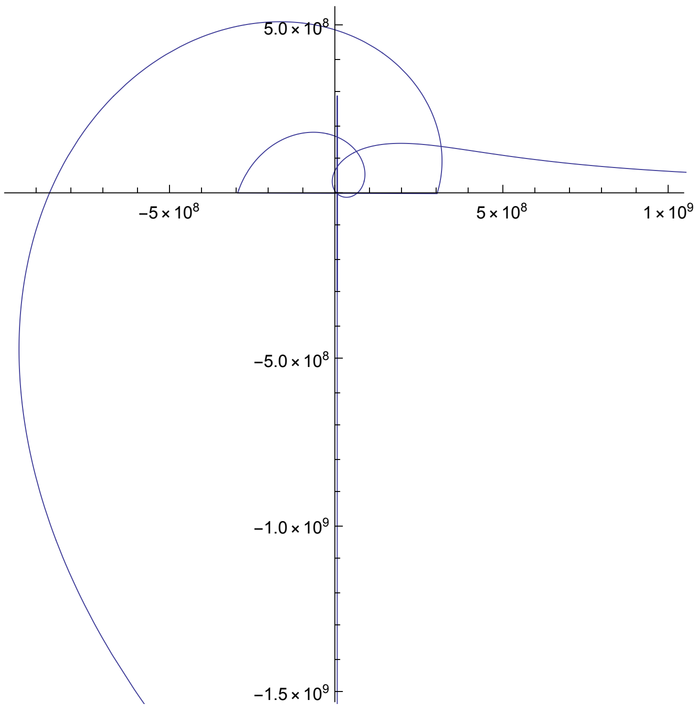
$$\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}\right)\right)\Big/$$

$$\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}}\right),\ \{\theta,\ -13,\ 13\}]$$



$$\text{PolarPlot}\Big[\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}\right)\right)\Big/$$

$$\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}}\right),\ \{\theta,\ -13,\ 13\}\Big]$$



$$\frac{1}{1080}\pi\,D\left[\frac{\frac{4665600\,c^2}{4\pi-\theta}+\frac{4665600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{\frac{37324800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18662400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13996800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}}{2\sqrt{\frac{4665600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18662400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}}},\theta\right]$$

$$\frac{1}{1080}$$

$$\pi\left(-\left(\frac{4665600\,c^2}{4\pi-\theta}+\frac{4665600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{\frac{37324800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18662400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13996800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}\right)^2\Big/\right.$$

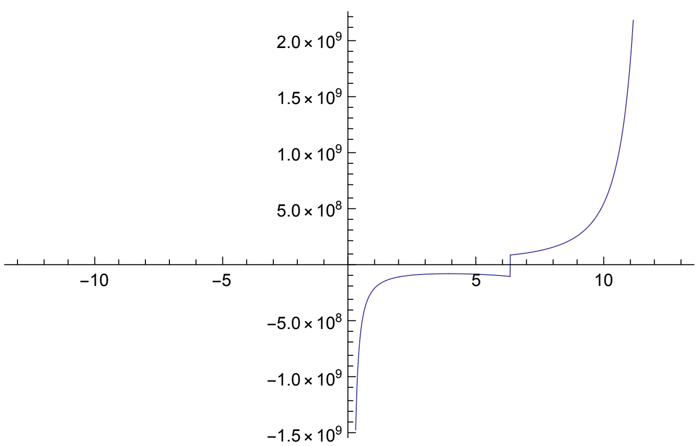
$$\left(4\left(\frac{4665600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18662400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}\right)^{3/2}\right)+$$

$$\left(\frac{9331200\,c^2}{(4\pi-\theta)^2}+\frac{9331200\,c^2\,\theta}{(4\pi-\theta)^3}-\frac{1}{4\pi^2}\left(\frac{37324800\,c^2\,\pi}{4\pi-\theta}+\frac{74649600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}-\right.\right.$$

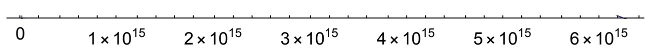
$$\left.\left.\frac{27993600\,c^2\,\theta}{4\pi-\theta}+\frac{37324800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{27993600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\frac{9331200\,c^2\,\theta^3}{(4\pi-\theta)^3}\right)\right)\Big/$$

$$\left.\left(2\sqrt{\frac{4665600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18662400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}}\right)\right)$$

$$\text{Plot}\Big[\frac{1}{1080}\pi\left(-\left(\frac{4\,665\,600\,c^2}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}\right)^2\Bigg/\left(4\left(\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}\right)^{3/2}\right)+\left(\frac{9\,331\,200\,c^2}{(4\pi-\theta)^2}+\frac{9\,331\,200\,c^2\,\theta}{(4\pi-\theta)^3}-\frac{1}{4\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}\right)\right)\Bigg/\left(2\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}}\right)\right),\ \{\theta,-13,13\}\Big]$$

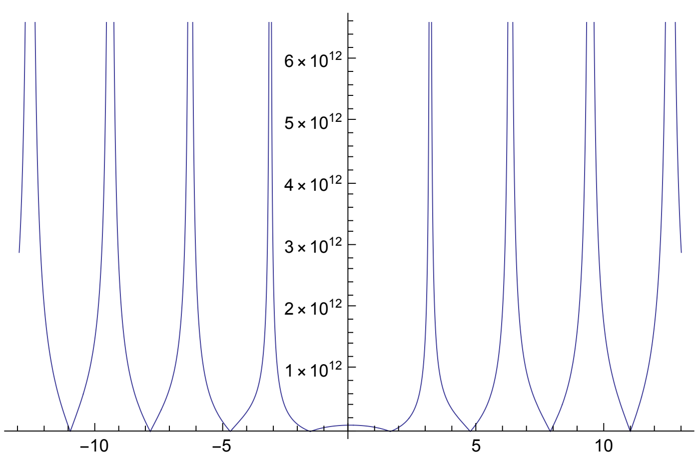


$$\text{PolarPlot}\Big[\frac{1}{1080}\pi\left(-\left(\frac{4\,665\,600\,c^2}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}\right)^2 \Big/ \left(4\left(\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}\right)^{3/2}\right)+\left(\frac{9\,331\,200\,c^2}{(4\pi-\theta)^2}+\frac{9\,331\,200\,c^2\,\theta}{(4\pi-\theta)^3}-\frac{1}{4\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}\right)\right)\Big/\left(2\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}}\right)\right),\ \{\theta,-13,13\}\Big]$$

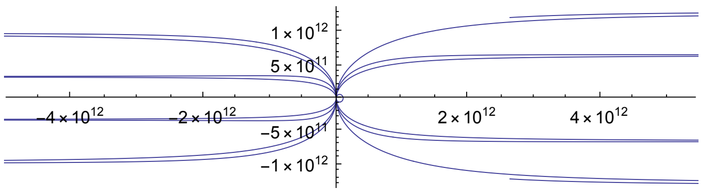


Expression for r_1, no. 2

$$\text{Plot}\Big[\sqrt{\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2},\ \{\theta,-13,13\}\Big]$$



$$\text{PolarPlot}\left[\sqrt{\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2},\ \{\theta, -13, 13\}\right]$$



First and Second derivatives of expression for r_1, no. 2

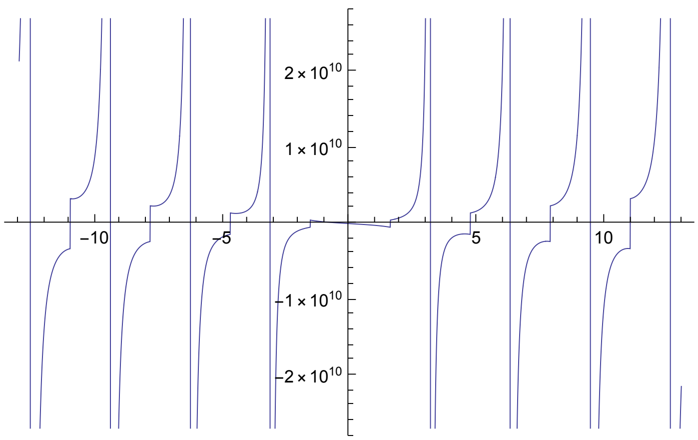
$$\frac{1}{1080}\pi$$

$$\text{D}\left[\sqrt{\left(\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2\right)},\ \theta\right]$$

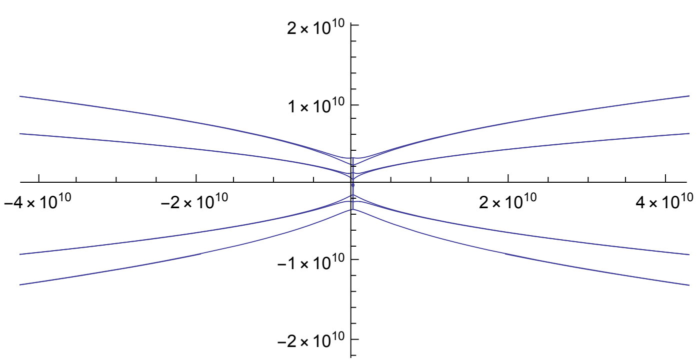
$$\left(\pi\left(-\frac{\frac{37\,324\,800\, c^2\, \pi\, \theta}{4\pi-\theta}+\frac{18\,662\,400\, c^2\, \pi\, \theta^2}{(4\pi-\theta)^2}-\frac{13\,996\,800\, c^2\, \theta^2}{4\pi-\theta}-\frac{4\,665\,600\, c^2\, \theta^3}{(4\pi-\theta)^2}}{4\pi^2}+\frac{2\,332\,800\, c^2\, \theta\, \text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\, c^2\, \theta^2\, \text{Cot}[\theta]\, \text{Csc}[\theta]^2}{\pi^2}\right)\right)\Bigg/$$

$$\left(2160\sqrt{-\frac{\frac{18\,662\,400\, c^2\, \pi\, \theta^2}{4\pi-\theta}-\frac{4\,665\,600\, c^2\, \theta^3}{4\pi-\theta}}{4\pi^2}+\frac{1\,166\,400\, c^2\, \theta^2\, \text{Csc}[\theta]^2}{\pi^2}}\right)$$

$$\text{Plot}\left[\left(\pi\left(-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}+\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\Big/\left(2160\,\sqrt{-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}}\right),\ \{\theta,\,-13,\,13\}\right]$$



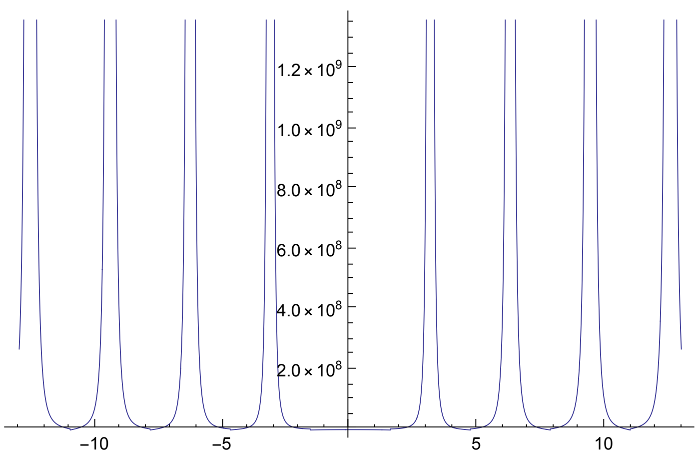
$$\text{PolarPlot}\left[\left(\pi\left(-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}+\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\Big/\left(2160\,\sqrt{-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}}\right),\ \{\theta,\,-13,\,13\}\right]$$



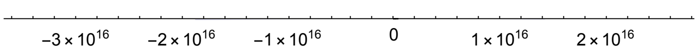
$$\frac{1}{1080}\pi\,D\Big[\frac{1}{1080}\pi\,D\Big[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,Csc[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2\right)},\theta\Big],\theta\Big]$$

$$\frac{1}{1080}\pi\left(-\left(\pi\left(-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}+\frac{2\,332\,800\,c^2\,\theta\,Csc[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,Cot[\theta]\,Csc[\theta]^2}{\pi^2}\right)^2\right)\Big/\left(4320\left(-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,Csc[\theta]^2}{\pi^2}\right)^{3/2}\right)+\left(\pi\left(-\frac{1}{4\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}\right)+\frac{2\,332\,800\,c^2\,Csc[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,Cot[\theta]\,Csc[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,Cot[\theta]^2\,Csc[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,Csc[\theta]^4}{\pi^2}\right)\right)\Big/\left(2160\sqrt{-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,Csc[\theta]^2}{\pi^2}}\right)\right)$$

$$\text{Plot}\Bigg[\frac{1}{1080}\pi\left(-\left(\pi\left(-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}}{4\,\pi^2}+\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)^2\right)\Bigg/\left(4320\left(-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}\right)^{3/2}\right)+\left(\pi\left(-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}\right)+\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}\right)\right)\Bigg/\left(2160\sqrt{-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}}{4\,\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}}\right)\right),\ \{\theta,-13,13\}\Bigg]$$

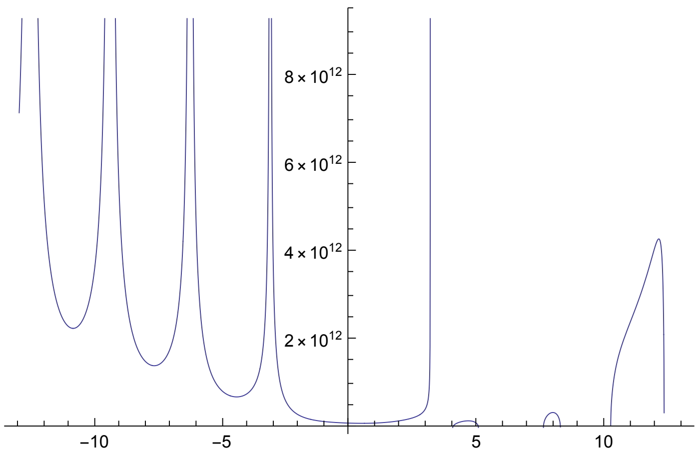


$$
\begin{aligned}
&\text{PolarPlot}\Big[\frac{1}{1080}\pi \\
&\quad\Bigg(-\Bigg(\pi\Bigg(-\frac{\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}}{4\pi^2}+\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}- \\
&\qquad\qquad\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)^2\Bigg)\Big/ \\
&\qquad\Bigg(4320\Bigg(-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)^{3/2}\Bigg)+ \\
&\qquad\Bigg(\pi\Bigg(-\frac{1}{4\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}+ \\
&\qquad\qquad\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}\Bigg)+ \\
&\qquad\quad\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+ \\
&\qquad\quad\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Big/ \\
&\qquad\Bigg(2160\sqrt{-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}}{4\pi^2}+\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}}\Bigg)\Bigg),\ \{\theta,-13,13\}\Big]
\end{aligned}
$$

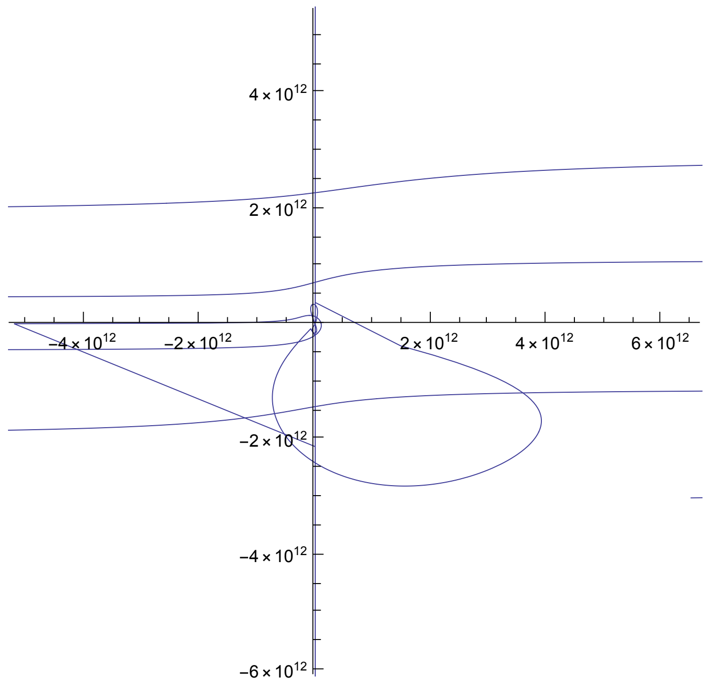


Expression for r_1, no. 3

$$\text{Plot}\left[\sqrt{\left|\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right|},\ \{\theta,\ -13,\ 13\}\right]$$



$$\text{PolarPlot}\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\ -13,\ 13\}\right]$$

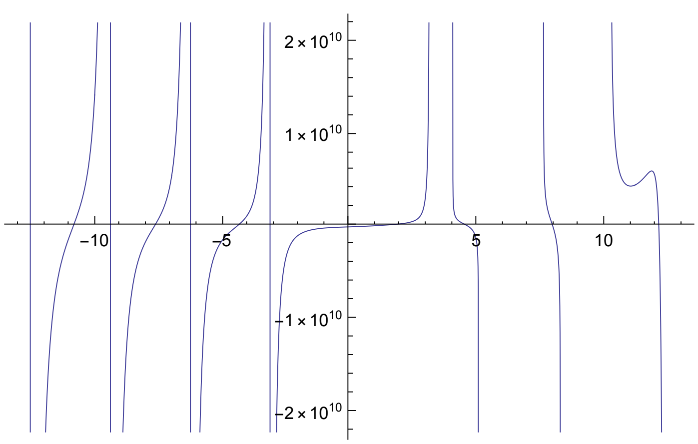


First and Second derivatives of expression for r_1, no. 3

$$\frac{1}{1080}\pi\, D\left[\sqrt{\left(\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \mathrm{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\pi\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \mathrm{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 \theta - \left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2 \theta^2}}{2\pi}\right)^2\right)},\ \theta\right]$$

$$\left(\pi\left(\frac{2\,332\,800\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{13\,996\,800\, c^2\, \theta^2}{4\pi-\theta} - \frac{4\,665\,600\, c^2\, \theta^3}{(4\pi-\theta)^2} + \frac{13\,996\,800\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi} - \frac{9\,331\,200\, c^2\, \theta^3\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi}}{4\pi^2}\right)\right) \Big/ \left(2160\sqrt{\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{4\,665\,600\, c^2\, \theta^3}{4\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right)$$

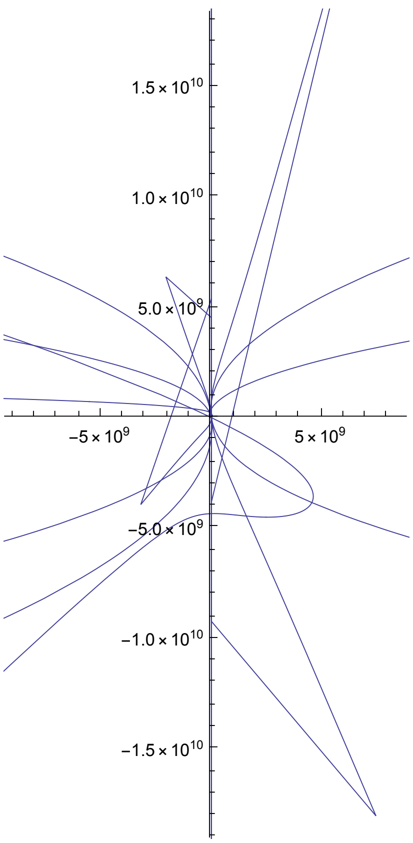
$$\mathrm{Plot}\left[\left(\pi\left(\frac{2\,332\,800\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{1}{4\pi^2}\left(-\frac{13\,996\,800\, c^2\, \theta^2}{4\pi-\theta} - \frac{4\,665\,600\, c^2\, \theta^3}{(4\pi-\theta)^2} + \frac{13\,996\,800\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi} - \frac{9\,331\,200\, c^2\, \theta^3\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi}\right)\right)\right) \Big/ \left(2160\sqrt{\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{4\,665\,600\, c^2\, \theta^3}{4\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right),\ \{\theta,\ -13,\ 13\}\right]$$



```
PolarPlot[
```

$$\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}\right)\right)\right)\Big/$$

$$\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\ \{\theta,\ -13,\ 13\}]$$

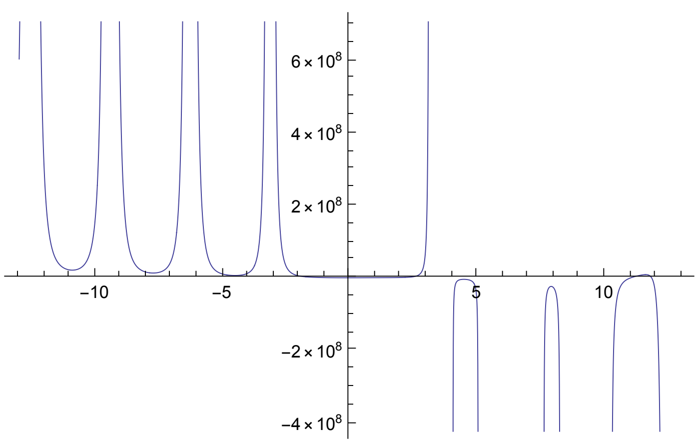


$$\frac{1}{1080}\pi\, \mathrm{D}\Big[\Big(\pi\Big(\frac{2\,332\,800\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{1}{4\,\pi^2}\Big(-\frac{13\,996\,800\, c^2\, \theta^2}{4\,\pi - \theta} - \frac{4\,665\,600\, c^2\, \theta^3}{(4\,\pi - \theta)^2} + \frac{13\,996\,800\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi} - \frac{9\,331\,200\, c^2\, \theta^3\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi}\Big)\Big)\Big) \Big/ \left(2160\sqrt{\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{4\,665\,600\, c^2\, \theta^3}{4\,\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right), \theta\Big]$$

$$\frac{1}{1080}\pi\Bigg(-\Big(\pi\Big(\frac{2\,332\,800\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{1}{4\,\pi^2}\Big(-\frac{13\,996\,800\, c^2\, \theta^2}{4\,\pi - \theta} - \frac{4\,665\,600\, c^2\, \theta^3}{(4\,\pi - \theta)^2} + \frac{13\,996\,800\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi} - \frac{9\,331\,200\, c^2\, \theta^3\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi}\Big)\Big)\Big)^2 \Big/ \left(4320\left(\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{4\,665\,600\, c^2\, \theta^3}{4\,\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}\right)^{3/2}\right) +$$

$$\Big(\pi\Big(\frac{2\,332\,800\, c^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{9\,331\,200\, c^2\, \theta\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} + \frac{4\,665\,600\, c^2\, \theta^2\, \mathrm{Cot}[\theta]^2\, \mathrm{Csc}[\theta]^2}{\pi^2} + \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^4}{\pi^2} - \frac{1}{4\,\pi^2}\Big(-\frac{27\,993\,600\, c^2\, \theta}{4\,\pi - \theta} - \frac{27\,993\,600\, c^2\, \theta^2}{(4\,\pi - \theta)^2} - \frac{9\,331\,200\, c^2\, \theta^3}{(4\,\pi - \theta)^3} + \frac{27\,993\,600\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi} - \frac{55\,987\,200\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi} + \frac{18\,662\,400\, c^2\, \theta^3\, \mathrm{Cot}[\theta]^2\, \mathrm{Csc}[\theta]^2}{\pi} + \frac{9\,331\,200\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^4}{\pi}\Big)\Big)\Big) \Big/ \left(2160\sqrt{\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{-\frac{4\,665\,600\, c^2\, \theta^3}{4\,\pi-\theta} + \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right)\Bigg)$$

$$\text{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Bigg)\Bigg)\Bigg)^2\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}\right)^{3/2}\right)+\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Bigg]$$

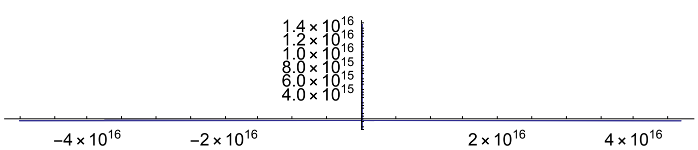


$$\text{PolarPlot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Bigg)\Bigg)^2\Bigg)\Bigg/$$

$$\Bigg(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}\right)^{3/2}\Bigg)+$$

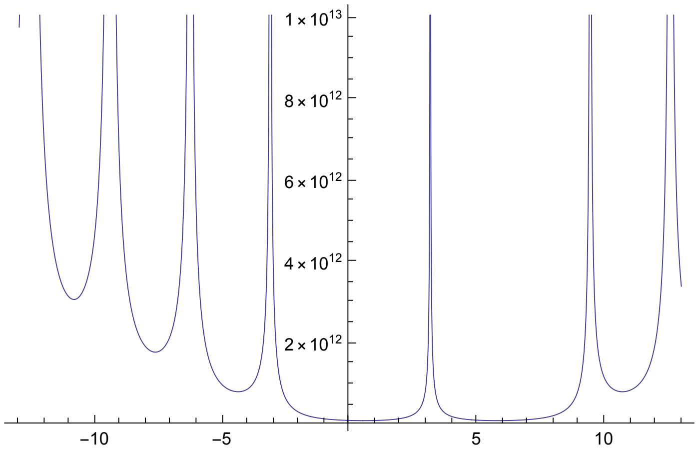
$$\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\Bigg)\Bigg),\ \{\theta,-13,13\}\Bigg]$$

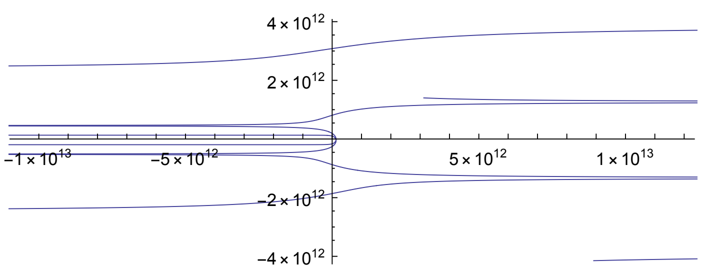


Expression for r_1, no. 4

$$\text{Plot}\left[\sqrt{\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2},\ \{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\sqrt{\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2},\ \{\theta,-13,13\}\right]$$



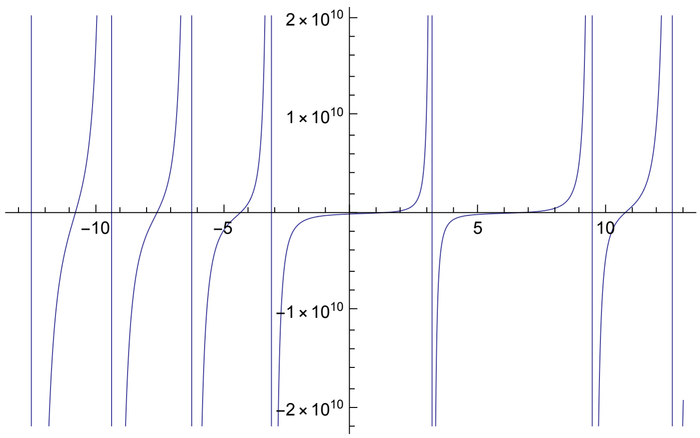
First and Second derivatives of expression for r_1, no. 4

$$\frac{1}{1080}\pi\,D\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2\right)},\,\theta\right]$$

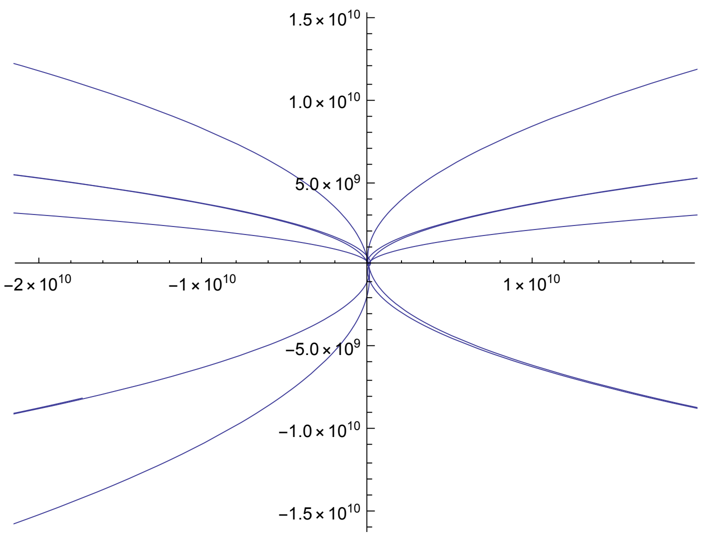
$$\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\pi^2}\left(\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/$$

$$\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\pi^2}}\right)$$

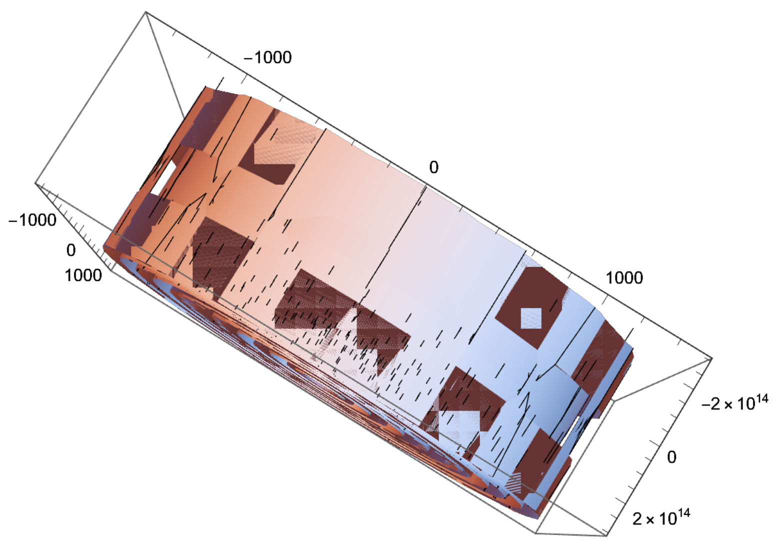
$$\text{Plot}\Big[\Big(\pi\Big(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Big(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Big)\Big)\Big)\Big/\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\{\theta,-13,13\}\Big]$$



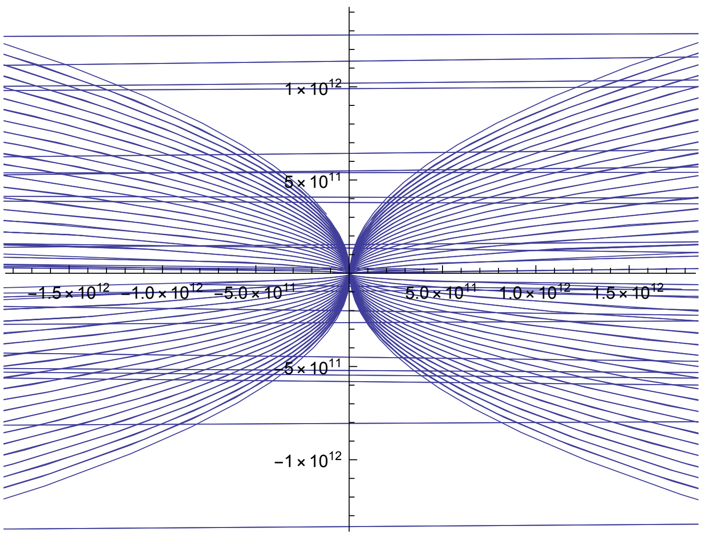
$$\text{PolarPlot}\Big[\Big(\pi\Big(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Big(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Big)\Big)\Big)\Big/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\{\theta,-13,13\}\Big]$$



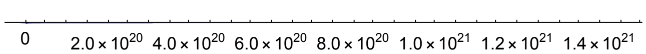
$$\text{RevolutionPlot3D}\Big[\Big(\pi\Big(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Big(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Big)\Big)\Big)\Big/\Big(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Big),\{\theta,-480\,\pi,480\,\pi\}\Big]$$



$$\text{PolarPlot}\left[\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\{\theta,-130,130\}\right]$$



$$\text{PolarPlot}\left[\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\{\theta,-1300,1300\}\right]$$



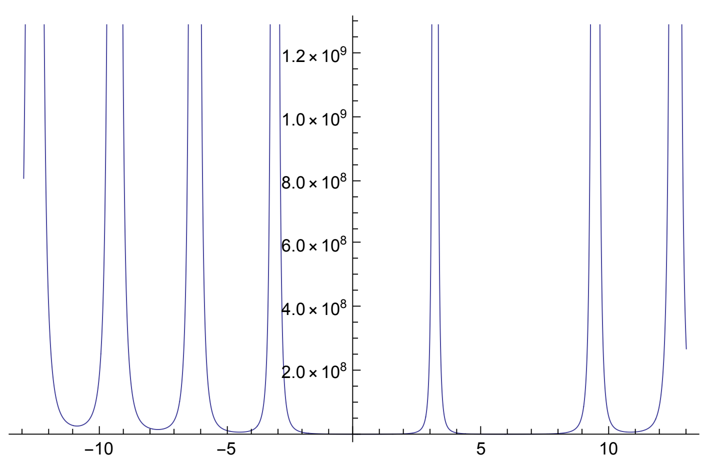
$$\frac{1}{1080}\pi\,\mathrm{D}\left[\frac{1}{1080}\pi\,\mathrm{D}\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2\right)},\theta\right],\theta\right]$$

$$\frac{1}{1080}\pi\left(-\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\pi^2}\left(\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)^2\right)\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\pi^2}\right)^{3/2}\right)+\left(\pi\left(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\pi^2}\left(\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\right)\right)\right)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\pi^2}}\right)\right)$$

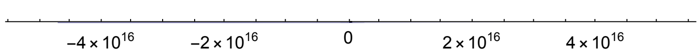
$$\text{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\pi^2}\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)^2\Bigg)\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\pi^2}\right)^{3/2}\right)+$$

$$\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\pi^2}\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Bigg]$$



$$
\begin{aligned}
&\text{PolarPlot}\Bigg[\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/\\
&\quad\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\\
&\quad\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\\
&\qquad\frac{1}{4\,\pi^2}\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\quad\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\\
&\quad\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Bigg]
\end{aligned}
$$

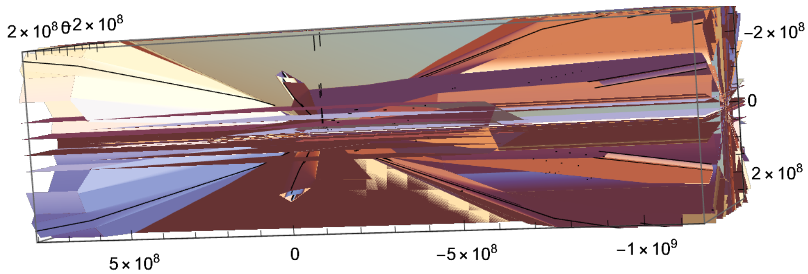


$$2\,\pi\left(1-\sqrt{1-\text{Sin}[\beta]^2}\right)$$

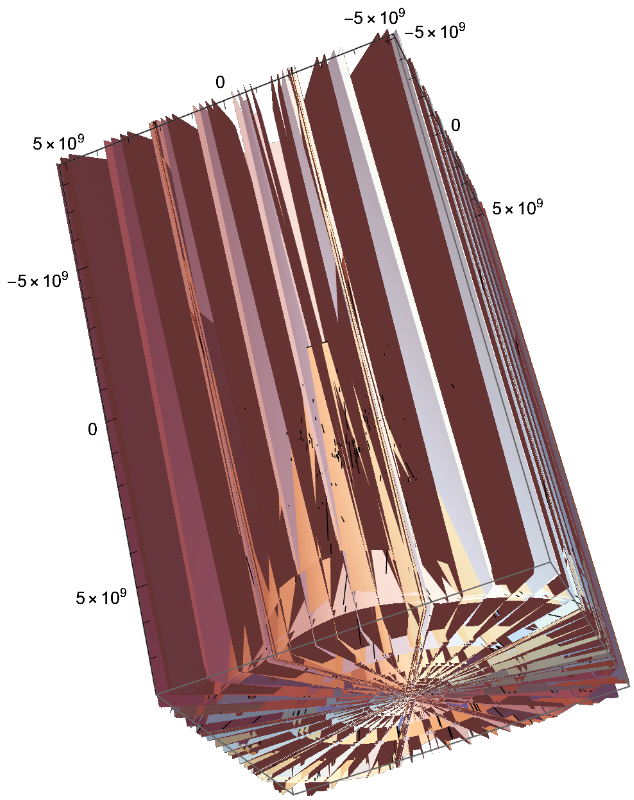
SphericalPlot3D$\Big[$

$$
\begin{aligned}
&\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,2\,\pi\left(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\right)\mathrm{Csc}\left[2\,\pi\left(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\right)\right]^2}{\pi^2}-\\
&\quad\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\left(\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}-\right.\\
&\qquad\left.\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)^2\Bigg)\Bigg)\Bigg/\\
&\quad\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\\
&\quad\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}-\\
&\qquad\frac{1}{4\,\pi^2}\left(\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\right.\\
&\qquad\quad\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\left.\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\right)\Bigg)\Bigg)\Bigg/\\
&\quad\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),
\end{aligned}
$$

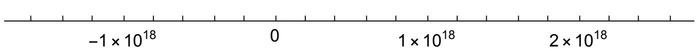
$\{\theta, -4\,\pi, 4\,\pi\}, \{\beta, -2$
$\pi, 2$
$\pi\}\Big]$



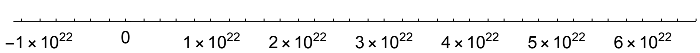
$$
\begin{aligned}
&\mathtt{SphericalPlot3D}\Big[\\
&\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,2\,\pi\left(1-\sqrt{1-\mathrm{Sin}[\beta]^2}\right)\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\Bigg)^2\Bigg)\Bigg)\Big/\\
&\Bigg(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\Bigg)+\\
&\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\quad\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\quad\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\\
&\quad\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Big/\\
&\Bigg(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Bigg)\Bigg),\\
&\{\theta,-130,130\},\{\beta,\\
&\ -\pi,\\
&\ \pi\}\Big]
\end{aligned}
$$


−5 × 10^9
−5 × 10^9
0
0
5 × 10^9
5 × 10^9
−5 × 10^9
0
5 × 10^9

$$
\begin{aligned}
&\texttt{PolarPlot}\Big[\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\texttt{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\,\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\texttt{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\texttt{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\frac{9\,331\,200\,c^2\,\theta^3\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/\\
&\quad\Bigg(4320\,\Bigg(\frac{1\,166\,400\,c^2\,\theta^2\,\texttt{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\texttt{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\texttt{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\Bigg)^{3/2}\Bigg)+\\
&\quad\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\texttt{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\texttt{Cot}[\theta]^2\,\texttt{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\texttt{Csc}[\theta]^4}{\pi^2}-\\
&\qquad\frac{1}{4\,\pi^2}\,\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\texttt{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\texttt{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\quad\frac{55\,987\,200\,c^2\,\theta^2\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{18\,662\,400\,c^2\,\theta^3\,\texttt{Cot}[\theta]^2\,\texttt{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\texttt{Cot}[\theta]^2\,\texttt{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{9\,331\,200\,c^2\,\theta^3\,\texttt{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\texttt{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(2160\\
&\quad\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\texttt{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\texttt{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\texttt{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Bigg)\Bigg),\ \{\theta,\,-130,\,130\}\Big]
\end{aligned}
$$

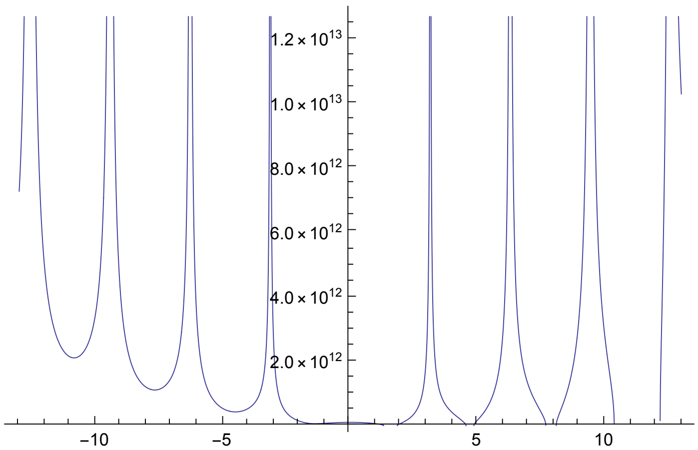


$$
\begin{aligned}
&\text{PolarPlot}\Bigg[\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\Bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg)\Big/\\
&\quad\Bigg(4320\,\Bigg(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\Bigg)^{3/2}\Bigg)+\\
&\quad\Bigg(\pi\,\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\\
&\qquad\frac{1}{4\,\pi^2}\Bigg(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\quad\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Big/\\
&\quad\Bigg(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Bigg)\Bigg),\\
&\{\theta,-1300,1300\}\Bigg]
\end{aligned}
$$

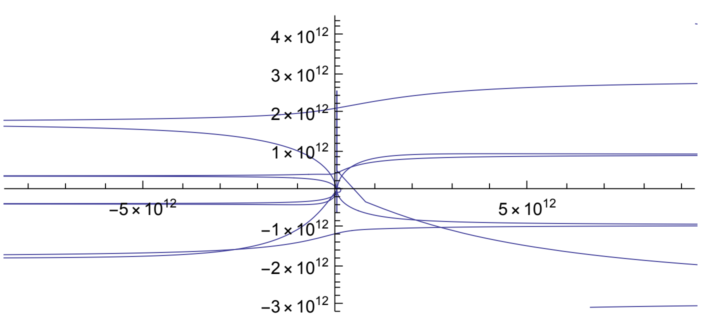


Expression for r_1, no. 5

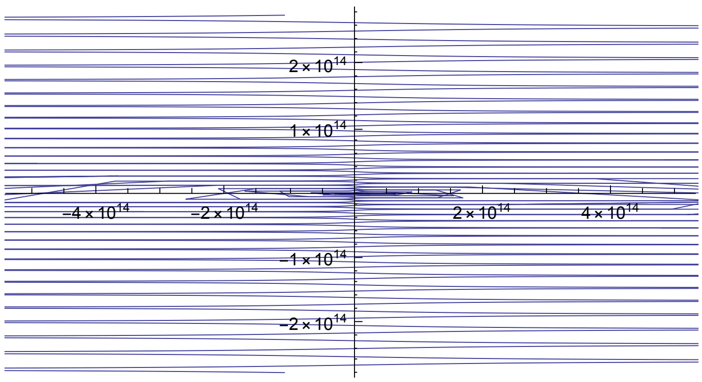
$$\text{Plot}\left[\sqrt{\left(\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\pi\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2 \theta - \left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 \theta^2}}{2\pi}\right)^2\right)}, \{\theta, -13, 13\}\right]$$



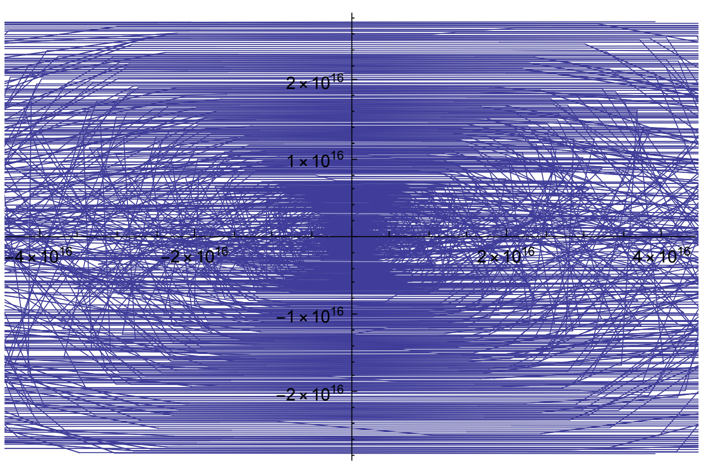
$$\text{PolarPlot}\left[\sqrt{\left(\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\pi\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2 \theta - \left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 \theta^2}}{2\pi}\right)^2\right)}, \{\theta, -13, 13\}\right]$$



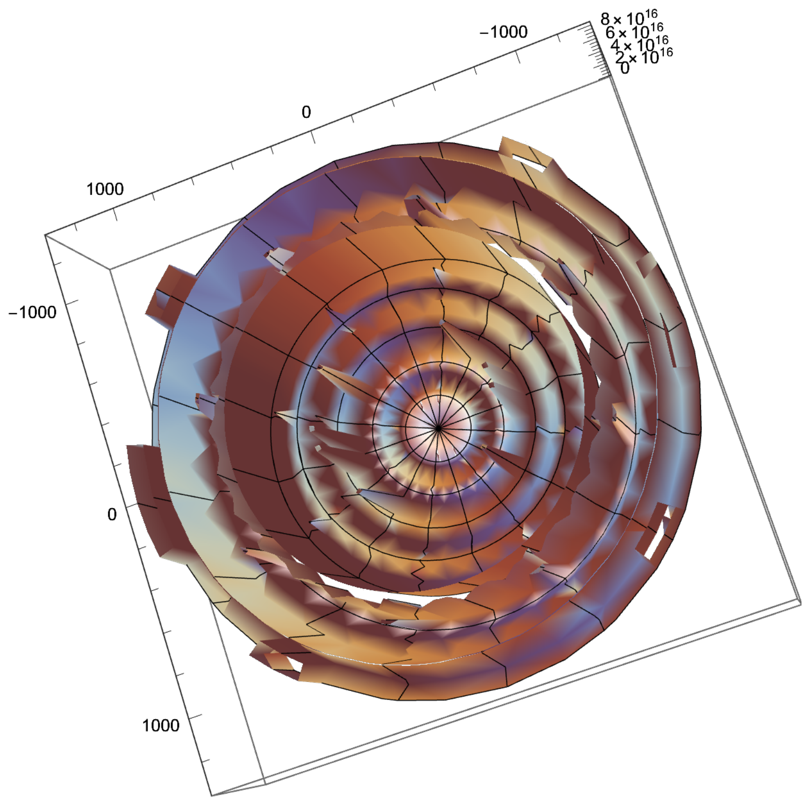
$$\texttt{PolarPlot}\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\,-130,\,130\}\right]$$



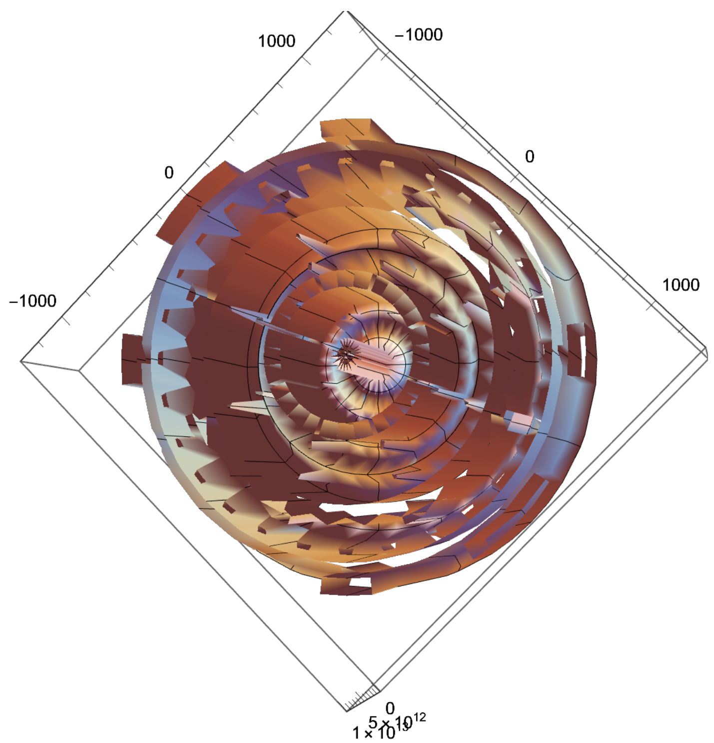
$$\texttt{PolarPlot}\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\,-1300,\,1300\}\right]$$



$$\text{RevolutionPlot3D}\left[\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\,-1300,\,1300\}\right]$$



$$
\begin{aligned}
&\text{Show}\Big[\\
&\Big\{\text{RevolutionPlot3D}\Big[\frac{1}{1080}\,\pi\,\Bigg(-\Bigg(\pi\,\bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\quad\frac{1}{4\,\pi^2}\bigg(\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\bigg)\bigg)^2\Bigg)\Bigg/\\
&\quad\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\\
&\quad\Bigg(\pi\,\bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\\
&\qquad\frac{1}{4\,\pi^2}\bigg(\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\\
&\qquad\quad\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\\
&\qquad\quad\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\bigg)\bigg)\Bigg)\Bigg/\\
&\quad\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),\\
&\{\theta,-1300,1300\}\Big],\ \text{RevolutionPlot3D}\Big[\\
&\sqrt{\left(\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2-\right.}\\
&\quad\left.\left(\frac{\sqrt{4\,\pi\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right),\ \{\theta,-1300,1300\}\Big]\Big\}\Big]
\end{aligned}
$$



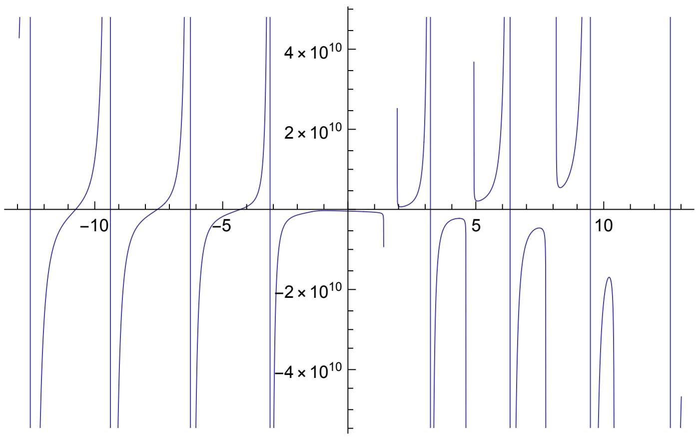
First and Second derivatives of expression for r_1, no. 5

$$\frac{1}{1080}\pi\, D\left[\sqrt{\left(\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \mathrm{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 - \left(\frac{\sqrt{4\pi\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2 \theta - \left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\pi-\theta)\,\theta}\, \mathrm{Csc}[\theta]}{\pi\, \sqrt{4\pi-\theta}}\right)^2 \theta^2}}{2\pi}\right)^2\right)},\ \theta\right]$$

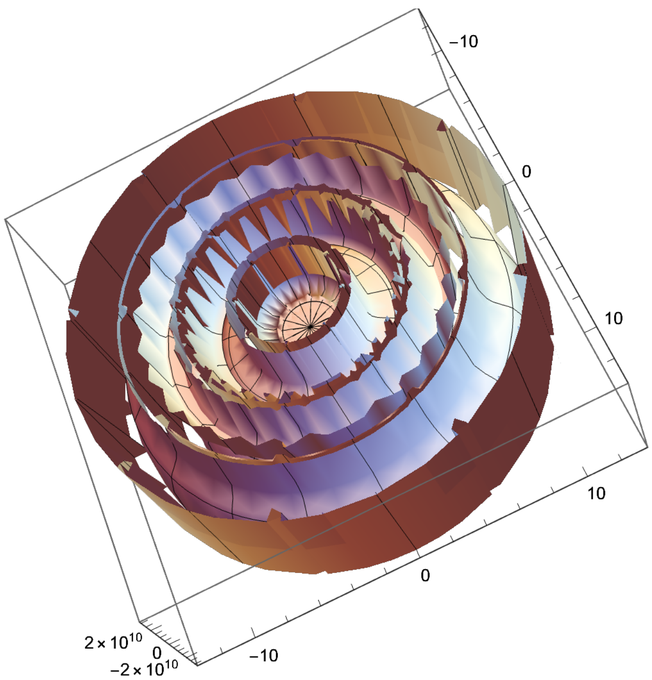
$$\left(\pi\left(\frac{2\,332\,800\, c^2\, \theta\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{2\,332\,800\, c^2\, \theta^2\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{\frac{37\,324\,800\, c^2\, \pi\, \theta}{4\pi-\theta} + \frac{18\,662\,400\, c^2\, \pi\, \theta^2}{(4\pi-\theta)^2} - \frac{4\,665\,600\, c^2\, \theta^3\, \mathrm{Csc}[\theta]^2}{\pi^2} + \frac{2\,332\,800\, c^2\, \theta^4\, \mathrm{Cot}[\theta]\, \mathrm{Csc}[\theta]^2}{\pi^2}}{4\pi^2}\right)\right)\Big/$$

$$\left(2160\sqrt{\frac{1\,166\,400\, c^2\, \theta^2\, \mathrm{Csc}[\theta]^2}{\pi^2} - \frac{\frac{18\,662\,400\, c^2\, \pi\, \theta^2}{4\pi-\theta} - \frac{1\,166\,400\, c^2\, \theta^4\, \mathrm{Csc}[\theta]^2}{\pi^2}}{4\pi^2}}\right)$$

$$\text{Plot}\left[\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\ \{\theta,\ -13,\ 13\}\right]$$

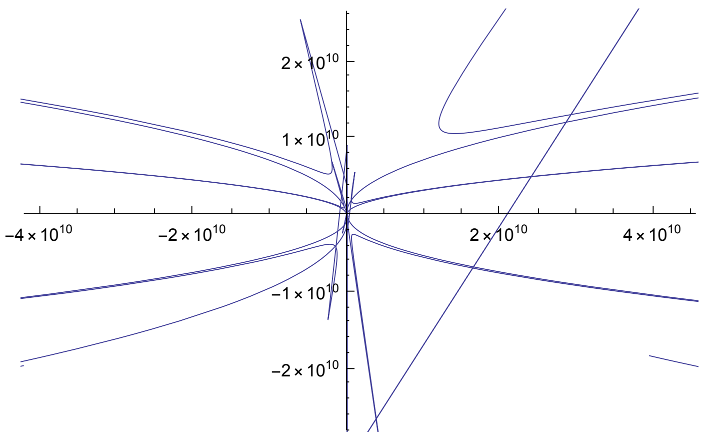


$$\text{RevolutionPlot3D}\Big[\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\ \{\theta,-13,13\}\Big]$$

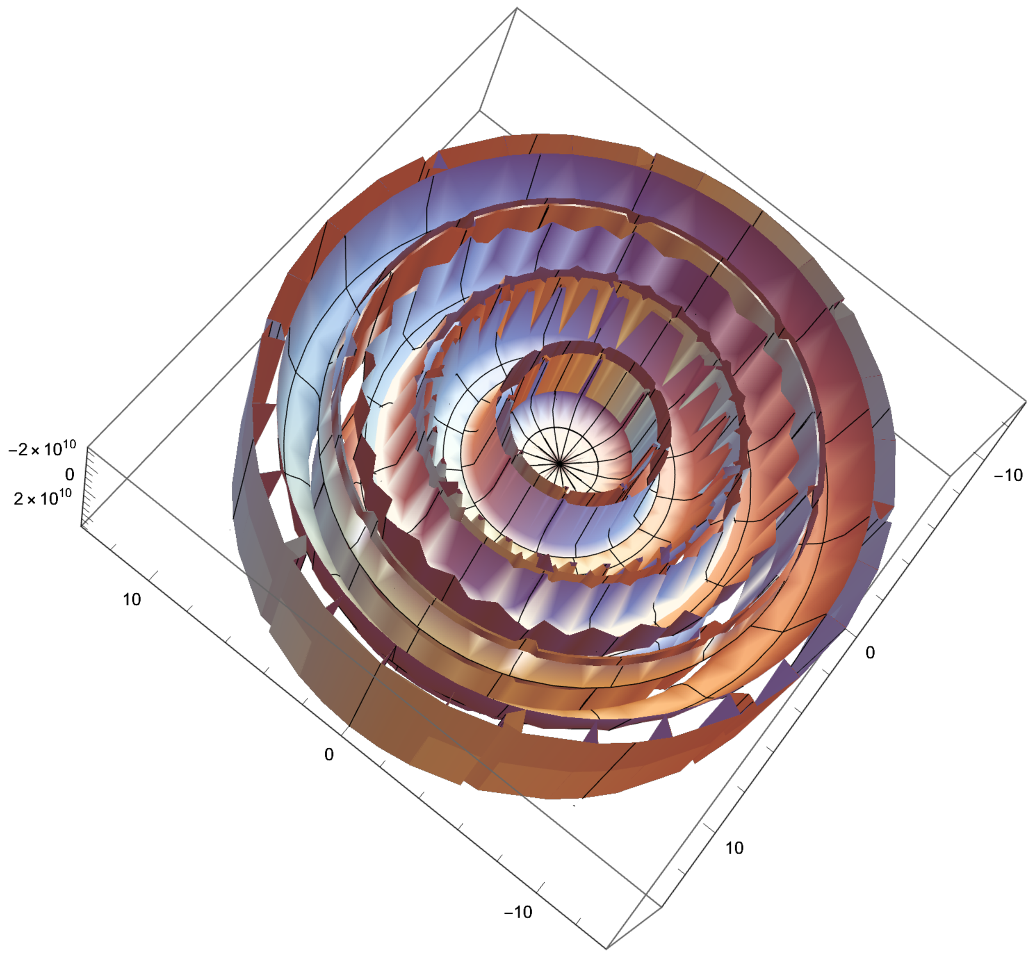


```
PolarPlot[
```

$$\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\ \{\theta,-13,13\}]$$

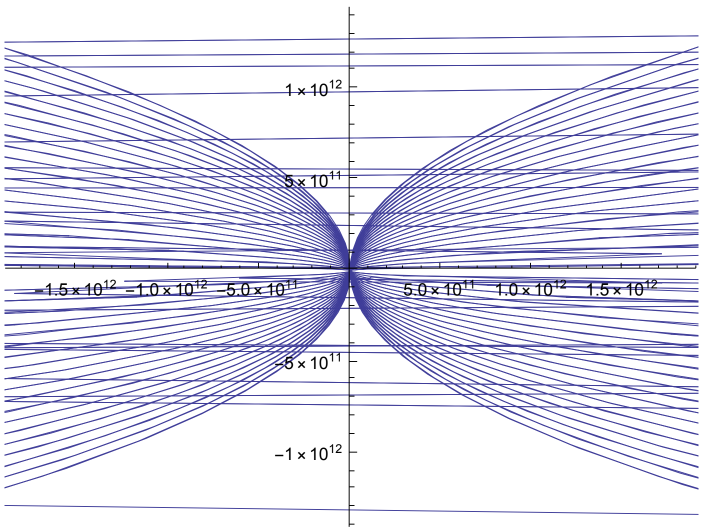


$$\text{RevolutionPlot3D}\Big[\left(\pi\left(\frac{2332800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2332800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37324800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18662400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4665600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2332800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\,\sqrt{\frac{1166400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18662400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1166400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\ \{\theta,-13,13\}\Big]$$

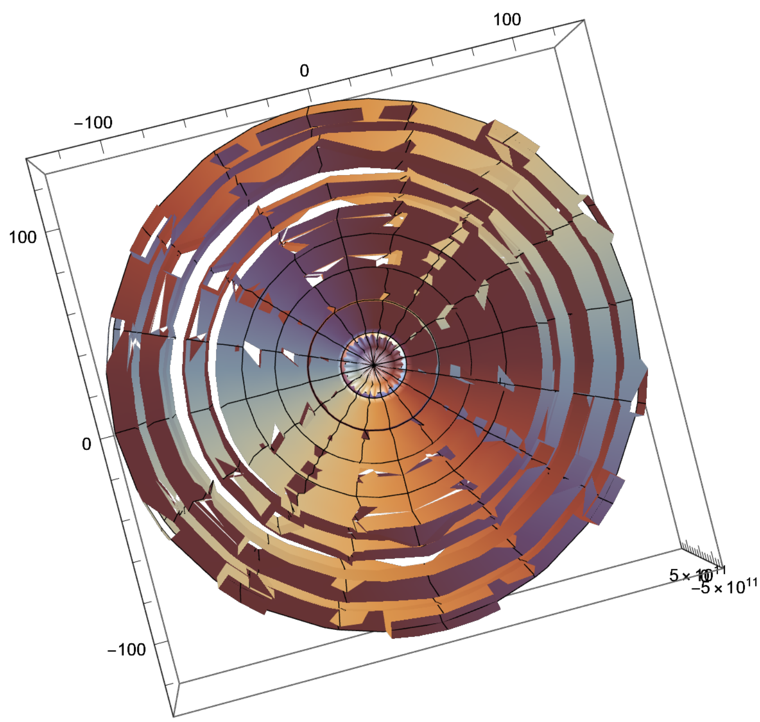


PolarPlot[

$$\left(\pi\left(\frac{2\,332\,800\, c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\, c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\, c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\, c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\, c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\, c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\sqrt{\frac{1\,166\,400\, c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\, c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\, c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right), \{\theta, -130, 130\}]$$



$$\text{RevolutionPlot3D}\Big[\left(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\right)\right)\right)\Big/\left(2160\,\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\{\theta,-130,130\}\Big]$$

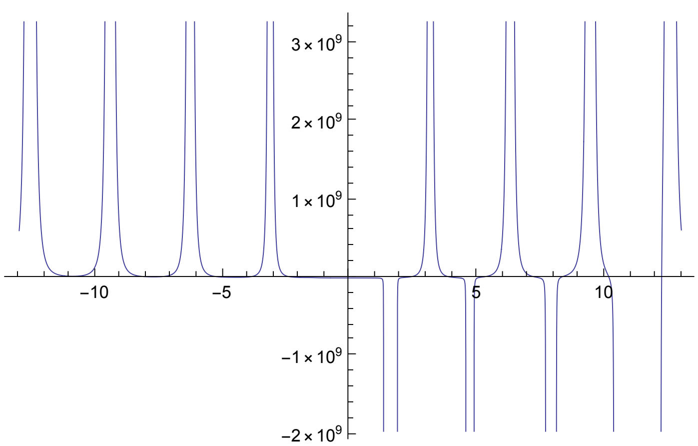


$$\frac{1}{1080}\pi\,\mathrm{D}\Bigg[\Bigg(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)\Bigg)\Big/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right),\theta\Bigg]$$

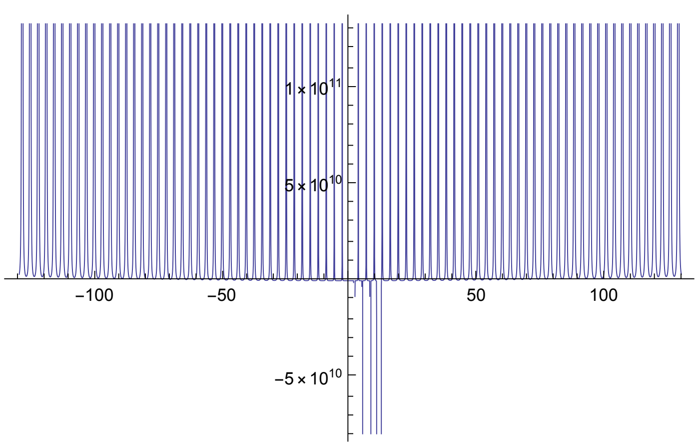
$$\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\left(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\left(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\right)\right)\Bigg)^2\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+$$

$$\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg)$$

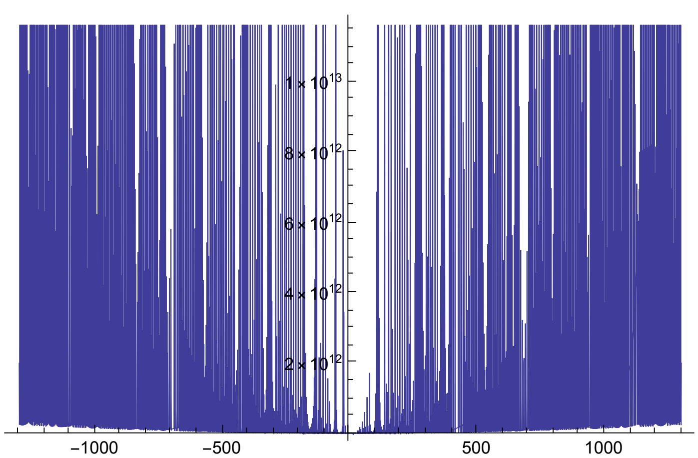
$$\text{Plot}\Big[\frac{1}{1080}\pi\Bigg(-\bigg(\pi\bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\bigg)\bigg)\bigg)^2\bigg)\Big/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\bigg(\pi\bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\bigg)\bigg)\bigg)\Big/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Big]$$



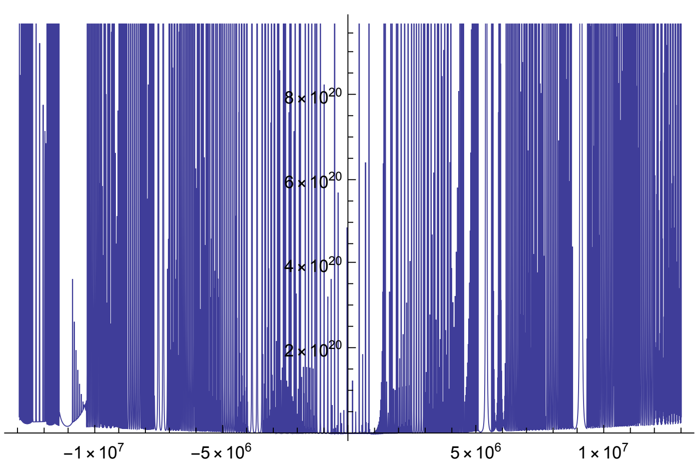
$$
\begin{aligned}
\text{Plot}\Bigg[&\frac{1}{1080}\pi \\
&\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\pi-\theta}+ \\
&\qquad\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+ \\
&\qquad\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg/ \\
&\Bigg(4320\Bigg(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\pi^2}\Bigg)^{3/2}\Bigg)+ \\
&\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+ \\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}- \\
&\qquad\frac{1}{4\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\pi-\theta)^3}- \\
&\qquad\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}- \\
&\qquad\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/ \\
&\Bigg(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\pi^2}}\Bigg)\Bigg),\ \{\theta,-130,130\}\Bigg]
\end{aligned}
$$



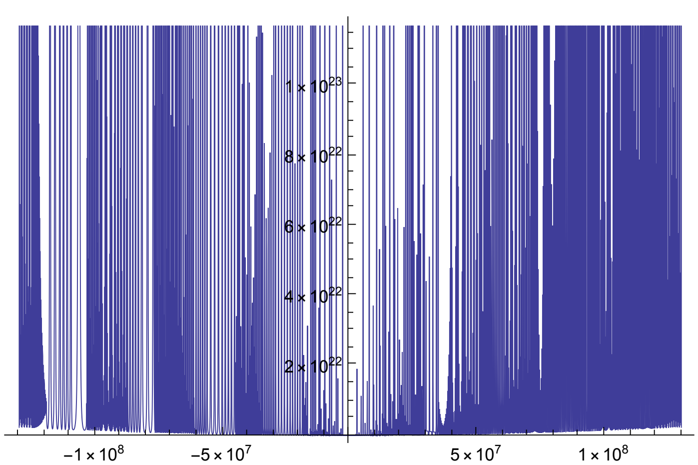
$$\text{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),\{\theta,-1300,1300\}\Bigg]$$



$$
\mathrm{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),
\{\theta,-13\,000\,000,\,13\,000\,000\}\Bigg]
$$

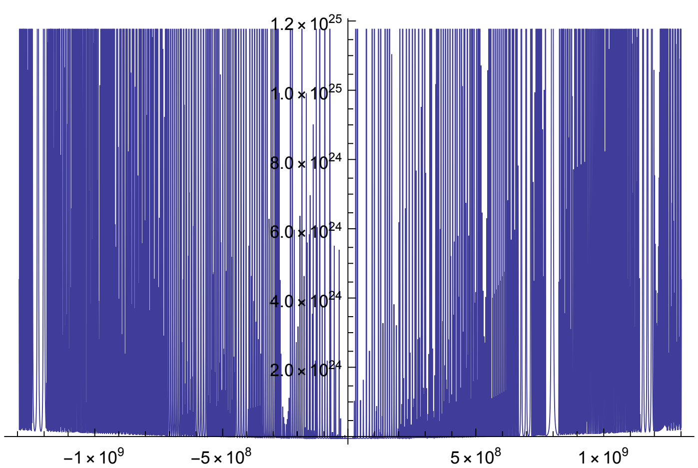


$$\text{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),\ \{\theta,-130\,000\,000,130\,000\,000\}\Bigg]$$

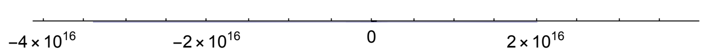


$$\text{Plot}\Big[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)\Bigg)^2\Bigg/\left(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\right)+\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/\left(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\right)\Bigg),$$

$$\{\theta,-1\,300\,000\,000,1\,300\,000\,000\}\Big]$$



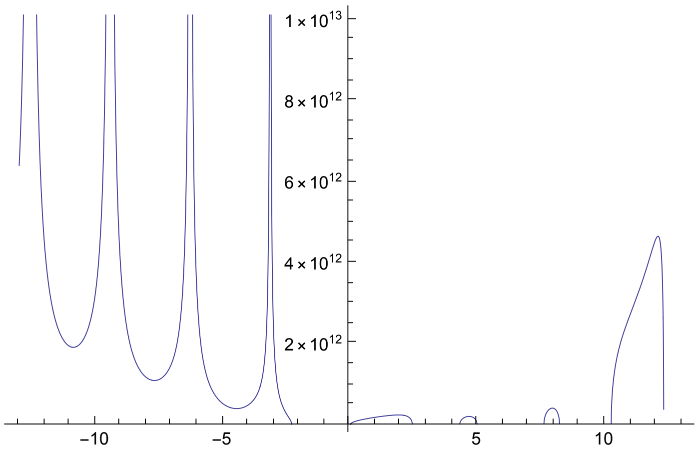
$$
\begin{aligned}
&\texttt{PolarPlot}\Big[\frac{1}{1080}\pi \\
&\Bigg(-\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+ \\
&\qquad\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi^2}+ \\
&\qquad\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}\Bigg)\Bigg)^2\Bigg)\Bigg/ \\
&\quad\Bigg(4320\left(\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\right)^{3/2}\Bigg)+ \\
&\quad\Bigg(\pi\Bigg(\frac{2\,332\,800\,c^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}+ \\
&\qquad\frac{4\,665\,600\,c^2\,\theta^2\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^4}{\pi^2}- \\
&\qquad\frac{1}{4\,\pi^2}\Bigg(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}- \\
&\qquad\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi^2}- \\
&\qquad\frac{4\,665\,600\,c^2\,\theta^4\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^4}{\pi^2}\Bigg)\Bigg)\Bigg)\Bigg/ \\
&\quad\Bigg(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\mathrm{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Bigg)\Bigg),\ \{\theta,-13,13\}\Big]
\end{aligned}
$$



$$\text{PolarPlot}\Big[\frac{1}{1080}\pi \Big(-\Big(\pi\Big(\frac{2\,332\,800\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{1}{4\,\pi^2}\Big(\frac{37\,324\,800\,c^2\,\pi\,\theta}{4\,\pi-\theta}+\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^2}-\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^4\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}\Big)\Big)\Big)^2\Big)\Big/\Big(4320\Big(\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}\Big)^{3/2}\Big)+\Big(\pi\Big(\frac{2\,332\,800\,c^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{9\,331\,200\,c^2\,\theta\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}+\frac{4\,665\,600\,c^2\,\theta^2\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{2\,332\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^4}{\pi^2}-\frac{1}{4\,\pi^2}\Big(\frac{37\,324\,800\,c^2\,\pi}{4\,\pi-\theta}+\frac{74\,649\,600\,c^2\,\pi\,\theta}{(4\,\pi-\theta)^2}+\frac{37\,324\,800\,c^2\,\pi\,\theta^2}{(4\,\pi-\theta)^3}-\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}+\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi^2}-\frac{4\,665\,600\,c^2\,\theta^4\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{2\,332\,800\,c^2\,\theta^4\,\text{Csc}[\theta]^4}{\pi^2}\Big)\Big)\Big)\Big/\Big(2160\sqrt{\frac{1\,166\,400\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi^2}-\frac{\frac{18\,662\,400\,c^2\,\pi\,\theta^2}{4\,\pi-\theta}-\frac{1\,166\,400\,c^2\,\theta^4\,\text{Csc}[\theta]^2}{\pi^2}}{4\,\pi^2}}\Big)\Big),\ \{\theta,-130,130\}\Big]$$

Expression for r_1, no. 6

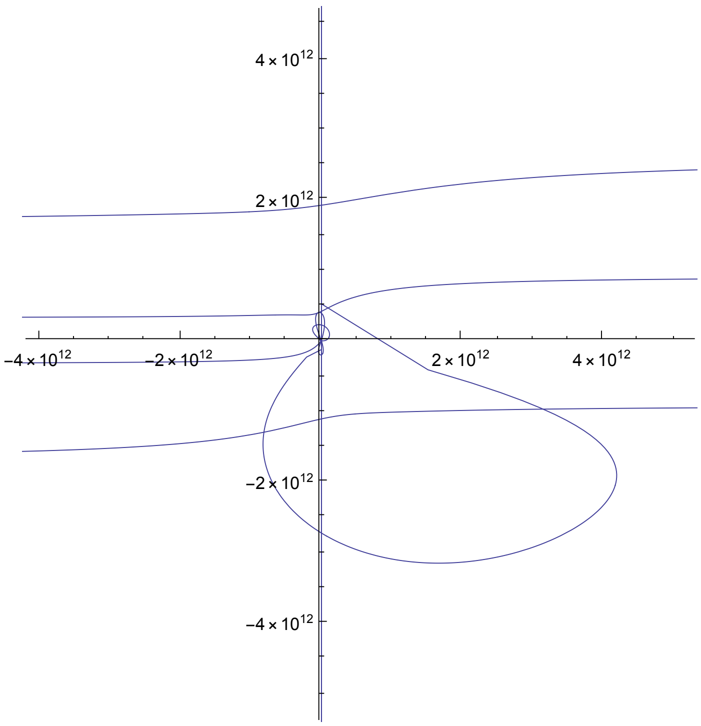
$$\text{Plot}\left[\sqrt{\left(\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\,\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\ -13,\ 13\}\right]$$



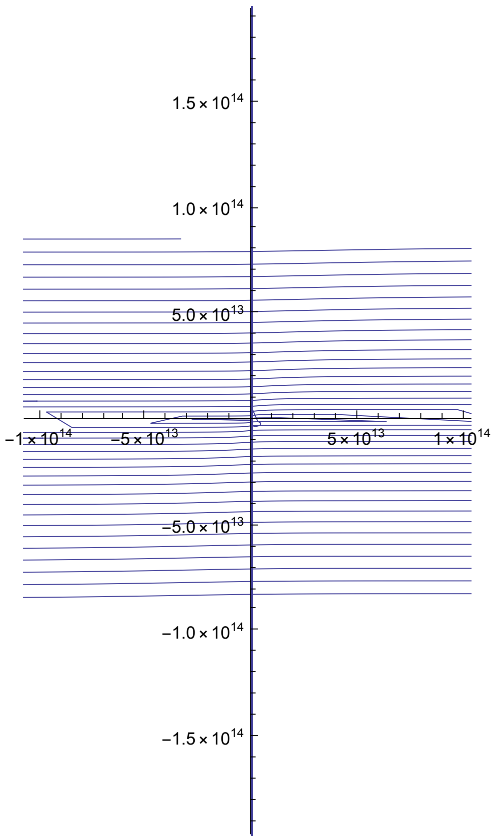
PolarPlot[

$$\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)}$$

, {θ, -13, 13}]

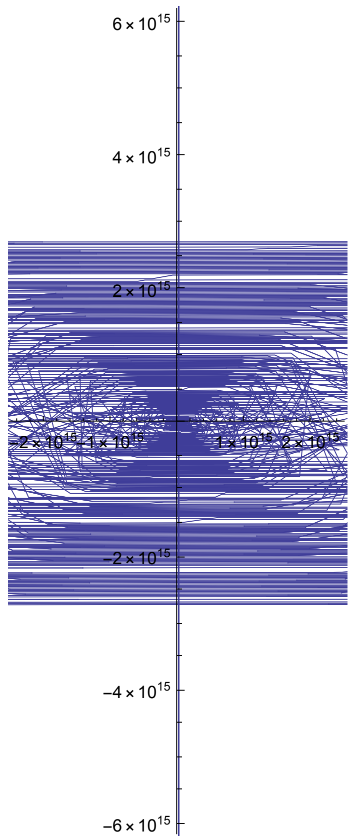


$$\text{PolarPlot}\Big[\sqrt{\left(\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\, c\, \sqrt{\theta}\, \sqrt{(4\,\pi-\theta)\,\theta}\, \text{Csc}[\theta]}{\pi\, \sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\, c\, \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\ \{\theta,\ -130,\ 130\}\Big]$$



$$\text{PolarPlot}\left[\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\right.$$

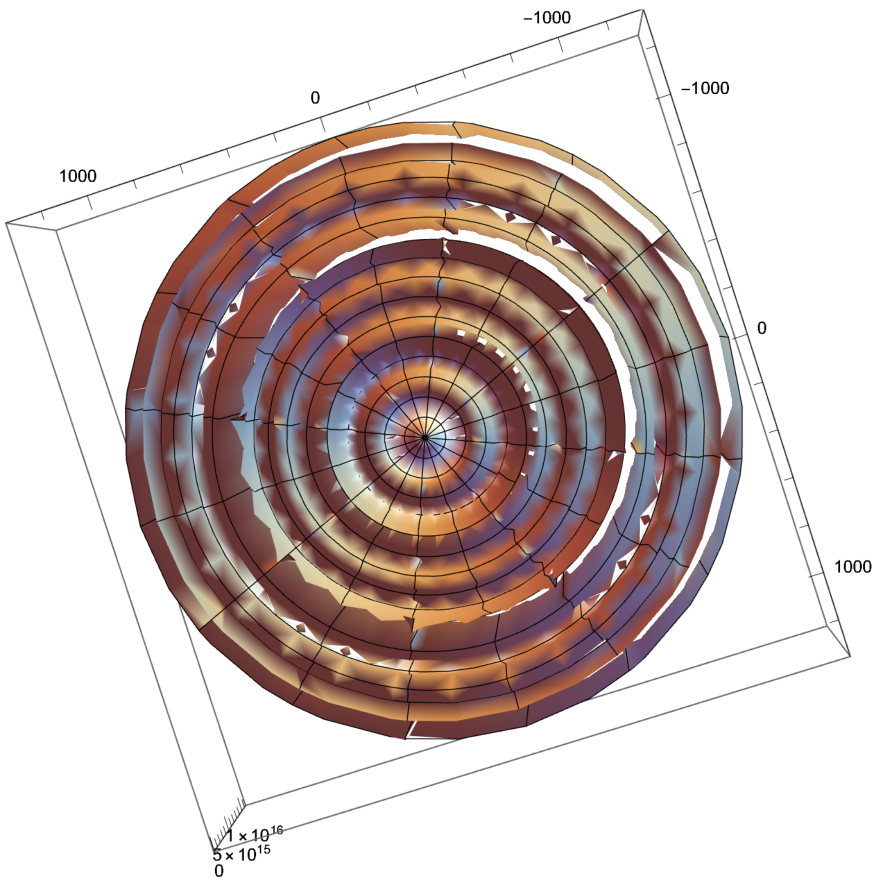
$$\left.\{\theta,-1300,1300\}\right]$$



```
RevolutionPlot3D[
```

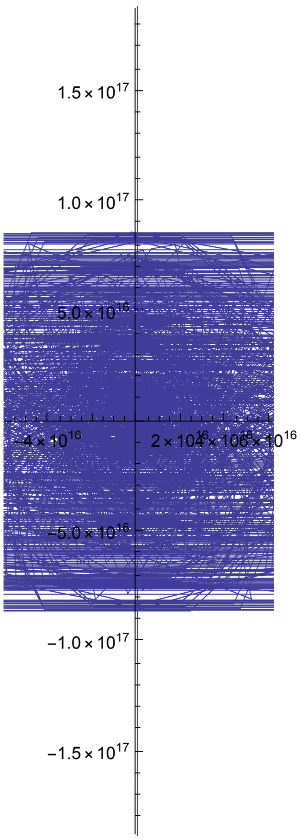
$$\sqrt{\left(\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\,\left(\frac{1080\ c\ \sqrt{\theta}\ \sqrt{(4\,\pi-\theta)\ \theta}\ \mathrm{Csc}[\theta]}{\pi\ \sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},$$

```
{θ, -1300, 1300}]
```



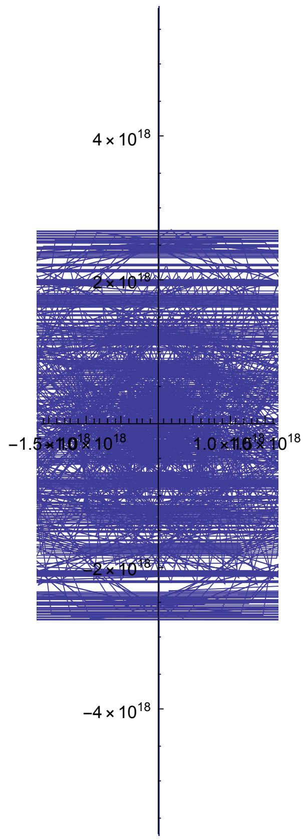
$$\text{PolarPlot}\left[\sqrt{\left(\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\ c\ \sqrt{\theta}\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Csc}[\theta]}{\pi\ \sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\ c\ \sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\right.$$

$$\left.\{\theta,\,-13\,000,\,13\,000\}\right]$$



$$\texttt{PolarPlot}\left[\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\,\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\texttt{Csc}[\theta]}{\pi\,\sqrt{4\,\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\theta^2}}{2\,\pi}\right)^2\right)},\right.$$

$$\left.\{\theta,\,-130\,000,\,130\,000\}\right]$$

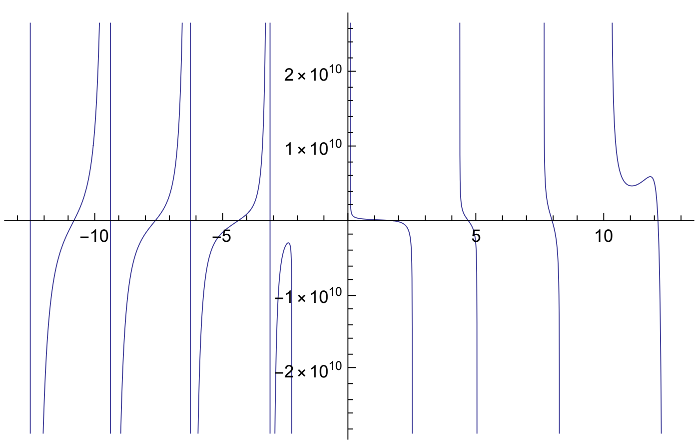


First and Second derivatives of expression for r_1, no. 6

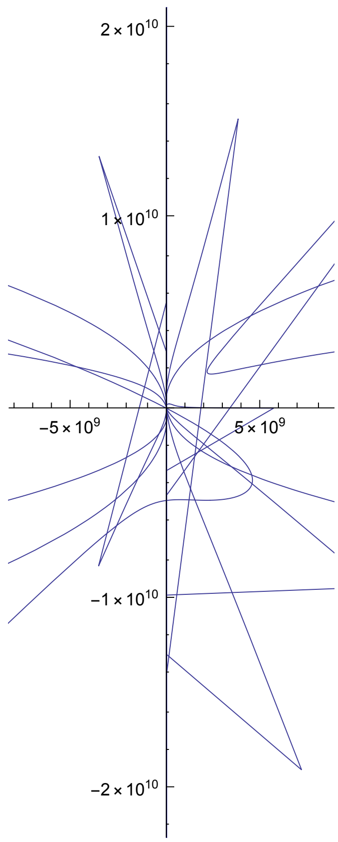
$$\frac{1}{1080}\pi\,D\left[\sqrt{\left(\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2-\left(\frac{\sqrt{4\pi\left(\frac{1080\,c\,\sqrt{\theta}\,\sqrt{(4\pi-\theta)\,\theta}\,\text{Csc}[\theta]}{\pi\,\sqrt{4\pi-\theta}}\right)^2\theta-\left(\frac{2160\,c\,\sqrt{\theta}}{\sqrt{4\pi-\theta}}\right)^2\theta^2}}{2\pi}\right)^2\right)},\theta\right]$$

$$\left(\pi\left(\frac{4665600\,c^2}{4\pi-\theta}+\frac{4665600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{-\frac{13996800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{(4\pi-\theta)^2}+\frac{13996800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9331200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}}{4\pi^2}\right)\right)\Bigg/\left(2160\sqrt{\frac{4665600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4665600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4665600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right)$$

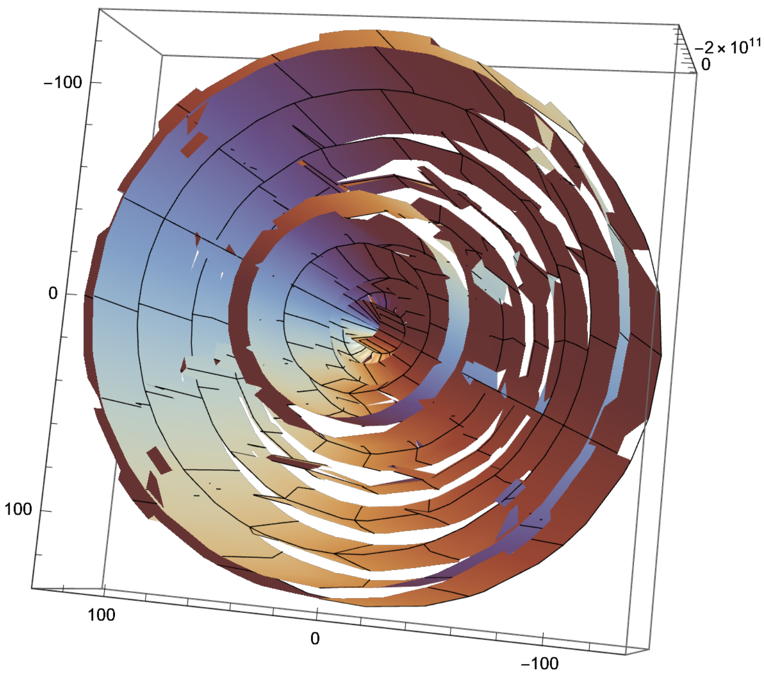
$$\text{Plot}\left[\left(\pi\left(\frac{4665600\,c^2}{4\pi-\theta}+\frac{4665600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{1}{4\pi^2}\left(-\frac{13996800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4665600\,c^2\,\theta^3}{(4\pi-\theta)^2}+\frac{13996800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9331200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\right)\right)\right)\Bigg/\left(2160\sqrt{\frac{4665600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4665600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4665600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right),\{\theta,-13,13\}\right]$$



$$\text{PolarPlot}\left[\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\right)\right)\right)\Big/\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\{\theta,-13,13\}\right]$$

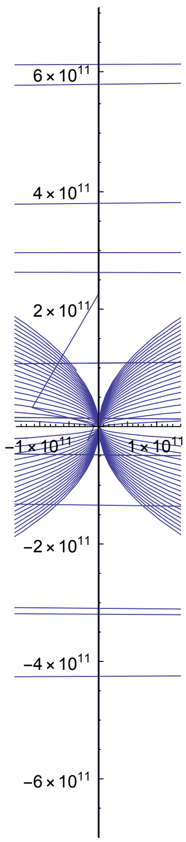


$$\text{RevolutionPlot3D}\left[\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\right)\right)\right)\Big/\left(2160\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\ \{\theta,\ -130,\ 130\}\right]$$

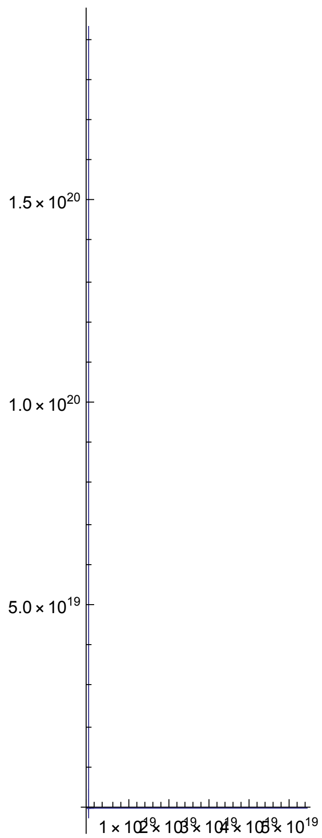


$$\text{PolarPlot}\Big[\Big(\pi\Big(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\Big(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Big)\Big)\Big)\Big/$$

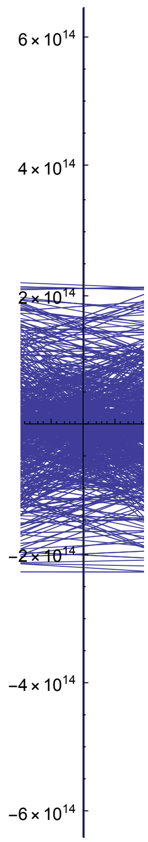
$$\Big(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\Big),\ \{\theta,\ -130,\ 130\}\Big]$$



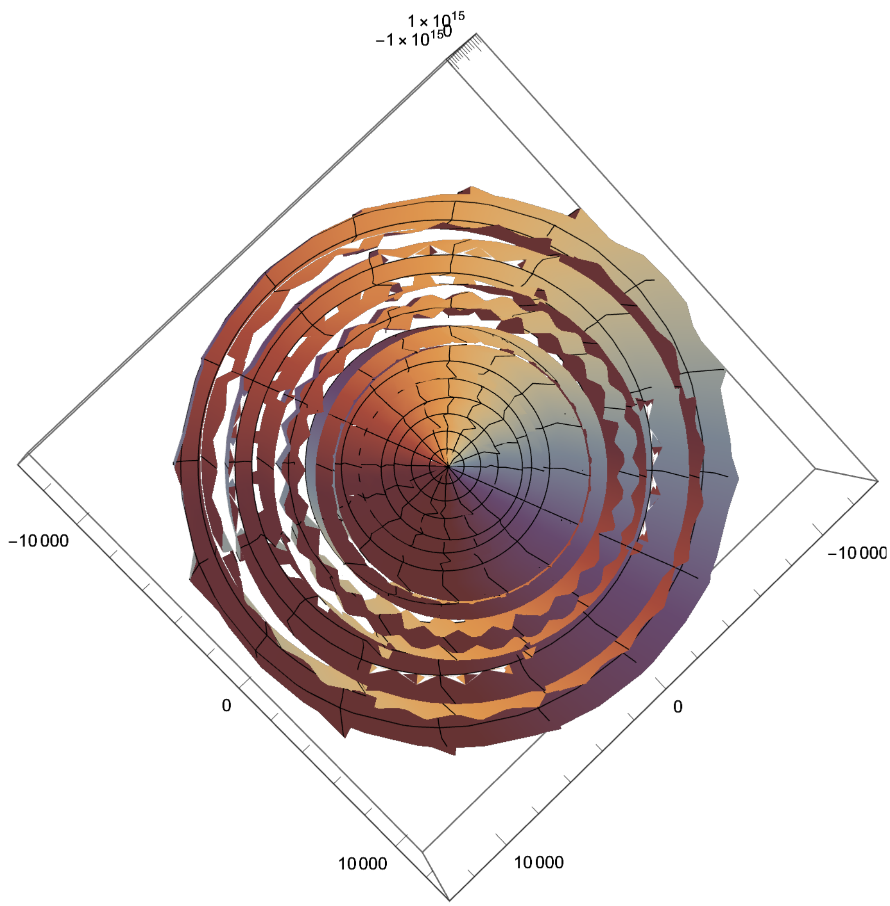
$$\text{PolarPlot}\Bigg[\Bigg(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\right)\right)\Bigg)\Bigg/\left(2160\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\ \{\theta,\ -1300,\ 1300\}\Bigg]$$



$$\text{PolarPlot}\left[\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\right)\right)\right)\Big/\left(2160\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\{\theta,-13\,000,13\,000\}\right]$$



$$\texttt{RevolutionPlot3D}\Big[\Bigg(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\texttt{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\texttt{Cot}[\theta]\,\texttt{Csc}[\theta]^2}{\pi}\right)\right)\Bigg)\Big/\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\texttt{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\ \{\theta,\,-13\,000,\,13\,000\}\Big]$$



$$\frac{1}{1080}\,\pi\,\mathrm{D}\Big[\Bigg(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}\right)\right)\Bigg)\Bigg/\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right),\theta\Big]$$

$$\frac{1}{1080}\,\pi\Bigg(-\left(\pi\left(\frac{4\,665\,600\,c^2}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\,\pi-\theta)^2}-\frac{1}{4\,\pi^2}\left(-\frac{13\,996\,800\,c^2\,\theta^2}{4\,\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\,\pi-\theta)^2}+\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}\right)\right)\right)^2\Bigg/\left(4320\left(\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}\right)^{3/2}\right)+\left(\pi\left(\frac{9\,331\,200\,c^2}{(4\,\pi-\theta)^2}+\frac{9\,331\,200\,c^2\,\theta}{(4\,\pi-\theta)^3}-\frac{1}{4\,\pi^2}\left(-\frac{27\,993\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\,\pi-\theta)^2}-\frac{9\,331\,200\,c^2\,\theta^3}{(4\,\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}\right)\right)\right)\Bigg/\left(2160\,\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\,\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\,\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\,\pi^2}}\right)\Bigg)$$

$$
\mathrm{Plot}\Bigg[\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{4\,665\,600\,c^2}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{1}{4\pi^2}\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}+
$$

$$
\frac{13\,996\,800\,c^2\,\theta^2\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/
$$

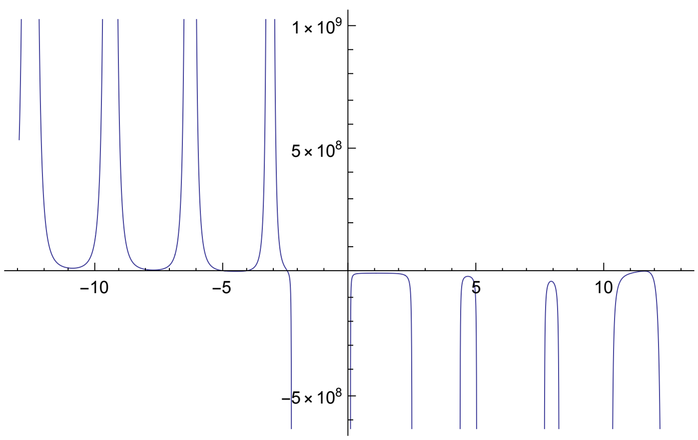
$$
\left(4320\left(\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\pi^2}\right)^{3/2}\right)+
$$

$$
\Bigg(\pi\Bigg(\frac{9\,331\,200\,c^2}{(4\pi-\theta)^2}+\frac{9\,331\,200\,c^2\,\theta}{(4\pi-\theta)^3}-\frac{1}{4\pi^2}\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-
$$

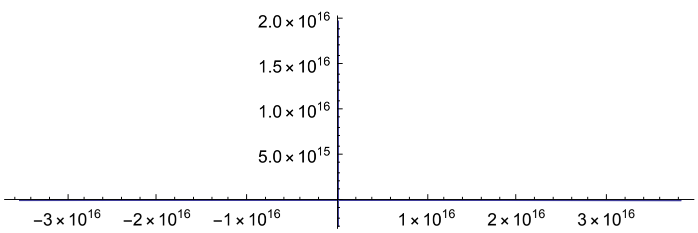
$$
\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\mathrm{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\mathrm{Cot}[\theta]\,\mathrm{Csc}[\theta]^2}{\pi}+
$$

$$
\frac{18\,662\,400\,c^2\,\theta^3\,\mathrm{Cot}[\theta]^2\,\mathrm{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^4}{\pi}\Bigg)\Bigg)\Bigg)\Bigg/
$$

$$
\left(2160\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\mathrm{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Bigg]
$$



$$
\begin{aligned}
&\text{PolarPlot}\Big[\\
&\frac{1}{1080}\pi\Bigg(-\Bigg(\pi\Bigg(\frac{4\,665\,600\,c^2}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta}{(4\pi-\theta)^2}-\frac{1}{4\pi^2}\Bigg(-\frac{13\,996\,800\,c^2\,\theta^2}{4\pi-\theta}-\frac{4\,665\,600\,c^2\,\theta^3}{(4\pi-\theta)^2}+\\
&\qquad\frac{13\,996\,800\,c^2\,\theta^2\,\text{Csc}[\theta]^2}{\pi}-\frac{9\,331\,200\,c^2\,\theta^3\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/\\
&\quad\left(4320\left(\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\pi^2}\right)^{3/2}\right)+\\
&\quad\Bigg(\pi\Bigg(\frac{9\,331\,200\,c^2}{(4\pi-\theta)^2}+\frac{9\,331\,200\,c^2\,\theta}{(4\pi-\theta)^3}-\frac{1}{4\pi^2}\Bigg(-\frac{27\,993\,600\,c^2\,\theta}{4\pi-\theta}-\frac{27\,993\,600\,c^2\,\theta^2}{(4\pi-\theta)^2}-\\
&\qquad\frac{9\,331\,200\,c^2\,\theta^3}{(4\pi-\theta)^3}+\frac{27\,993\,600\,c^2\,\theta\,\text{Csc}[\theta]^2}{\pi}-\frac{55\,987\,200\,c^2\,\theta^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2}{\pi}+\\
&\qquad\frac{18\,662\,400\,c^2\,\theta^3\,\text{Cot}[\theta]^2\,\text{Csc}[\theta]^2}{\pi}+\frac{9\,331\,200\,c^2\,\theta^3\,\text{Csc}[\theta]^4}{\pi}\Bigg)\Bigg)\Bigg)\Bigg/\\
&\quad\left(2160\sqrt{\frac{4\,665\,600\,c^2\,\theta}{4\pi-\theta}-\frac{-\frac{4\,665\,600\,c^2\,\theta^3}{4\pi-\theta}+\frac{4\,665\,600\,c^2\,\theta^3\,\text{Csc}[\theta]^2}{\pi}}{4\pi^2}}\right)\Bigg),\ \{\theta,-13,13\}\Big]
\end{aligned}
$$



On Formulations of Pythagorean Theorem

by Parker Emmerson

Why this can help us prove string theory? Within even the smallest unit of time, there is an implied ten dimensionality. Because it is mathematically proven, it is no longer theoretical. The mathematics is directly correlated to the perceptual experience just as the geometer measures as he perceives.

Preface :

$$r^2 = \eta^2 + r_1^2$$

$$\theta r = 2\pi r - 2\pi r_1 = 2\pi r - 2\pi \sqrt{(r^2 - \eta^2)}$$

$$\theta r - 2\pi r = -2\pi \sqrt{(r^2 - \eta^2)}$$

$$\frac{\theta r - 2\pi r}{2\pi} = \sqrt{(r^2 - \eta^2)}$$

$$\left(\frac{\theta r - 2\pi r}{2\pi}\right)^2 = (r^2 - \eta^2)$$

$$\left(\frac{\theta r - 2\pi r}{2\pi}\right)^2 + \eta^2 = r^2 = \eta^2 + r_1^2$$

Relevant Lemmas to the Formulation

Lemma 4 *The height of the cone can be calculated in terms of only r and* θ, thus β is a function of θ alone.

Proof. Since we have shown that $\theta r = 2\pi r - 2\pi r_1$ and $r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial radius of the circle, into the expression for θr in terms of the change in circumference of the initial circle to the circle, which is the base of the cone. $\theta r = 2\pi r - 2\pi \sqrt{(r^2 - \eta^2)}$, thus, $\eta = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi}$ = (r Sin[β]). From $\frac{2\pi\eta}{\sqrt{4\pi\theta - \theta^2}}$ = r, we note that r = $\frac{2\pi r \,\mathrm{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}}$, so

$\theta = 2\left(\pi \pm \sqrt{\pi^2 - \pi^2 \,\mathrm{Sin}[\beta]^2}\right) = \frac{2\pi\left(r^2 + \sqrt{r^4 - r^2\eta^2}\right)}{r^2}$, because $1 = \frac{2\pi \,\mathrm{Sin}[\beta]}{\sqrt{4\pi\theta - \theta^2}}$

Lemma 6 *The height of the cone can be calculated in terms of only r and* θ, thus θ is a function of β alone, and the initial radius can be calculated purely in terms of the angle θ.

$$\beta = \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]$$

$$\mathrm{Sin}[\beta] = \frac{\eta}{r} = \frac{\sqrt{4\pi r^2 \theta - r^2\theta^2}}{r\, 2\pi} = \frac{4\pi r^2\theta - r^2\theta^2}{4\pi^2 r} = \frac{r\,(4\pi - \theta)\,\theta}{4\pi^2}$$

$$\beta \to \mathrm{ArcSin}\left[\frac{4\pi r\theta - r\theta^2}{4\pi^2}\right] = \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]$$

$$\mathrm{Solve}\left[\mathrm{ArcSin}\left[\frac{4\pi r\theta - r\theta^2}{4\pi^2}\right] == \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right], r\right]$$

$$\left\{\left\{r \to \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}\right\}\right\}$$

A quick calculation:

$$\text{Solve}\left[r == \frac{2\pi\sqrt{\left(4\pi - \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}{\left(4\pi - \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}, \eta\right]$$

$\{\{\eta \to -1\}, \{\eta \to 1\}\}$

$$\text{Solve}\left[r == \frac{2\pi\sqrt{\left(4\pi - \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}}{\left(4\pi - \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)\frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}}, r\right]$$

$\{\}$

$$\text{Solve}\left[r == \frac{2\pi\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}, \beta\right]$$

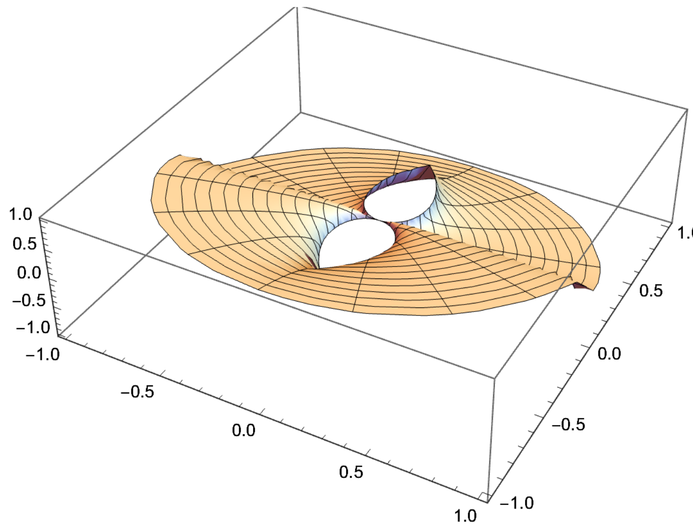
$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{1}{r}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{1}{r}\right]\right\}\right\}$$

$$\text{Solve}\left[r == \frac{2\pi\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\left(4\pi - \frac{2\pi\left(r^2+\sqrt{r^4-r^2\eta^2}\right)}{r^2}\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}, \eta\right]$$

$$\Bigg\{\Bigg\{\eta \to -\frac{1}{\sqrt{\pi}}\text{Csc}[\beta]\sqrt{\Big(-2\pi+\pi\,\text{Sin}[\beta]^2 +}$$
$$2\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])} + \sqrt{2}\,r\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)}$$
$$\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)\Big)\Big) -$$
$$\sqrt{2}\,r\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)}$$
$$\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)\Big)\Big)\Big)\Bigg\},$$

$$\Bigg\{\eta \to \frac{1}{\sqrt{\pi}}\text{Csc}[\beta]\sqrt{\Big(-2\pi+\pi\,\text{Sin}[\beta]^2 + 2\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])} +}$$
$$\sqrt{2}\,r\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)}$$
$$\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)\Big)\Big) -$$
$$\sqrt{2}\,r\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)}$$
$$\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])(1+\text{Sin}[\beta])}\Big)\Big)\Big)\Big)\Bigg\}\Bigg\}$$

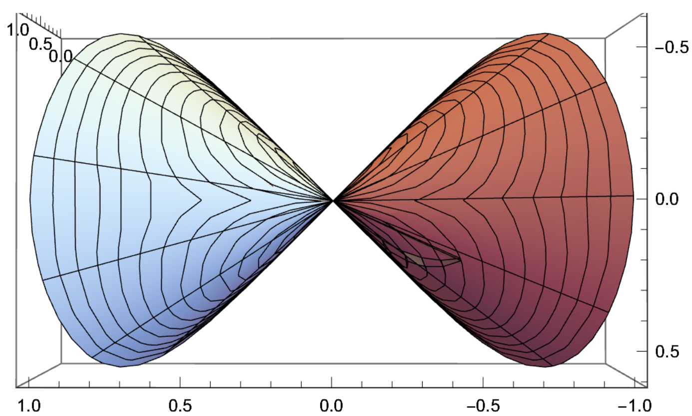
$$\text{RevolutionPlot3D}\Big[-\frac{1}{\sqrt{\pi}}\text{Csc}[\beta]\sqrt{\Big(-2\pi+\pi\,\text{Sin}[\beta]^2+2\pi\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}+\sqrt{2}\,r\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}-\sqrt{2}\,r\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\sqrt{\Big(\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big(4\pi-2\Big(\pi+\pi\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}\Big)},\{r,-1,1\},\{\beta,-\pi,\pi\}\Big]$$

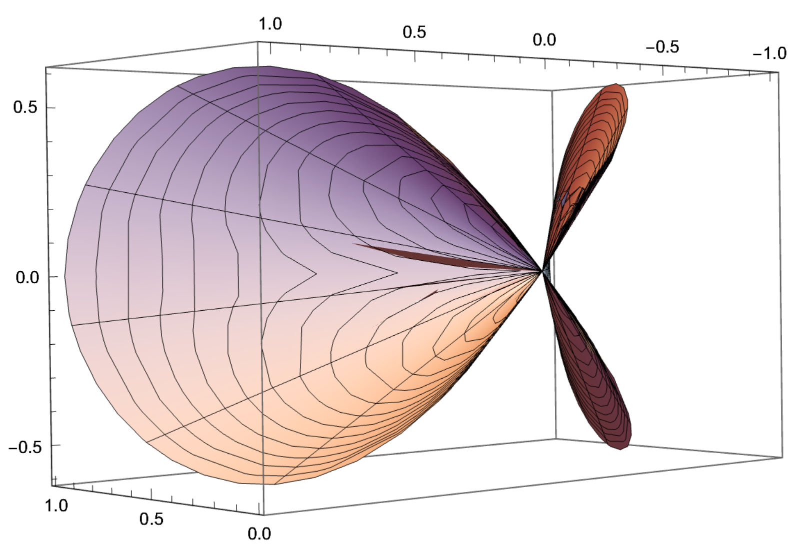


$$\text{RevolutionPlot3D}\Big[$$

$$\Big\{\frac{1}{\sqrt{\pi}}\,\text{Csc}[\beta]\,\sqrt{\Big(-2\,\pi+\pi\,\text{Sin}[\beta]^2+2\,\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}+\sqrt{2}\,r\,\sqrt{\Big(\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}-\sqrt{2}\,r\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\,\sqrt{\Big(\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}\Big)},$$

$$-\frac{1}{\sqrt{\pi}}\,\text{Csc}[\beta]\,\sqrt{\Big(-2\,\pi+\pi\,\text{Sin}[\beta]^2+2\,\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}+\sqrt{2}\,r\,\sqrt{\Big(\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}-\sqrt{2}\,r\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\,\sqrt{\Big(\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\,\Big(4\,\pi-2\,\Big(\pi+\pi\,\sqrt{-(-1+\text{Sin}[\beta])\,(1+\text{Sin}[\beta])}\Big)\Big)\Big)}\Big)}\Big\},\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\Big]$$





The Formulation of New Pythagorean Expressions from

Difference in Circumferences Equals an Arc Length of the Initial Circle (Which is Folded into a Cone) Applied to Pythagorean Theorem

$$r\text{^}2 = \eta\text{^}2 + r_1\text{^}2$$

$$r \to \frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}$$

$$\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\text{^}2 = \eta\text{^}2 + r_1\text{^}2$$

$$r\text{^}2 = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\text{^}2 + r_1\text{^}2 = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\text{^}2 + \frac{\theta\,r\ - 2\,\pi\,r}{2\,\pi}\text{^}2$$

Substitutions that Cancel

$$\text{Solve}\left[r\text{^}2 == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\text{^}2 + \frac{\theta\,r\ - 2\,\pi\,r}{2\,\pi}\text{^}2,\ r\right]$$

{{}}

$$\text{Solve}\left[r\text{^}2 == \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\text{^}2 + \frac{\theta\,r\ - 2\,\pi\,r}{2\,\pi}\text{^}2,\ \theta\right]$$

{{}}

$$\text{Solve}\left[\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\text{^}2 == \frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta - \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\text{^}2 + \frac{\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta} - 2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}}{2\,\pi}\text{^}2,\ \theta\right]$$

{{}}

Substitutions that Don't Cancel

$$\text{Solve}\left[r\text{^}2 == \frac{\sqrt{4\,\pi\,(r)^2\,\theta - (r)^2\,\theta^2}}{2\,\pi}\text{^}2 + \frac{\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta} - 2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}}{2\,\pi}\text{^}2,\ \theta\right]$$

$$\left\{\{\theta \to 2\,\pi\},\ \{\theta \to 2\,\pi\},\ \left\{\theta \to \frac{2\,\pi\left(r^2 - \sqrt{-r^2 + r^4}\right)}{r^2}\right\},\ \left\{\theta \to \frac{2\,\pi\left(r^2 + \sqrt{-r^2 + r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[r^{\wedge}2 == \frac{\sqrt{4\,\pi\,(r)^2\,\theta - (r)^2\,\theta^2}}{2\,\pi}{}^{\wedge}2 + \frac{\theta\,r\ - 2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}}{2\,\pi}{}^{\wedge}2,\ \theta\right]$$

$$\left\{\left\{\theta \to \frac{2\,\pi\,\left(r^2 - \sqrt{-r^2 + r^4}\right)}{r^2}\right\},\ \left\{\theta \to \frac{2\,\pi\,\left(r^2 + \sqrt{-r^2 + r^4}\right)}{r^2}\right\},\right.$$

$$\left\{\theta \to \frac{3\,\pi}{2} - \frac{1}{2}\sqrt{\left(3\,\pi^2 + \frac{\pi^2\,\left(16\,r^2 + 3\,r^4\right)}{3^{1/3}\,r^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}} + \right.}\right.$$

$$\left.\frac{\pi^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right) -$$

$$\frac{1}{2}\sqrt{\left(6\,\pi^2 - \frac{\pi^2\,\left(16\,r^2 + 3\,r^4\right)}{3^{1/3}\,r^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}} - \right.}$$

$$\frac{\pi^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2} -$$

$$\left(8\,\pi^3\right) \Big/ \left(\sqrt{\left(3\,\pi^2 + \frac{\pi^2\,\left(16\,r^2 + 3\,r^4\right)}{3^{1/3}\,r^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}} + \right.}\right.$$

$$\left.\left.\left.\frac{\pi^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)\right)\right)\right\},$$

$$\left\{\theta \to \frac{3\,\pi}{2} - \frac{1}{2}\sqrt{\left(3\,\pi^2 + \frac{\pi^2\,\left(16\,r^2 + 3\,r^4\right)}{3^{1/3}\,r^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}} + \right.}\right.$$

$$\left.\frac{\pi^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right) +$$

$$\frac{1}{2}\sqrt{\left(6\,\pi^2 - \frac{\pi^2\,\left(16\,r^2 + 3\,r^4\right)}{3^{1/3}\,r^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}} - \right.}$$

$$\frac{\pi^2\,\left(216\,r^4 - 9\,r^6 + 8\,\sqrt{3}\,\sqrt{-64\,r^6 + 207\,r^8 - 27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2} -$$

$$\left(8\,\pi^3\right)\Big/\left(\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}\right)\Bigg\},$$

$$\Bigg\{\theta\to\frac{3\,\pi}{2}+\frac{1}{2}\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}-$$

$$\frac{1}{2}\sqrt{\left(6\,\pi^2-\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}-\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}+\right.}$$

$$\left(8\,\pi^3\right)\Big/\left(\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}\right)\Bigg\},$$

$$\Bigg\{\theta\to\frac{3\,\pi}{2}+\frac{1}{2}\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}+$$

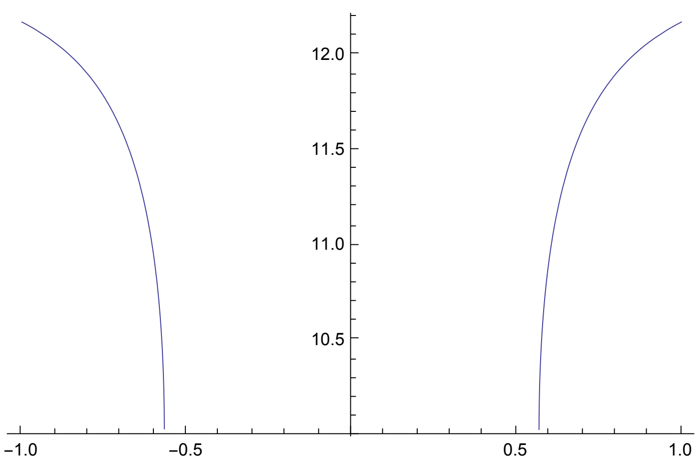
$$\frac{1}{2}\sqrt{\left(6\,\pi^2-\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}-\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}+\right.}$$

$$\left(8\,\pi^3\right)\Big/\left(\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}\right)\}\}$$

$$\text{Plot}\Big[\frac{3\,\pi}{2}+\frac{1}{2}\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}+$$

$$\frac{1}{2}\sqrt{\left(6\,\pi^2-\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}-\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}+\right.}$$

$$\left.\left(8\,\pi^3\right)\Big/\left(\sqrt{\left(3\,\pi^2+\frac{\pi^2\left(16\,r^2+3\,r^4\right)}{3^{1/3}\,r^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}+\frac{\pi^2\left(216\,r^4-9\,r^6+8\,\sqrt{3}\,\sqrt{-64\,r^6+207\,r^8-27\,r^{10}}\right)^{1/3}}{3^{2/3}\,r^2}\right)}\right)\right),\ \{r,-1,1\}\Big]$$



Note that r is to the 10 th dimension.

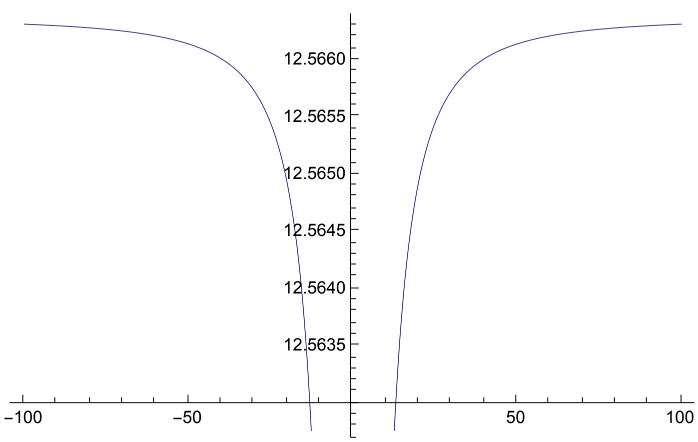
$$\texttt{Solve}\left[r\wedge 2 == \frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-(r)^2\,\theta^2}}{2\pi}\wedge 2+\frac{\theta\,r\,-2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}}{2\pi}\wedge 2,\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(-2+r^2-\sqrt{-5\,r^2+r^4}\right)}{4+r^2}\right\},\left\{\theta\to\frac{2\pi\left(-2+r^2+\sqrt{-5\,r^2+r^4}\right)}{4+r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

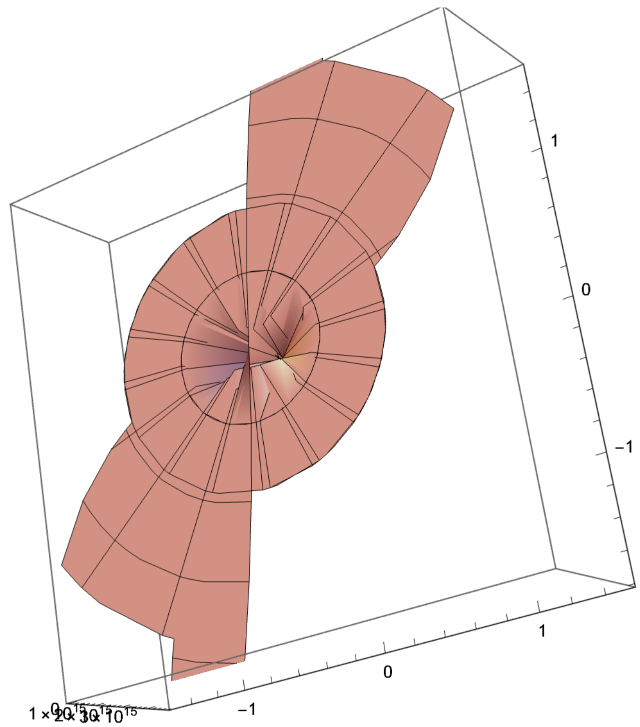
$$\texttt{Solve}\left[r\wedge 2 == \frac{\sqrt{4\pi\,(r)^2\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}\wedge 2+\frac{\theta\,r\,-2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}}{2\pi}\wedge 2,\theta\right]$$

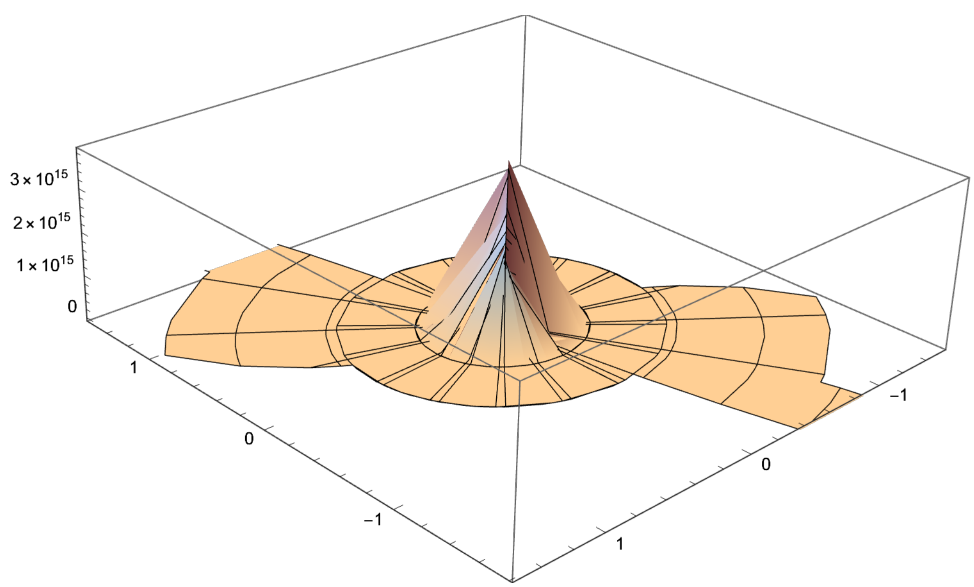
$$\left\{\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\},\right.$$
$$\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,1\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,2\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,3\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,4\right]\right\},$$
$$\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,5\right]\right\},$$
$$\left.\left\{\theta\to\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,6\right]\right\}\right\}$$

$$\texttt{Plot}\left[\text{Root}\left[64\,\pi^6-64\,\pi^5\,r^2\,\#1+\left(-32\,\pi^4+144\,\pi^4\,r^2\right)\#1^2-64\,\pi^3\,r^2\,\#1^3+\left(4\,\pi^2-24\,\pi^2\,r^2\right)\#1^4+4\,\pi\,r^2\,\#1^5+r^2\,\#1^6\,\&,4\right],\{r,-100,100\}\right]$$



```
RevolutionPlot3D[
 Root[64 π^6 - 64 π^5 ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 #1 + (-32 π^4 + 144 π^4 ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2) #1^2 -
    64 π^3 r^2 #1^3 + (4 π^2 - 24 π^2 ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2) #1^4 + 4 π r^2 #1^5 + r^2 #1^6 &,
  4], {r, -100, 100}, {θ, -2 π, 2 π}]
```





$$\text{Solve}\left[r\,{}^\wedge 2 == \frac{\sqrt{4\,\pi\,(r)^2\,\theta - \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta^2}}{2\,\pi}{}^\wedge 2 + \frac{\theta\,r\;-2\,\pi\,r}{2\,\pi}{}^\wedge 2,\;\theta\right]$$

$$\left\{\{\theta \to 0\},\;\left\{\theta \to \frac{2\,\pi\left(r^2 - \sqrt{-r^2+r^4}\right)}{r^2}\right\},\;\left\{\theta \to \frac{2\,\pi\left(r^2 + \sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}{}^\wedge 2 == \frac{\sqrt{4\,\pi\,(r)^2\,\theta - \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta^2}}{2\,\pi}{}^\wedge 2 + \frac{\theta\,r - 2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}}{2\,\pi}{}^\wedge 2,\;\theta\right]$$

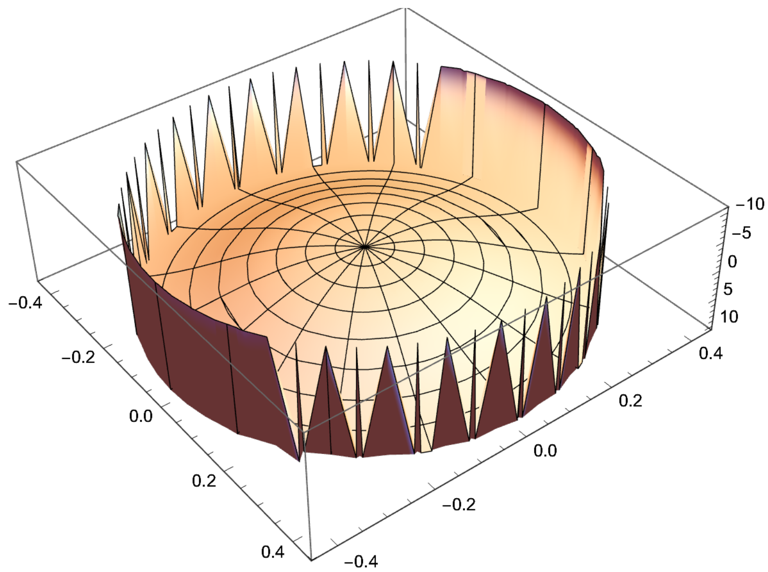
$$\left\{\left\{\theta \to \frac{2\,\pi\left(r^2 - \sqrt{-r^2+r^4}\right)}{r^2}\right\},\;\left\{\theta \to \frac{2\,\pi\left(r^2 + \sqrt{-r^2+r^4}\right)}{r^2}\right\},\right.$$

$$\left\{\theta \to -\frac{4\,\pi}{3} + \frac{12\,\pi^2\,r^2 - 64\,\pi^2\,r^4}{6\,\pi\,r^2\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}} - \frac{2\,\pi\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}}{3\,r^2}\right\},$$

$$\left\{\theta \to -\frac{4\,\pi}{3} - \frac{\left(1 + i\,\sqrt{3}\right)\left(12\,\pi^2\,r^2 - 64\,\pi^2\,r^4\right)}{12\,\pi\,r^2\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}} + \frac{\left(1 - i\,\sqrt{3}\right)\pi\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}}{3\,r^2}\right\},$$

$$\left.\left\{\theta \to -\frac{4\,\pi}{3} - \frac{\left(1 - i\,\sqrt{3}\right)\left(12\,\pi^2\,r^2 - 64\,\pi^2\,r^4\right)}{12\,\pi\,r^2\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}} + \frac{\left(1 + i\,\sqrt{3}\right)\pi\left(-9\,r^4 - 64\,r^6 + 3\,\sqrt{3}\,\sqrt{r^6 - 13\,r^8 + 128\,r^{10}}\right)^{1/3}}{3\,r^2}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[-\frac{4\pi}{3}+\frac{12\pi^2 r^2-64\pi^2 r^4}{6\pi r^2\left(-9 r^4-64 r^6+3\sqrt{3}\sqrt{r^6-13 r^8+128 r^{10}}\right)^{1/3}}-\frac{2\pi\left(-9 r^4-64 r^6+3\sqrt{3}\sqrt{r^6-13 r^8+128 r^{10}}\right)^{1/3}}{3 r^2},\{r,-1,1\}\right]$$



Univocal Radius Solutions Continued

by Parker Emmerson © 2009 - 2010

$$r_1=\sqrt{\left(r\wedge 2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}\wedge 2\right)}==\frac{2\pi r-r\theta}{2\pi}$$

$$\text{Solve}\left[\sqrt{\left(r\wedge 2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}\wedge 2\right)}==\frac{2\pi r-r\theta}{2\pi},\theta\right]$$

{{}}

$$\text{Solve}\left[\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\wedge 2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}\wedge 2\right)}==\frac{2\pi r-r\theta}{2\pi},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\text{^}2-\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-(r)^2\,\theta^2}}{2\,\pi}\,\text{^}2\right)}==\frac{2\,\pi\,r-r\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\{\theta\to\pi\},\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\text{^}2-\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\,\text{^}2\right)}==\frac{2\,\pi\,r-r\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\{\theta\to2\,\pi\},\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\text{^}2-\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\,\text{^}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-r\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\},\right.$$

$$\left\{\theta\to2\left(\frac{\pi}{3^{1/3}\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}-\frac{\pi\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}{3^{2/3}\,r^2}\right)\right\},$$

$$\left\{\theta\to-\frac{\left(1+i\,\sqrt{3}\right)\pi}{3^{1/3}\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}+\frac{\left(1-i\,\sqrt{3}\right)\pi\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}{3^{2/3}\,r^2}\right\},$$

$$\left.\left\{\theta\to-\frac{\left(1-i\,\sqrt{3}\right)\pi}{3^{1/3}\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}+\frac{\left(1+i\,\sqrt{3}\right)\pi\left(-9\,r^4+\sqrt{3}\,\sqrt{r^6+27\,r^8}\right)^{1/3}}{3^{2/3}\,r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\text{^}2-\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\text{^}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\theta\right]$$

$\{\{\}\}$

$$\text{Solve}\left[\sqrt{\left(r\text{^}2-\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\text{^}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(r\text{^}2-\frac{\sqrt{4\,\pi\,(r)^2\,\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\text{^}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\{\theta\to\pi\},\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\text{Solve}\left[\sqrt{\left(r\text{^}2-\frac{\sqrt{4\,\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\,\pi}\text{^}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\theta\right]$$

$$\left\{\{\theta\to2\,\pi\},\left\{\theta\to\frac{2\,\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\,\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\texttt{Solve}\left[\sqrt{\left(r^{\wedge}2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}{}^{\wedge}2\right)}==\frac{2\pi r-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{2\pi},\theta\right]$$

$$\left\{\{\theta\to 0\},\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\},\right.$$

$$\left\{\theta\to 2\left(2\pi+\frac{\pi}{3^{1/3}\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}-\frac{\pi\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}{3^{2/3}r^2}\right)\right\},$$

$$\left\{\theta\to 4\pi-\frac{\left(1+i\sqrt{3}\right)\pi}{3^{1/3}\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}+\frac{\left(1-i\sqrt{3}\right)\pi\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}{3^{2/3}r^2}\right\},$$

$$\left.\left\{\theta\to 4\pi-\frac{\left(1-i\sqrt{3}\right)\pi}{3^{1/3}\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}+\frac{\left(1+i\sqrt{3}\right)\pi\left(9r^4+\sqrt{3}\sqrt{r^6+27r^8}\right)^{1/3}}{3^{2/3}r^2}\right\}\right\}$$

$$\texttt{Solve}\left[\sqrt{\left(r^{\wedge}2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}{}^{\wedge}2\right)}==\frac{2\pi r-r\,\theta}{2\pi},\theta\right]$$

{{}}

$$\texttt{Solve}\left[\sqrt{\left(r^{\wedge}2-\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}{}^{\wedge}2\right)}==\frac{2\pi r-r\,\theta}{2\pi},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(r-\sqrt{-1+r^2}\right)}{r}\right\}\right\}$$

$$\texttt{Solve}\left[\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}{}^{\wedge}2-\frac{\sqrt{4\pi\,(r)^2\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}{}^{\wedge}2\right)}==\frac{2\pi r-r\,\theta}{2\pi},\theta\right]$$

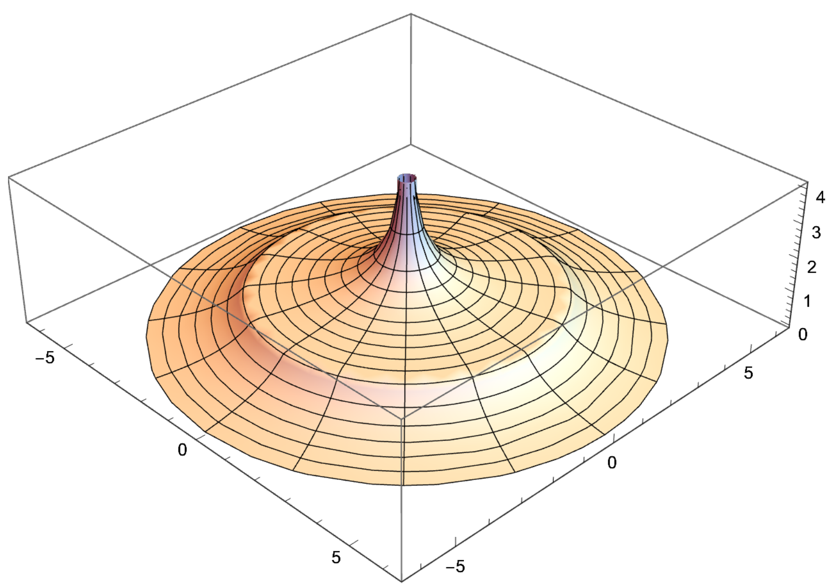
$$\left\{\{\theta\to-2\,i\,\pi\},\{\theta\to 2\,i\,\pi\},\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

New Solution 1

$$\text{Solve}\left[\sqrt{\left(r\,^\wedge 2-\frac{\sqrt{4\,\pi\,(r)^2\,\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\,^\wedge 2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-r\,\theta}{2\,\pi},\ r\right]$$

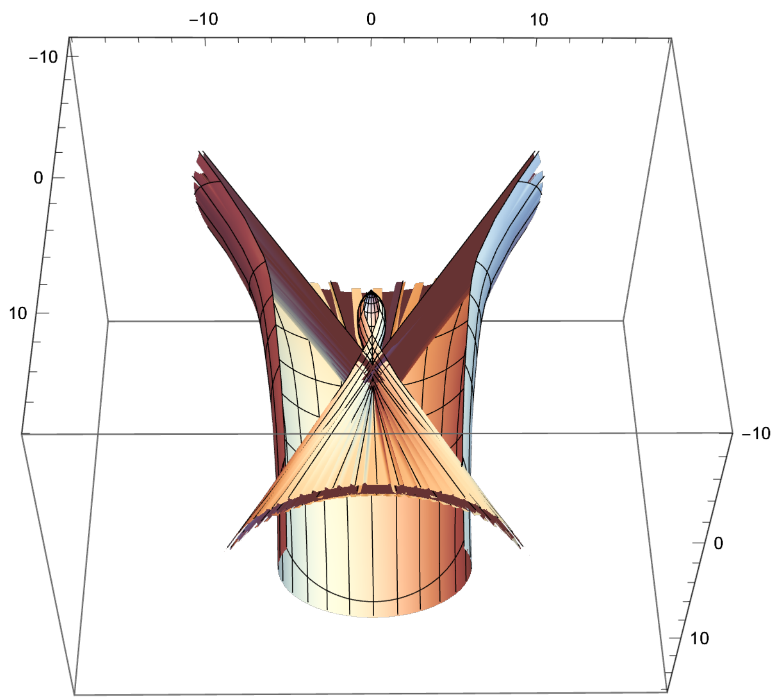
$$\left\{\left\{r\to\frac{2\,\pi\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}-\sqrt{64\,\pi^5\,\theta-80\,\pi^4\,\theta^2+20\,\pi^2\,\theta^4-\theta^6}\right)}{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+\theta^4}\right\},\right.$$
$$\left.\left\{r\to\frac{2\,\pi\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}+\sqrt{64\,\pi^5\,\theta-80\,\pi^4\,\theta^2+20\,\pi^2\,\theta^4-\theta^6}\right)}{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+\theta^4}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{2\,\pi\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}+\sqrt{64\,\pi^5\,\theta-80\,\pi^4\,\theta^2+20\,\pi^2\,\theta^4-\theta^6}\right)}{16\,\pi^3\,\theta-20\,\pi^2\,\theta^2+\theta^4},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



Solution 1 Substitutions

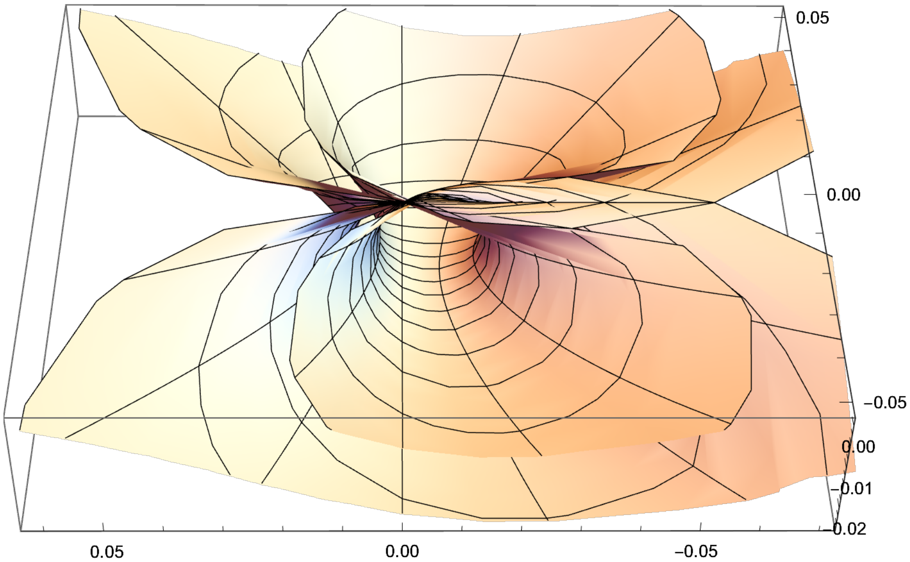
```
SphericalPlot3D[1 / (16 π^3 θ - 20 π^2 θ^2 + θ^4)
  2 π (-2 π θ Sqrt[(4 π - θ) θ] + Sqrt[64 π^5 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) - 80 π^4 θ^2 + 20 π^2 θ^4 - θ^6]),
  {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\texttt{SphericalPlot3D}\Big[\frac{1}{16\,\pi^3\,\theta-20\,\pi^2\,\left(2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\right)^2+\theta^4}$$

$$2\,\pi\,\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}+\sqrt{64\,\pi^5\,\theta-80\,\pi^4\,\theta^2+20\,\pi^2\,\theta^4-\theta^6}\right),$$

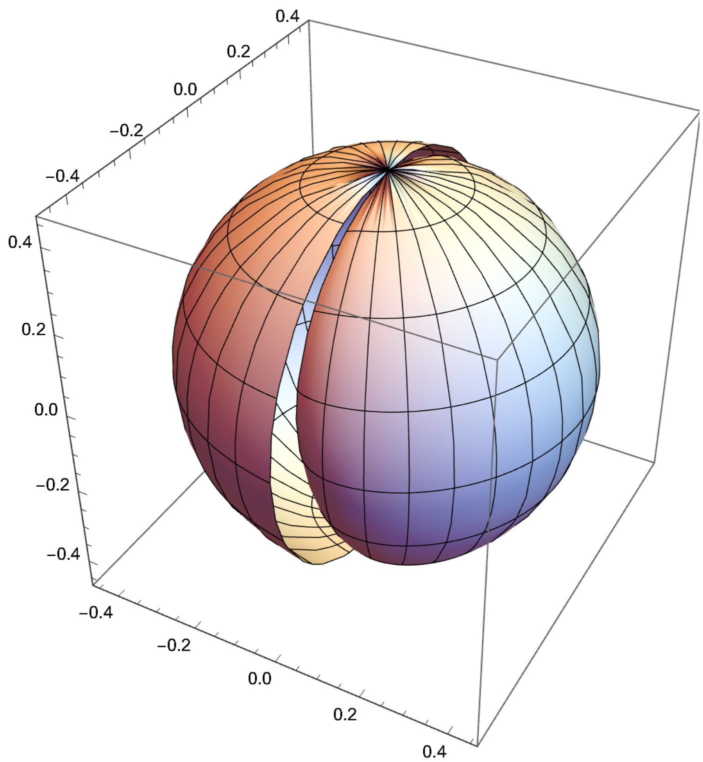
$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi\,/\,2,\,\pi\,/\,2\}\Big]$$



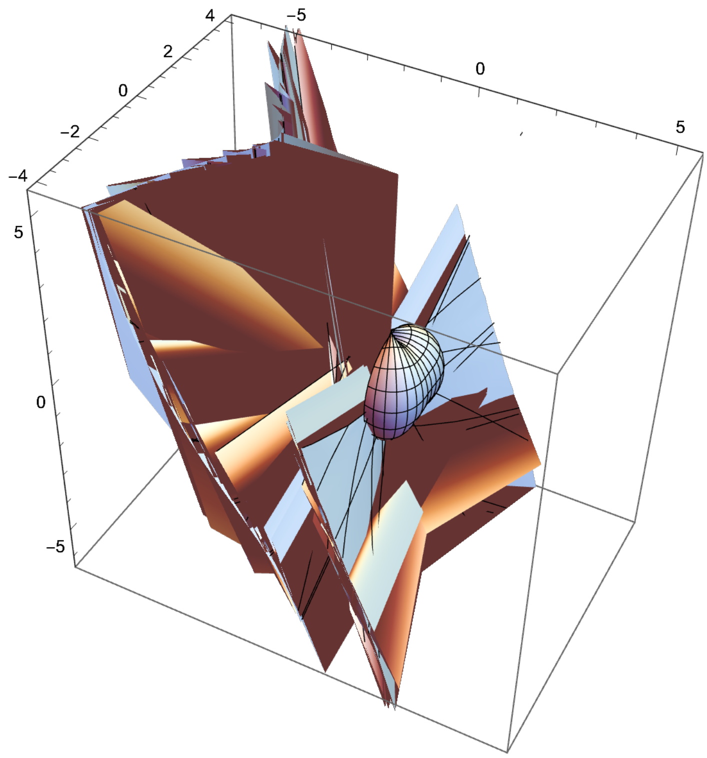
$$\text{SphericalPlot3D}\Big[\frac{1}{16\,\pi^3\,\theta-20\,\pi^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2+(\theta)^4}$$

$$2\,\pi\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}+\sqrt{64\,\pi^5\,\theta-80\,\pi^4\,\theta^2+20\,\pi^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^4-\theta^6}\right),$$

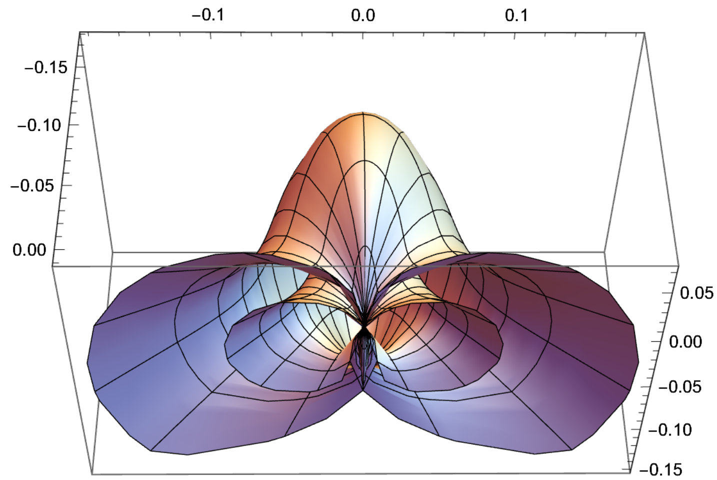
$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]$$



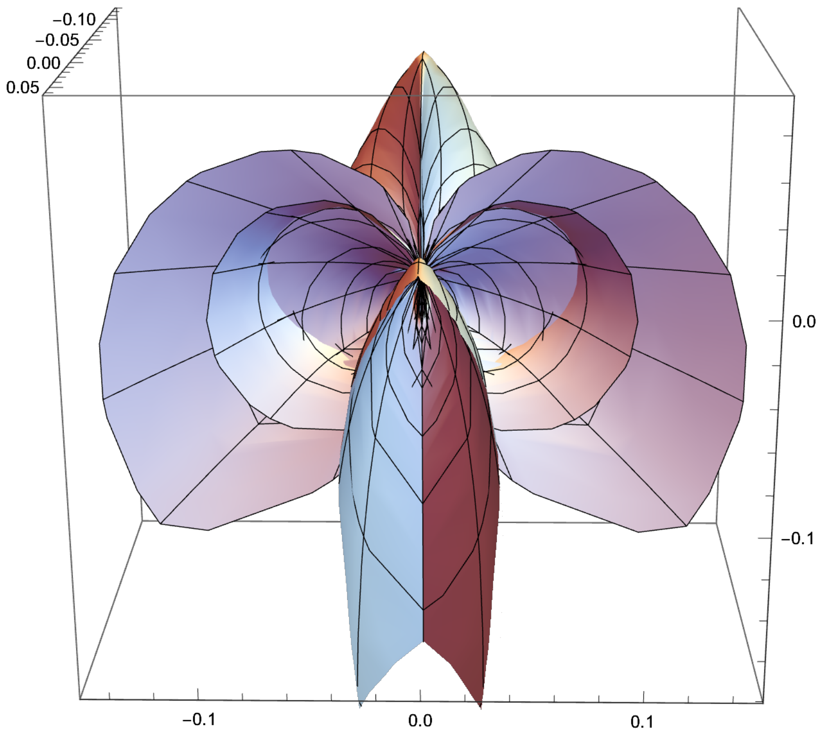
$$\text{SphericalPlot3D}\Big[\frac{1}{16\,\pi^3\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-20\,\pi^2\,(\theta)^2+(\theta)^4}\,2\,\pi\left(-2\,\pi\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}+\sqrt{\left(64\,\pi^5\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-80\,\pi^4\,\theta^2+20\,\pi^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^4-\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^6\right)}\right),\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



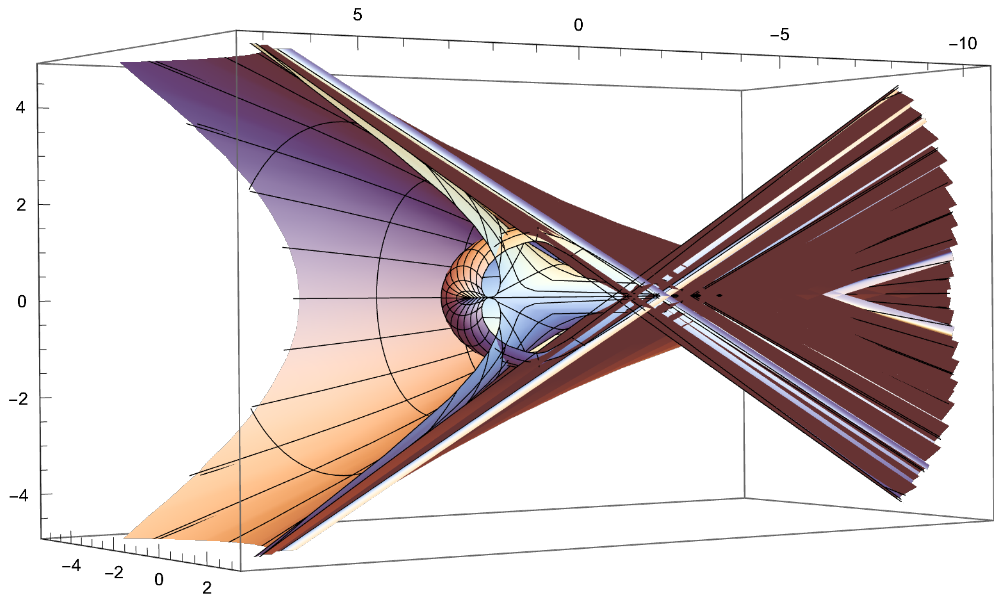
```
SphericalPlot3D[
 (1/ (16 π³ θ - 20 π² (2 (π + √(π² - π² Sin[β]²)))² + (2 (π + √(π² - π² Sin[β]²)))⁴))
  2 π (-2 π θ √((4 π - θ) θ) + √(64 π⁵ θ - 80 π⁴ θ² + 20 π² θ⁴ - θ⁶)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



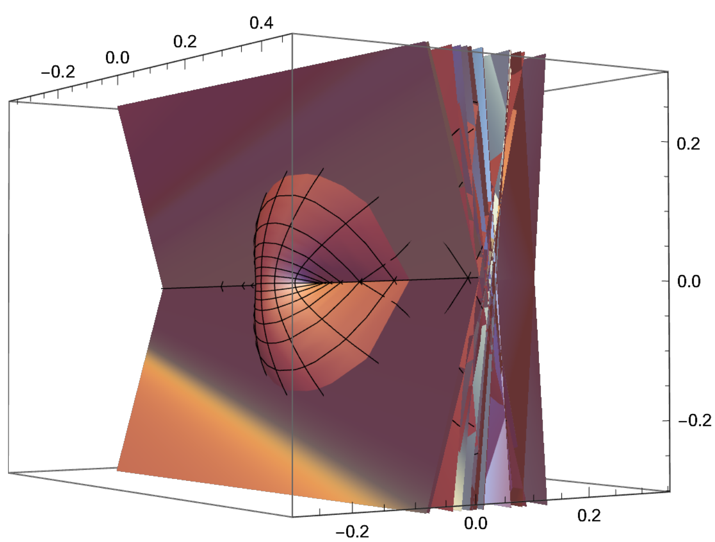
```
SphericalPlot3D[
 (1/ (16 π^3 θ - 20 π^2 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^4))
  2 π (-2 π θ Sqrt[(4 π - (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))) θ] + Sqrt[64 π^5 θ - 80 π^4 θ^2 + 20 π^2 θ^4 - θ^6]),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



$$\text{SphericalPlot3D}\left[\frac{1}{16\,\pi^3\,\theta - 20\,\pi^2\,\theta^2 + \theta^4}\,2\,\pi\left(-2\,\pi\,2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\sqrt{(4\,\pi - \theta)\,\theta} + \sqrt{64\,\pi^5\,\theta - 80\,\pi^4\,\theta^2 + 20\,\pi^2\,\theta^4 - \theta^6}\right),\ \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{1}{16\,\pi^3\,\theta - 20\,\pi^2\,\theta^2 + \left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)^4}\,2\,\pi\left(-2\,\pi\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right)\sqrt{(4\,\pi - \theta)\,\theta} + \sqrt{64\,\pi^5\,\theta - 80\,\pi^4\,\theta^2 + 20\,\pi^2\,\theta^4 - \theta^6}\right),\ \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$

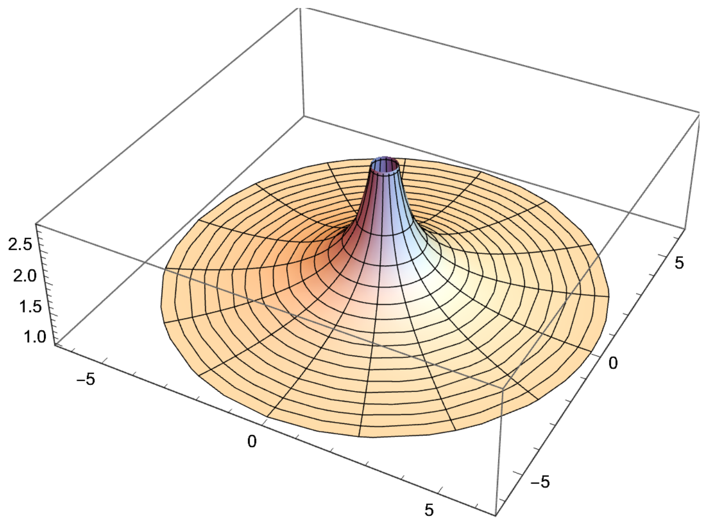


New Solution 2

$$\text{Solve}\left[\sqrt{\left(r^{\wedge}2-\frac{\sqrt{4\,\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\,\pi}{}^{\wedge}2\right)}==\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\ r\right]$$

$$\left\{\left\{r\to-\sqrt{\pi}\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{1}{\theta}}\right\},\left\{r\to\sqrt{\pi}\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{1}{\theta}}\right\}\right\}$$

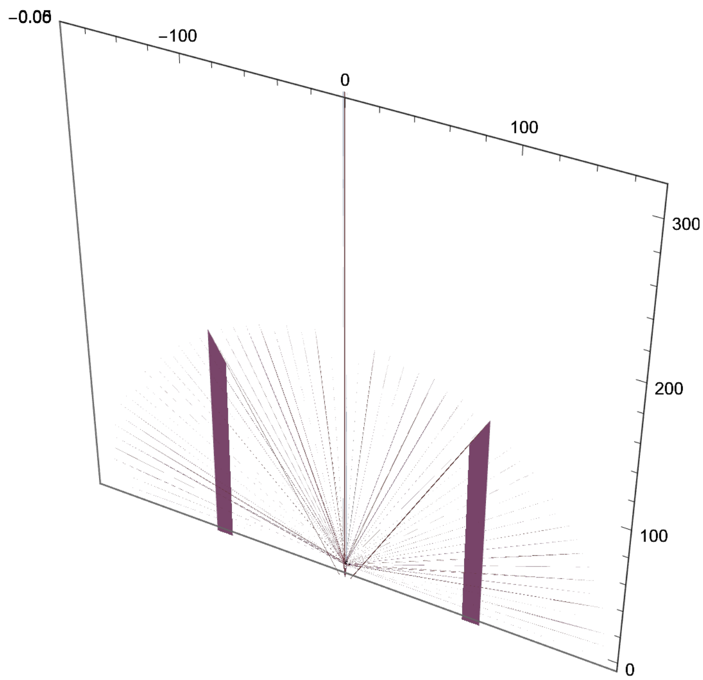
$$\text{RevolutionPlot3D}\left[\sqrt{\pi}\,\sqrt{\frac{1}{4\,\pi-\theta}+\frac{1}{\theta}},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



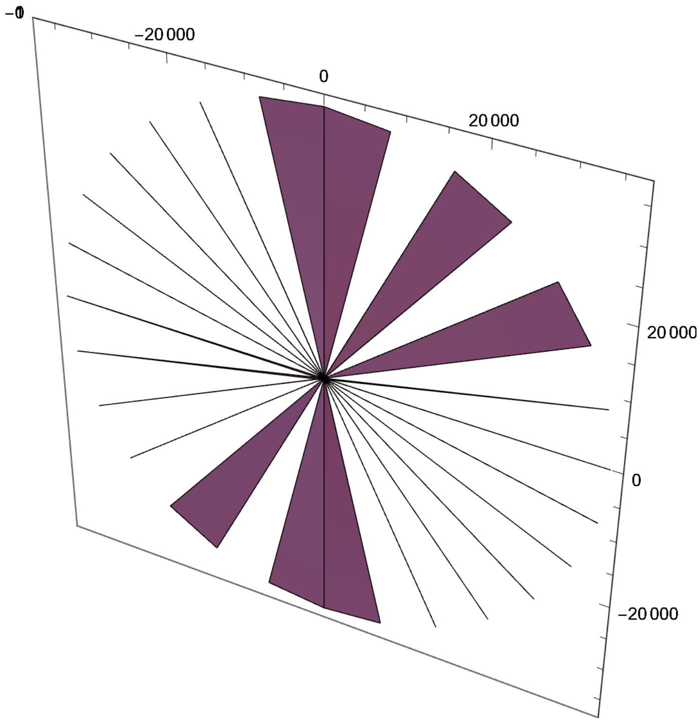
Solution 2 Substitutions

$$\text{SphericalPlot3D}\left[\sqrt{\pi}\ \sqrt{\frac{1}{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}+\frac{1}{\theta}},\right.$$

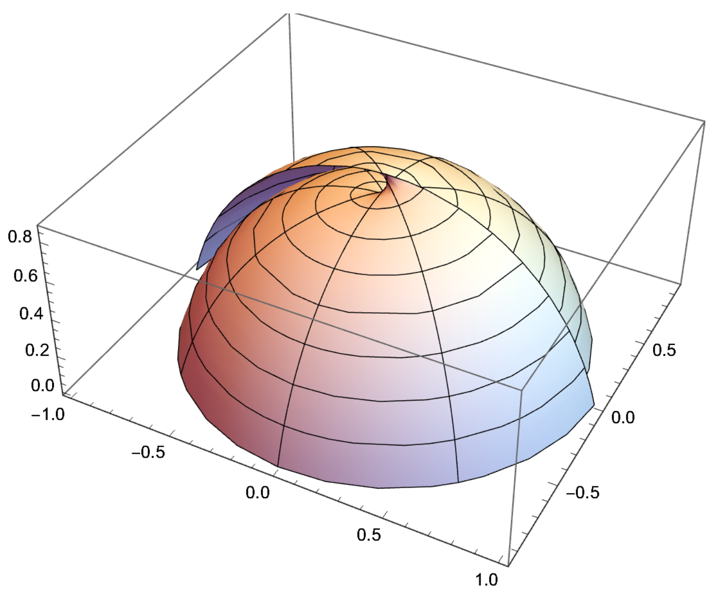
$$\left.\{\beta,\,-\pi/2,\,\pi/2\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



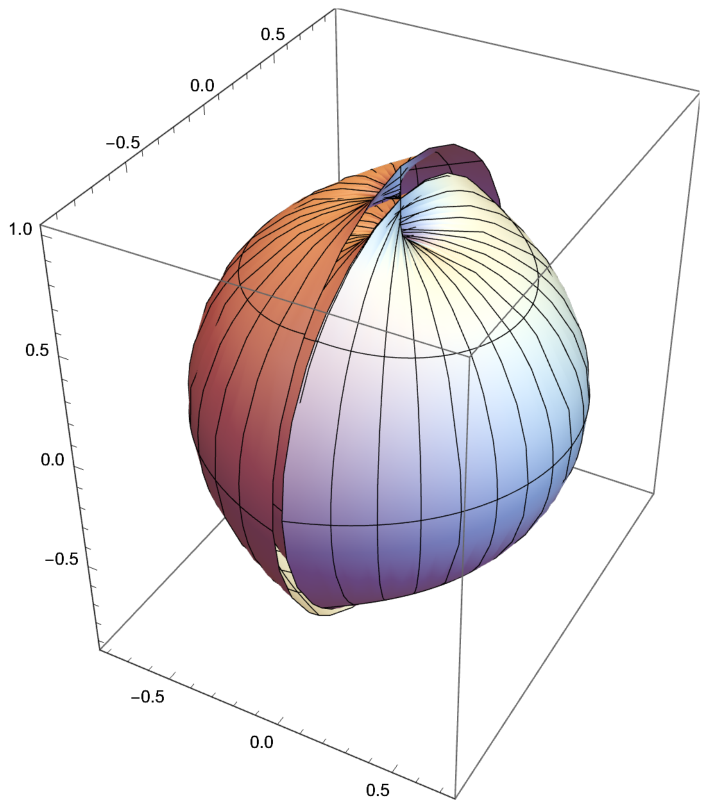
```
SphericalPlot3D[ √π √( 1/(4 π - 2 (π + √(π² - π² Sin[β]²))) + 1/θ ),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[ √π √( 1/(4 π - θ) + 1/(2 (π + √(π² - π² Sin[β]²))) ),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



$$\text{SphericalPlot3D}\left[\sqrt{\pi}\ \sqrt{\frac{1}{4\,\pi-\theta}+\frac{1}{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}},\ \{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



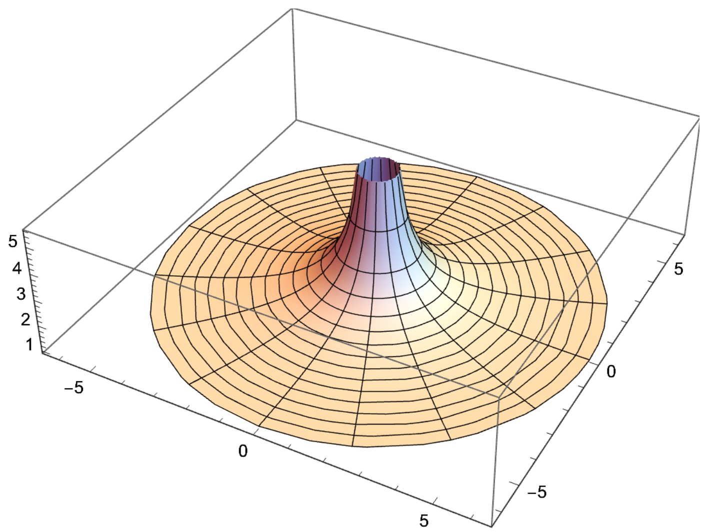
New Solution 3

$$\text{Solve}\left[\sqrt{\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}{}^\wedge 2-\frac{\sqrt{4\,\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\,\pi}{}^\wedge 2\right)}==\frac{2\,\pi-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi},\ r\right]$$

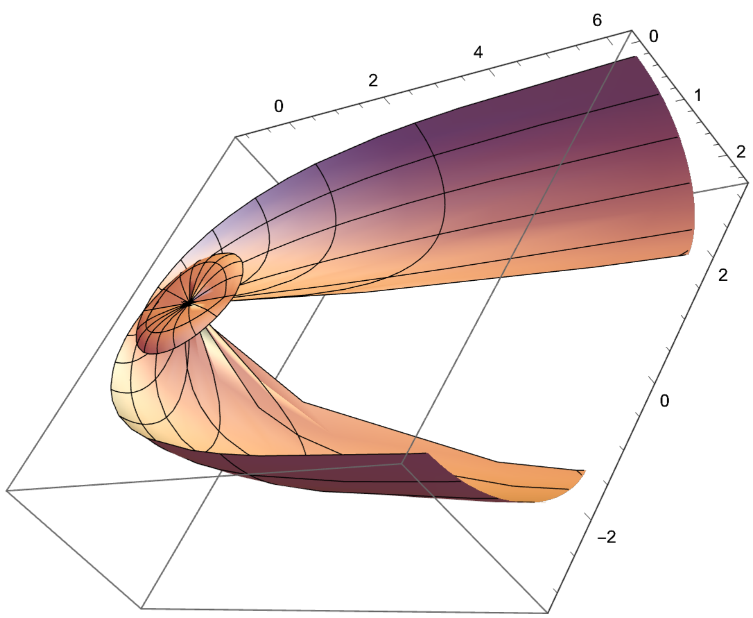
$$\left\{\left\{r\to-\frac{\sqrt{-\frac{6\,\pi^2}{(4\,\pi-\theta)^2}-\frac{\pi}{4\,\pi-\theta}+\frac{2\,\pi^2}{\theta^2}-\frac{\pi}{\theta}+\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^2}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\theta}}}{\sqrt{2}}\right\},\right.$$

$$\left.\left\{r\to\frac{\sqrt{-\frac{6\,\pi^2}{(4\,\pi-\theta)^2}-\frac{\pi}{4\,\pi-\theta}+\frac{2\,\pi^2}{\theta^2}-\frac{\pi}{\theta}+\frac{4\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)^2}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{4\,\pi-\theta}+\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{\theta}}}{\sqrt{2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{-\frac{6\pi^2}{(4\pi-\theta)^2}-\frac{\pi}{4\pi-\theta}+\frac{2\pi^2}{\theta^2}-\frac{\pi}{\theta}+\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{\theta}}}{\sqrt{2}}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{1}{\sqrt{2}}\left(\sqrt{\left(-\frac{6\pi^2}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}-\frac{\pi}{4\pi-\theta}+\frac{2\pi^2}{\theta^2}-\frac{\pi}{\theta}+\frac{4\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)^2}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{\theta}\right)}\right), \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



Theta Solution Representing "Eight Fold Path"

$$\text{Solve}\left[\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\text{^}2-\frac{\sqrt{4\pi\,(r)^2\,\theta-(r)^2\,\theta^2}}{2\pi}\,\text{^}2\right)}==\frac{2\pi-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{2\pi},\ \theta\right]$$

$$\{\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 1]\},$$

$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 2]\},$$

$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 3]\},$$

$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 4]\},$$

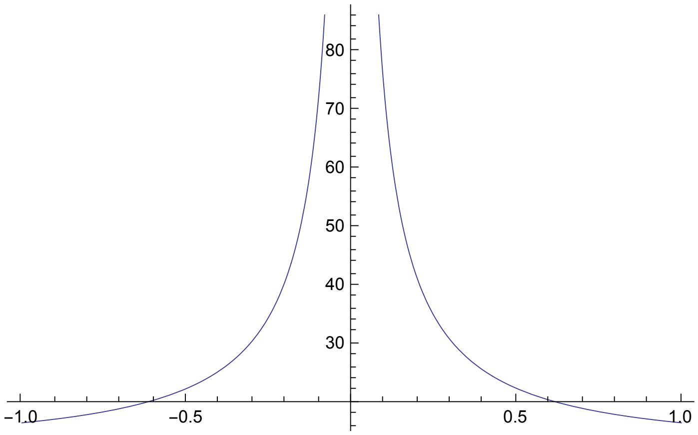
$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 5]\},$$

$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 6]\},$$

$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 7]\},$$

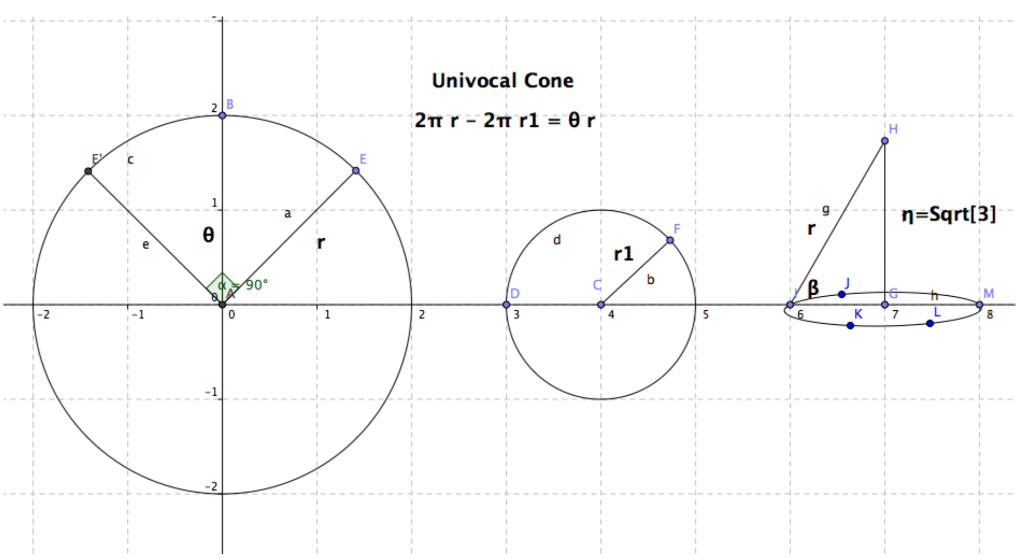
$$\{\theta\to\text{Root}[256\pi^8-512\pi^7\,\#1+(256\pi^6-512\pi^6 r^2)\,\#1^2+(-256\pi^5+768\pi^5 r^2)\,\#1^3+(64\pi^4-288\pi^4 r^2+256\pi^4 r^4)\,\#1^4+(32\pi^3 r^2-256\pi^3 r^4)\,\#1^5+96\pi^2 r^4\,\#1^6-16\pi r^4\,\#1^7+r^4\,\#1^8\,\&,\ 8]\}\}$$

```
Plot[Re[Root[256 π^8 - 512 π^7 #1 + (256 π^6 - 512 π^6 r^2) #1^2 +
    (-256 π^5 + 768 π^5 r^2) #1^3 + (64 π^4 - 288 π^4 r^2 + 256 π^4 r^4) #1^4 +
    (32 π^3 r^2 - 256 π^3 r^4) #1^5 + 96 π^2 r^4 #1^6 - 16 π r^4 #1^7 + r^4 #1^8 &, 8]], {r, -1, 1}]
```



8 Roots symbolize the eight - fold path.

Parker' s Commentary on Fermat' s Last Theorem



Please see The Geometric Pattern of Perception to reference the preliminary investigations.

Lemma 5 *The height of the cone can be calculated in terms of only r and* θ, thus θ is a function of β alone.

Proof. Since we have shown that $\theta\, r = 2\,\pi\, r - 2\,\pi\, r_1$ and $r_1 \to \sqrt{r^2 - \eta^2}$, we can substitute the expression for r_1, calculated from the Pythagorean theorem in terms of the height of the cone and the initial

radius of the circle, into the expression for θ r in terms of the change in circumference of the initial circle to the circle that is the base of the cone into which the circle was transformed.

$\theta r = 2\pi r - 2\pi\sqrt{(r^2 - \eta^2)}$, thus, $\eta = \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}$ = (r Sin[β]). From $\frac{2\pi\eta}{\sqrt{4\pi\theta-\theta^2}}$ = r, we note that: r = $\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}$. So we solve the equation,

$$\text{Solve}\left[r == \frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ \theta\right]$$

$$\left\{\left\{\theta \to 2\left(\pi - \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta \to 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$1 = \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}$$

The Meaning of n > 2 is n > $\frac{r\,\theta}{\pi\,(r - r_1)}$;

$$n > \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} + \frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} >$$

$$\frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}[\beta]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)} + \frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta - \theta^2}} + \frac{\frac{r\,\theta}{\pi\,(r-r_1)}\,\pi\,\text{Sin}[\beta]}{\sqrt{\left(\frac{r\,\theta}{\pi\,(r-r_1)} + \frac{r\,\theta}{\pi\,(r-r_1)}\right)\pi\,\theta - \theta^2}}$$

x^n + y^n == z^n, where n > 2

$\theta r = 2\pi r - 2\pi r_1$

What is 2?

$$\text{Solve}[\theta r == \varrho\pi r - \varrho\pi r_1,\ \varrho]$$

$$\left\{\left\{\varrho \to \frac{r\,\theta}{\pi\,(r - r_1)}\right\}\right\}$$

$$2 == \frac{r\,\theta}{\pi\,(r - r_1)}$$

$$x\,\hat{}\,n + y\,\hat{}\,n == z\,\hat{}\,n, \text{ where } n > \frac{r\,\theta}{\pi\,(r - r_1)}$$

$$x\,\hat{}\,n + y\,\hat{}\,n == z\,\hat{}\,n, \text{ where } n > \left\{\frac{r\,\theta}{\pi\left(r - \frac{2\,\pi\,r - r\,\theta}{2\,\pi}\right)} = \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} + \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}\right\}$$

$$\text{Solve}\left[\frac{r\,\theta}{\pi\left(r - \frac{2\,\pi\,r - r\,\theta}{2\,\pi}\right)} == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} + \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ r\right]$$

{}

$$\textbf{Solve}\left[\frac{r\,\theta}{\pi\left(r - \sqrt{\left(r\,\hat{}\,2 - \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\,\hat{}\,2\right)}\right)} == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} + \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ r\right]$$

{}

$$\textbf{Solve}\left[\frac{r\,\theta}{\pi\left(r - \sqrt{(r\,\hat{}\,2 - \eta\,\hat{}\,2)}\right)} == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}} + \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}},\ r\right]$$

$$\left\{\left\{r \to -\left(2\,\sqrt{2}\,\sqrt{\left(2\,\pi^4\,\eta^2\,\text{Sin}[\beta]^2 + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} + \frac{4\,\pi^5\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2} + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)}\right)\Big/\left(\sqrt{-4\,\pi\,\theta^3 + \theta^4 + 64\,\pi^4\,\text{Sin}[\beta]^2}\right)\right\},\right.$$
$$\left.\left\{r \to \left(2\,\sqrt{2}\,\sqrt{\left(2\,\pi^4\,\eta^2\,\text{Sin}[\beta]^2 + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} + \frac{4\,\pi^5\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2} + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)}\right)\Big/\left(\sqrt{-4\,\pi\,\theta^3 + \theta^4 + 64\,\pi^4\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

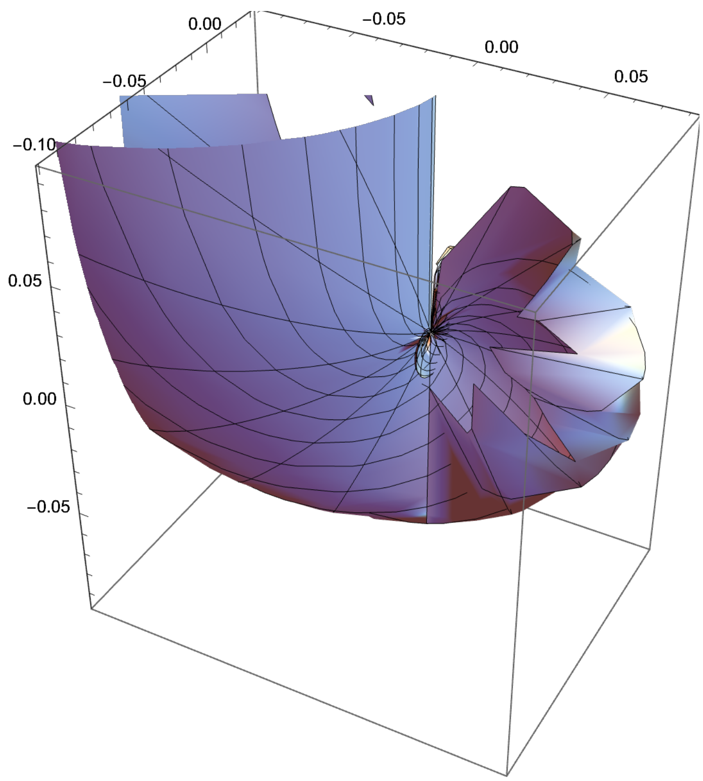
$$\textbf{Solve}\left[\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right) ==\right.$$
$$\left.\left(2\,\sqrt{2}\,\sqrt{\left(2\,\pi^4\,\eta^2\,\text{Sin}[\beta]^2 + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} + \frac{4\,\pi^5\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2} + \frac{\pi^4\,\eta^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)}\right)\Big/\left(\sqrt{-4\,\pi\,\theta^3 + \theta^4 + 64\,\pi^4\,\text{Sin}[\beta]^2}\right),\ \eta\right]$$

$$\left\{\left\{\eta \to -\left(\text{Csc}[\beta]\,\sqrt{\left(192\,\pi^6 + \frac{256\,\pi^8}{(2\,\pi - \theta)^2} - \frac{512\,\pi^7}{2\,\pi - \theta} + 64\,\pi^5\,\theta + 16\,\pi^4\,\theta^2 - 4\,\pi^2\,\theta^4 -\right.}\right.\right.\right.$$
$$4\,\pi\,\theta^5 + \theta^6 - 320\,\pi^5\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] - \frac{512\,\pi^7\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi - \theta)^2} +$$

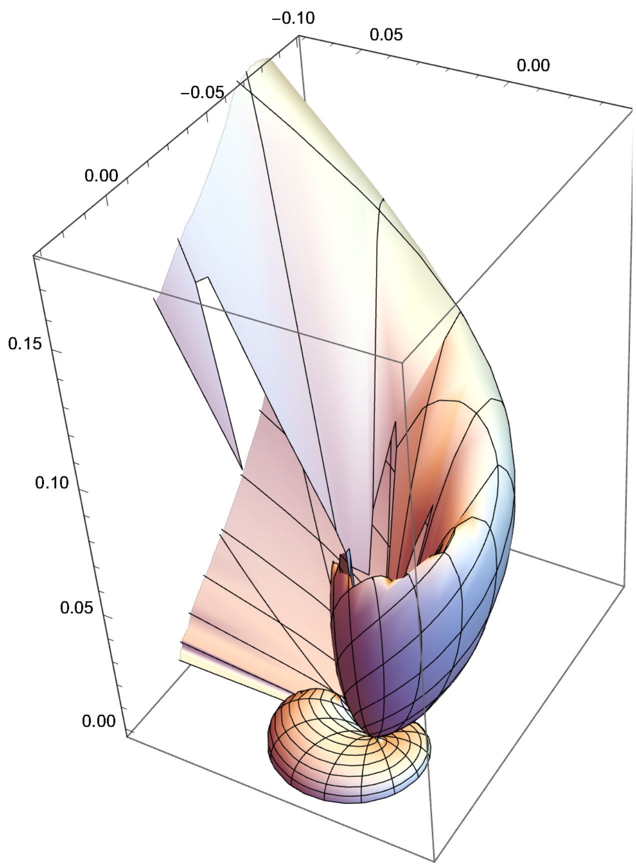
$$\frac{896\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{2\,\pi-\theta}-96\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]-$$
$$16\,\pi^3\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+8\,\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$
$$4\,\pi\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+448\,\pi^6\,\text{Sin}[\beta]^2+\frac{256\,\pi^8\,\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}-$$
$$\frac{1024\,\pi^7\,\text{Sin}[\beta]^2}{2\,\pi-\theta}+192\,\pi^5\,\theta\,\text{Sin}[\beta]^2+80\,\pi^4\,\theta^2\,\text{Sin}[\beta]^2-32\,\pi^3\,\theta^3\,\text{Sin}[\beta]^2-$$
$$4\,\pi^2\,\theta^4\,\text{Sin}[\beta]^2+128\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3+\frac{1792\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(2\,\pi-\theta)^2}-$$
$$\frac{1152\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{2\,\pi-\theta}-32\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3-256\,\pi^6\,\text{Sin}[\beta]^4-$$
$$\frac{5120\,\pi^8\,\text{Sin}[\beta]^4}{(2\,\pi-\theta)^2}+\frac{3072\,\pi^7\,\text{Sin}[\beta]^4}{2\,\pi-\theta}+\frac{1024\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{(2\,\pi-\theta)^2}-$$
$$\left.\left.\frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{2\,\pi-\theta}+\frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{4\,\pi-\theta}\right)\right)\Big/$$
$$\left.\left(\pi^2\,\sqrt{-256\,\pi\,\theta^3+64\,\theta^4+4096\,\pi^4\,\text{Sin}[\beta]^2}\right)\right\},$$

$$\left\{\eta\to\left(\text{Csc}[\beta]\,\sqrt{\left(192\,\pi^6+\frac{256\,\pi^8}{(2\,\pi-\theta)^2}-\frac{512\,\pi^7}{2\,\pi-\theta}+64\,\pi^5\,\theta+16\,\pi^4\,\theta^2-4\,\pi^2\,\theta^4-4\,\pi\,\theta^5+\right.}\right.\right.$$
$$\theta^6-320\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]-\frac{512\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{(2\,\pi-\theta)^2}+$$
$$\frac{896\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]}{2\,\pi-\theta}-96\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]-$$
$$16\,\pi^3\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+8\,\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$
$$4\,\pi\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+448\,\pi^6\,\text{Sin}[\beta]^2+\frac{256\,\pi^8\,\text{Sin}[\beta]^2}{(2\,\pi-\theta)^2}-$$
$$\frac{1024\,\pi^7\,\text{Sin}[\beta]^2}{2\,\pi-\theta}+192\,\pi^5\,\theta\,\text{Sin}[\beta]^2+80\,\pi^4\,\theta^2\,\text{Sin}[\beta]^2-32\,\pi^3\,\theta^3\,\text{Sin}[\beta]^2-$$
$$4\,\pi^2\,\theta^4\,\text{Sin}[\beta]^2+128\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3+\frac{1792\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{(2\,\pi-\theta)^2}-$$
$$\frac{1152\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{2\,\pi-\theta}-32\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3-256\,\pi^6\,\text{Sin}[\beta]^4-$$
$$\frac{5120\,\pi^8\,\text{Sin}[\beta]^4}{(2\,\pi-\theta)^2}+\frac{3072\,\pi^7\,\text{Sin}[\beta]^4}{2\,\pi-\theta}+\frac{1024\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{(2\,\pi-\theta)^2}-$$
$$\left.\left.\frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{2\,\pi-\theta}+\frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^5}{4\,\pi-\theta}\right)\right)\Big/$$
$$\left.\left.\left(\pi^2\,\sqrt{-256\,\pi\,\theta^3+64\,\theta^4+4096\,\pi^4\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{SphericalPlot3D}\Big[\left(\text{Csc}[\beta]\sqrt{\left(192\pi^6+\frac{256\pi^8}{(2\pi-\theta)^2}-\frac{512\pi^7}{2\pi-\theta}+64\pi^5\theta+16\pi^4\theta^2-4\pi^2\theta^4-4\pi\theta^5+\theta^6-320\pi^5\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]-\frac{512\pi^7\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]}{(2\pi-\theta)^2}+\frac{896\pi^6\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]}{2\pi-\theta}-96\pi^4\theta\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]-16\pi^3\theta^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+8\pi^2\theta^3\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi\theta^4\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+448\pi^6\text{Sin}[\beta]^2+\frac{256\pi^8\text{Sin}[\beta]^2}{(2\pi-\theta)^2}-\frac{1024\pi^7\text{Sin}[\beta]^2}{2\pi-\theta}+192\pi^5\theta\,\text{Sin}[\beta]^2+80\pi^4\theta^2\text{Sin}[\beta]^2-32\pi^3\theta^3\text{Sin}[\beta]^2-4\pi^2\theta^4\text{Sin}[\beta]^2+128\pi^5\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3+\frac{1792\pi^7\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{(2\pi-\theta)^2}-\frac{1152\pi^6\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{2\pi-\theta}-32\pi^4\theta\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3-256\pi^6\text{Sin}[\beta]^4-\frac{5120\pi^8\text{Sin}[\beta]^4}{(2\pi-\theta)^2}+\frac{3072\pi^7\text{Sin}[\beta]^4}{2\pi-\theta}+\frac{1024\pi^7\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^5}{(2\pi-\theta)^2}-\frac{512\pi^6\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^5}{2\pi-\theta}+\frac{512\pi^6\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^5}{4\pi-\theta}\right)}\right)\Big/\left(\pi^2\sqrt{-256\pi\theta^3+64\theta^4+4096\pi^4\text{Sin}[\beta]^2}\right),\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$


0.00
−0.05
−0.10
−0.05
0.00
0.05
0.05
0.00
−0.05

$$\text{SphericalPlot3D}\Big[\left(\text{Csc}[\beta]\sqrt{\left(192\pi^6+\frac{256\pi^8}{(2\pi-\theta)^2}-\frac{512\pi^7}{2\pi-\theta}+64\pi^5\theta+16\pi^4\theta^2-4\pi^2\theta^4-4\pi\theta^5+\theta^6-320\pi^5\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]-\frac{512\pi^7\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{(2\pi-\theta)^2}+\frac{896\pi^6\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]}{2\pi-\theta}-96\pi^4\theta\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]-16\pi^3\theta^2\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+8\pi^2\theta^3\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\pi\theta^4\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]+448\pi^6\,\text{Sin}[\beta]^2+\frac{256\pi^8\,\text{Sin}[\beta]^2}{(2\pi-\theta)^2}-\frac{1024\pi^7\,\text{Sin}[\beta]^2}{2\pi-\theta}+192\pi^5\theta\,\text{Sin}[\beta]^2+80\pi^4\theta^2\,\text{Sin}[\beta]^2-32\pi^3\theta^3\,\text{Sin}[\beta]^2-4\pi^2\theta^4\,\text{Sin}[\beta]^2+128\pi^5\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3+\frac{1792\pi^7\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{(2\pi-\theta)^2}-\frac{1152\pi^6\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{2\pi-\theta}-32\pi^4\theta\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3-256\pi^6\,\text{Sin}[\beta]^4-\frac{5120\pi^8\,\text{Sin}[\beta]^4}{(2\pi-\theta)^2}+\frac{3072\pi^7\,\text{Sin}[\beta]^4}{2\pi-\theta}+\frac{1024\pi^7\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{(2\pi-\theta)^2}-\frac{512\pi^6\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{2\pi-\theta}+\frac{512\pi^6\sqrt{(4\pi-\theta)\,\theta}\;\text{Sin}[\beta]^5}{4\pi-\theta}\right)}\right)\Big/\left(\pi^2\sqrt{-256\pi\theta^3+64\theta^4+4096\pi^4\,\text{Sin}[\beta]^2}\right),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\pi,\ 2\pi\}\Big]$$


-0.10
0.05
0.00
-0.05
0.00
0.15
0.10
0.05
0.00

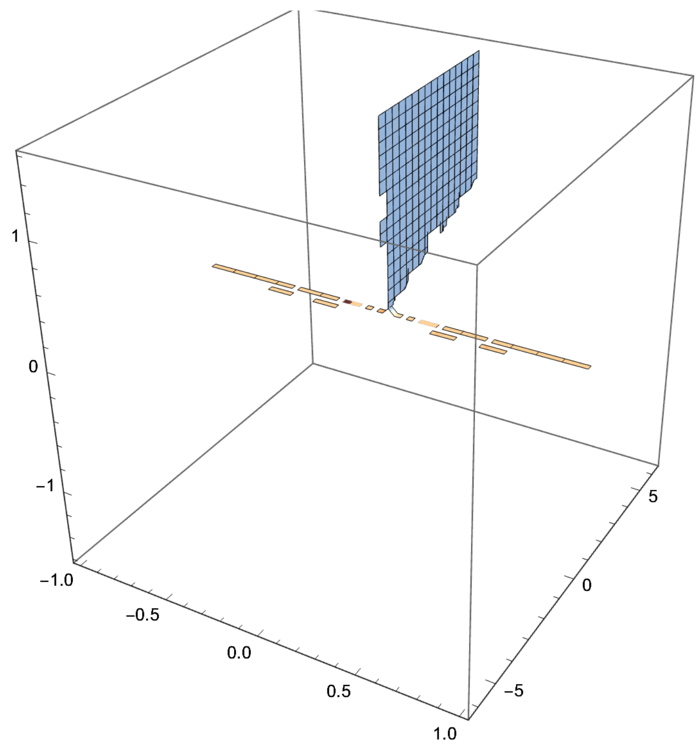
$$
\begin{aligned}
&\mathtt{Export}\Big[\text{"sheath.3ds"},\\
&\quad \mathtt{SphericalPlot3D}\Bigg[\Bigg(\mathtt{Csc}[\beta]\sqrt{\Bigg(192\,\pi^6+\frac{256\,\pi^8}{(2\,\pi-\theta)^2}-\frac{512\,\pi^7}{2\,\pi-\theta}+64\,\pi^5\,\theta+16\,\pi^4\,\theta^2-4\,\pi^2\,\theta^4-}\\
&\qquad\qquad 4\,\pi\,\theta^5+\theta^6-320\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]-\frac{512\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]}{(2\,\pi-\theta)^2}+\\
&\qquad\qquad \frac{896\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]}{2\,\pi-\theta}-96\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]-\\
&\qquad\qquad 16\,\pi^3\,\theta^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]+8\,\pi^2\,\theta^3\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]+\\
&\qquad\qquad 4\,\pi\,\theta^4\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]+448\,\pi^6\,\mathtt{Sin}[\beta]^2+\frac{256\,\pi^8\,\mathtt{Sin}[\beta]^2}{(2\,\pi-\theta)^2}-\\
&\qquad\qquad \frac{1024\,\pi^7\,\mathtt{Sin}[\beta]^2}{2\,\pi-\theta}+192\,\pi^5\,\theta\,\mathtt{Sin}[\beta]^2+80\,\pi^4\,\theta^2\,\mathtt{Sin}[\beta]^2-32\,\pi^3\,\theta^3\,\mathtt{Sin}[\beta]^2-\\
&\qquad\qquad 4\,\pi^2\,\theta^4\,\mathtt{Sin}[\beta]^2+128\,\pi^5\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^3+\frac{1792\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^3}{(2\,\pi-\theta)^2}-\\
&\qquad\qquad \frac{1152\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^3}{2\,\pi-\theta}-32\,\pi^4\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^3-256\,\pi^6\,\mathtt{Sin}[\beta]^4-\\
&\qquad\qquad \frac{5120\,\pi^8\,\mathtt{Sin}[\beta]^4}{(2\,\pi-\theta)^2}+\frac{3072\,\pi^7\,\mathtt{Sin}[\beta]^4}{2\,\pi-\theta}+\frac{1024\,\pi^7\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^5}{(2\,\pi-\theta)^2}-\\
&\qquad\qquad \frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^5}{2\,\pi-\theta}+\frac{512\,\pi^6\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathtt{Sin}[\beta]^5}{4\,\pi-\theta}\Bigg)\Bigg)\Bigg/\\
&\quad\left(\pi^2\,\sqrt{-256\,\pi\,\theta^3+64\,\theta^4+4096\,\pi^4\,\mathtt{Sin}[\beta]^2}\right),\ \{\beta,-\pi/2,\\
&\quad \pi/2\},\ \{\theta,\\
&\quad -2\,\pi,\\
&\quad 2\,\pi\}\Bigg]\Big]
\end{aligned}
$$

```
sheath.3ds
```

"sheath.obj"

$$\text{ContourPlot3D}\Big[\Big\{-\Big(2\sqrt{2}\sqrt{\Big(2\pi^4\eta^2\,\text{Sin}[\beta]^2+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}+\frac{4\pi^5\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)}\Big)\Big/\Big(\sqrt{-4\pi\theta^3+\theta^4+64\pi^4\,\text{Sin}[\beta]^2}\Big),$$

$$\Big(2\sqrt{2}\sqrt{\Big(2\pi^4\eta^2\,\text{Sin}[\beta]^2+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}+\frac{4\pi^5\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta^2}+\frac{\pi^4\eta^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)}\Big)\Big/\Big(\sqrt{-4\pi\theta^3+\theta^4+64\pi^4\,\text{Sin}[\beta]^2}\Big)\Big\},\{\eta,-1,1\},\{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



$$\text{Solve}\Big[\frac{\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{2\pi}\right)}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\theta\Big]$$

$$\Big\{\Big\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big\},\Big\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big\}\Big\}$$

$$\text{Solve}\left[\frac{\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{2\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{2\pi}\right)}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ \beta\right]$$

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{r\,\theta}{\pi\left(r-\sqrt{\left(r\,\hat{}\,2-\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\,\hat{}\,2\right)}\right)}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ r\right]$$

$$\{\}$$

$$\text{Solve}\left[\frac{r\,\theta}{\pi\left(r-\sqrt{\left(r\,\hat{}\,2-\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\,\hat{}\,2\right)}\right)}==\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}},\ \theta\right]$$

$$\left\{\left\{\theta\to 2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\theta\to 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right\},\right.$$

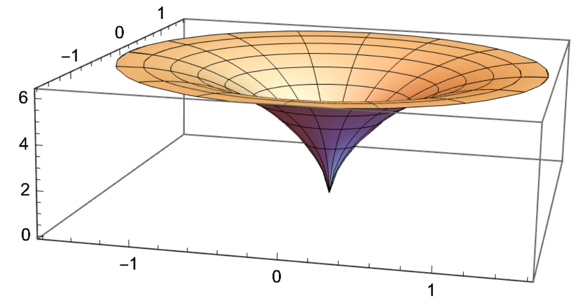
$$\left\{\theta\to 2\left(\frac{\pi^2\,\text{Sin}[\beta]^2}{3^{1/3}\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}-\frac{\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}{3^{2/3}}\right)\right\},$$

$$\left\{\theta\to-\frac{\left(1+\mathbb{i}\sqrt{3}\right)\pi^2\,\text{Sin}[\beta]^2}{3^{1/3}\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{\left(1-\mathbb{i}\sqrt{3}\right)\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}{3^{2/3}}\right\},$$

$$\left.\left\{\theta\to-\frac{\left(1-\mathbb{i}\sqrt{3}\right)\pi^2\,\text{Sin}[\beta]^2}{3^{1/3}\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{\left(1+\mathbb{i}\sqrt{3}\right)\left(-9\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\sqrt{27\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}{3^{2/3}}\right\}\right\}$$

```
RevolutionPlot3D[2 (π^2 Sin[β]^2 / (3^(1/3) (-9 π^3 Sin[β]^2 + √3 √(27 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) -
    (-9 π^3 Sin[β]^2 + √3 √(27 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3) / 3^(2/3)), {β, -π / 2, π / 2}]
```

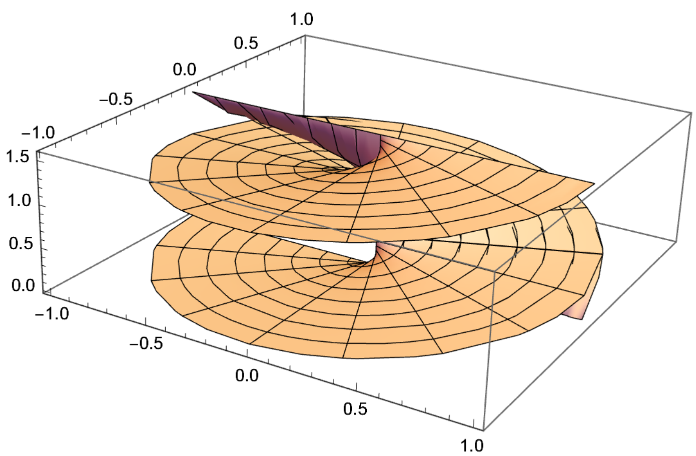
$$\text{RevolutionPlot3D}\left[2\left(\frac{\pi^2\,\text{Sin}[\beta]^2}{3^{1/3}\left(-9\,\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\,\sqrt{27\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}-\frac{\left(-9\,\pi^3\,\text{Sin}[\beta]^2+\sqrt{3}\,\sqrt{27\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}{3^{2/3}}\right),\{\beta,-\pi/2,\pi/2\}\right]$$



$$\text{Solve}\left[\frac{r\,\theta}{\pi\left(r-\sqrt{\left(r\,\hat{}\,2-\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\,\hat{}\,2\right)}\right)}==\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\beta\right]$$

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{r\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi\left(2\,\pi\,r-\sqrt{r^2\,(2\,\pi-\theta)^2}\right)}\right]\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\frac{r\,\theta\,\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi\left(2\,\pi\,r-\sqrt{r^2\,(2\,\pi-\theta)^2}\right)}\right],\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



For n = 3,

$$\text{Solve}\left[x^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)+y^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)==\right.$$

$$\left.z^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right),\ x\right]$$

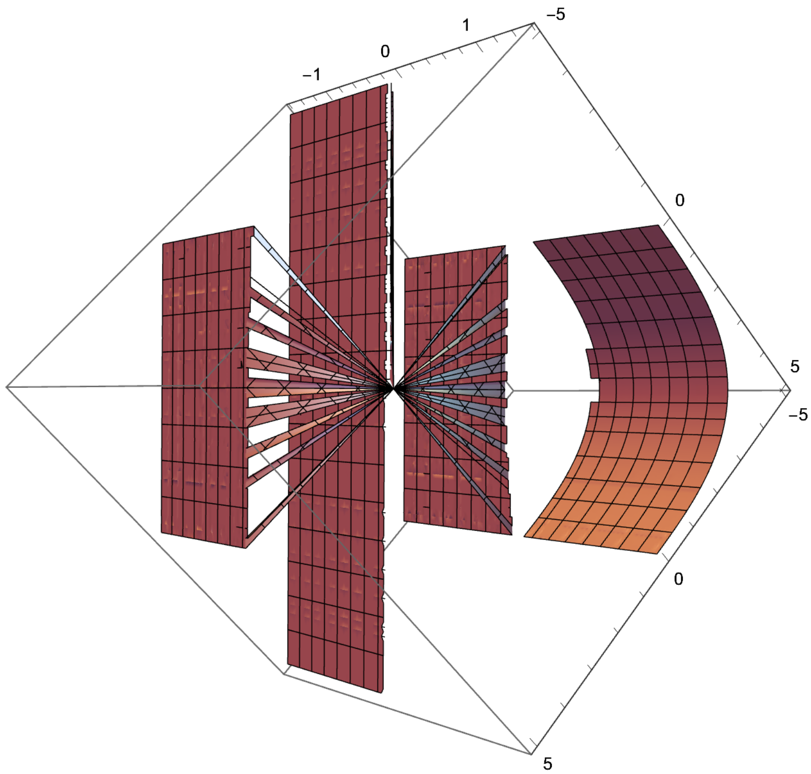
$$\left\{\left\{x\to\left(-y^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}}\right\}\right\}$$

$$r:=\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\theta:=2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

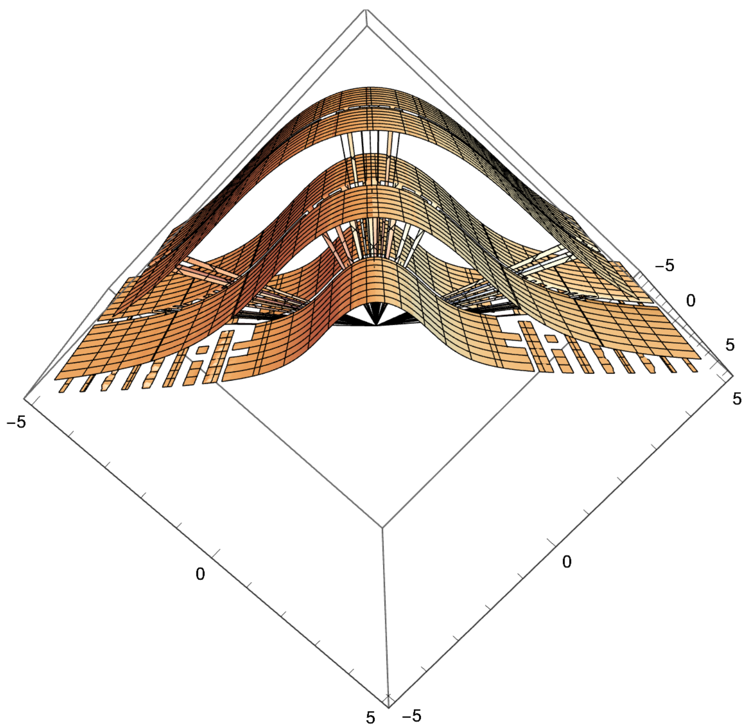
$$\text{ContourPlot3D}\left[\left(-y^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}},\right.$$

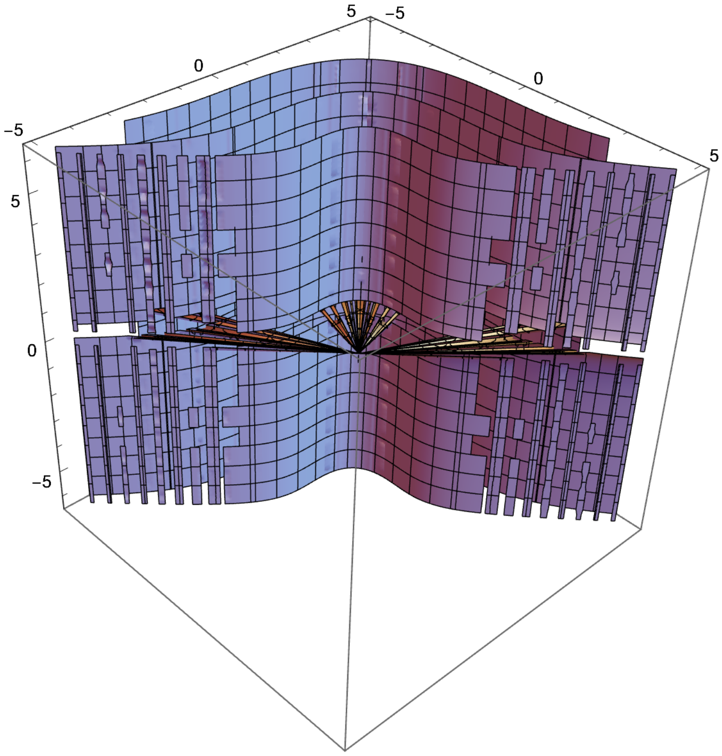
$$\left.\{y,-5,5\},\{z,-5,5\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\beta:=\text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$\texttt{ContourPlot3D}\left[\left(-y^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}},\right.$$
$$\left.\{y,-5,5\},\{z,-5,5\},\{\theta,-2\,\pi,2\,\pi\}\right]$$





$$\text{Solve}\left[x^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)+y^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right)==\right.$$

$$\left.z^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}\right),\ y\right]$$

$$\left\{\left\{y\to\left(-x^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\pi r-r\theta}{2\pi}\right)}+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{(4\pi-\theta)\,\theta}}}}\right\}\right\}$$

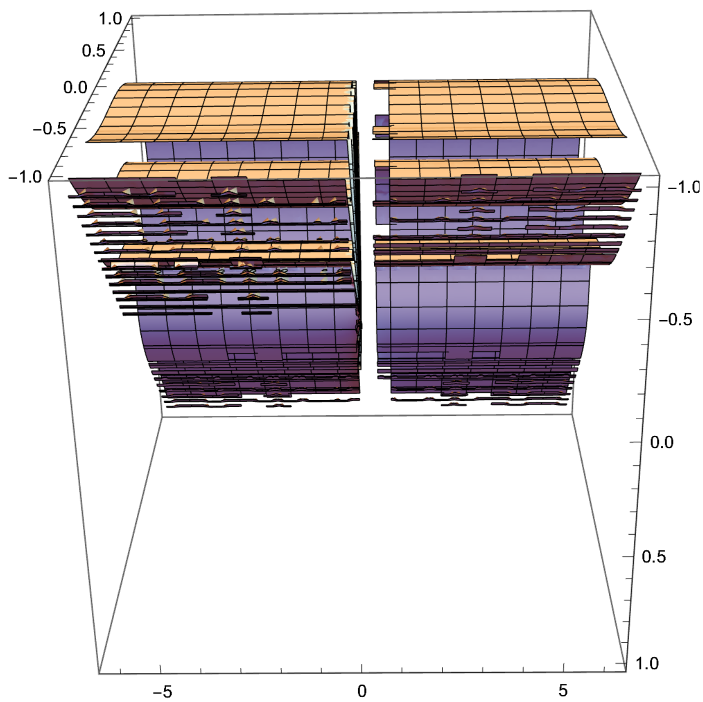
$$\text{Solve}\left[r==\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta},\ \theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi\left(r^2-\sqrt{-r^2+r^4}\right)}{r^2}\right\},\ \left\{\theta\to\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}\right\}\right\}$$

$$\theta:=\frac{2\pi\left(r^2+\sqrt{-r^2+r^4}\right)}{r^2}$$

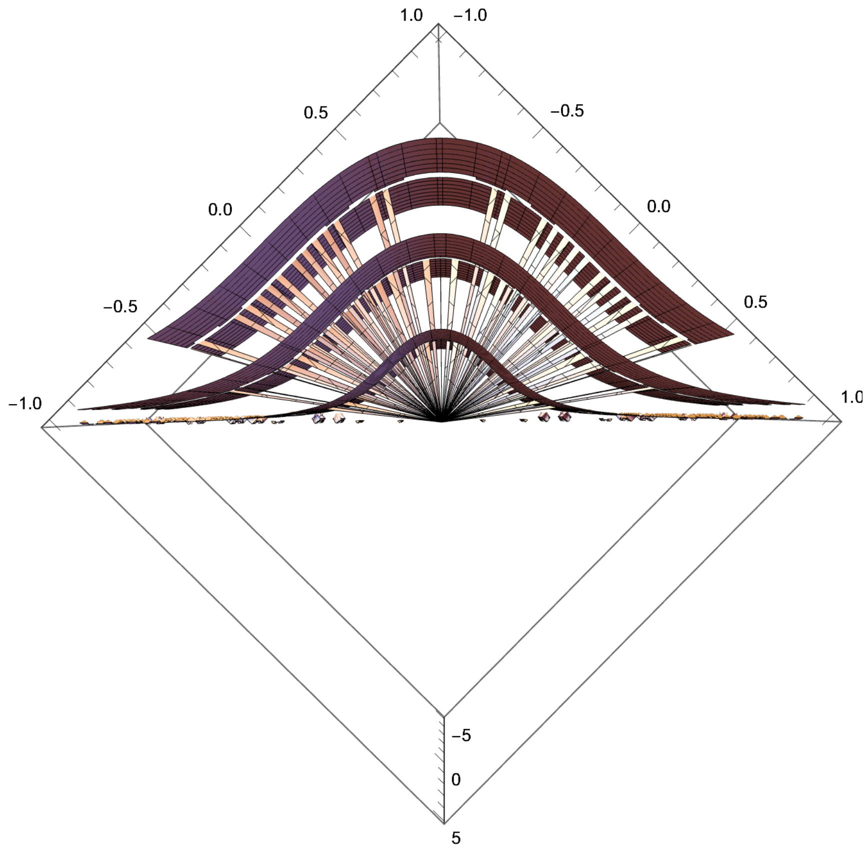
$$\texttt{ContourPlot3D}\left[\left(-x^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}},\right.$$

$$\left.\{x,-1,1\},\{z,-1,1\},\{r,-2\,\pi,2\,\pi\}\right]$$



$$\text{ContourPlot3D}\left[\left(-x^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}+z^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}},\right.$$

$$\left.\{x,-1,1\},\{z,-1,1\},\{r,-5,5\}\right]$$



$$\text{Solve}\left[x\,{}^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)+y\,{}^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right)==\right.$$

$$\left.z\,{}^\wedge\left(\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\right),z\right]$$

$$\left\{\left\{z\to\left(x^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}+y^{\frac{r\,\theta}{\pi\left(r-\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)}+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}\right)^{\frac{1}{2+\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{(4\,\pi-\theta)\,\theta}}}}\right\}\right\}$$

Form and Formality (Gibson - Stillwell - Emmerson Formulation of Fermat's Last Theorem)

It is important to note that it is an area of the retina that is affected by radiant energy, not just a single point. Gibson’s reason for believing that the geometry of transformations is important to visual

perception is that, “transformations are usually represented on a plane, however, whereas the retinal image is a projection on a curved surface,” (The Visual World, 153) **(Gibson, James, J.. The Perception of the Visual World. Cambridge, Mass.: The Riverside Press, 1950. Print. (All further references to this source will be cited parenthetically in the text)**.), and that, “the actual retinal image on a curved surface is related to the hypothetical image on a picture-plane only by such a non-rigid transformation” (The Visual World, 153). A transformation in geometry is the mapping of one point onto another. Isometries, “are defined as the transformations that preserve distance” (The Four Pillars of Geometry, 145) **(Stillwell, John. The Four Pillars of Geometry (Undergraduate Texts in Mathematics). 1 ed. New York: Springer, 2005. Print.)**. In essence, the distance of the initial radius is preserved through the transformation of a circle into a cone so long as the height is orthogonal to the base of the cone and the initial radius is always the slant of the cone. Next, we see the diagram to which Gibson was referring when considering the notion of a transformation onto a picture plane.

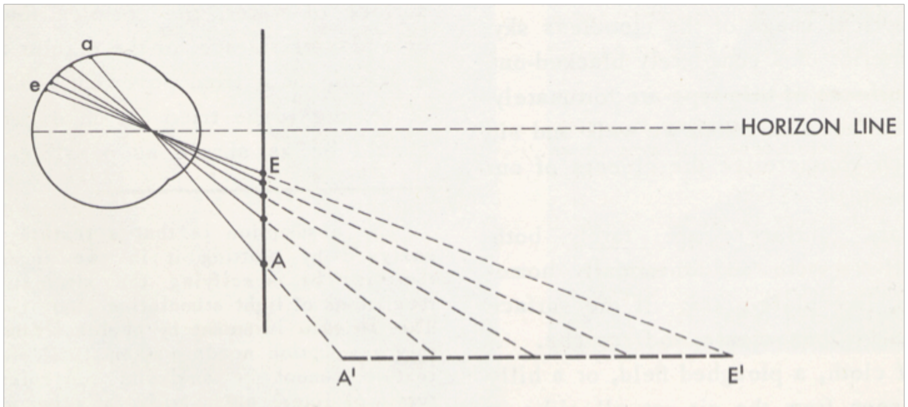


FIGURE 28. A Picture-Gradient, its Retinal Gradient, and the Longitudinal Surface Corresponding to Both

(The Visual World, 79).

In being preserved, the initial radius is considered an invariant. Stillwell comments about the picture plane that, “the line from (-1, 1) to (n, 0) crosses the y-axis at y = n/(n+1)” (The Four Pillars of Geometry, 91). This supposes that the eye is approximated like a point and that it is at the position of (-1, 1) in the Cartesian coordinate system. In the “coordinate system” described by The Geometric Pattern of Perception Theorems (Emmerson, 2009), the y-axis in general is described by the height of a cone. In relation to this diagram, in terms of the y intercept, the height of the cone would be changing with respect to both the initial radius (slant of the cone) and the angle taken out of the initial circle (the angle made between the line from the eye to the x-axis changes is a function of solely the angular amount taken out of the initial circle). Further mathematical analysis of optical infinity with relation to the horizon line and geometric system is needed, but perceived difference in circumferences as an arc length will be a useful formula. Gibson says that, “only because light is structured by the substantial environment can it contain information about it” (Ecological Approach, 86). The basic equation for an arc length as a difference in circumferences describes an even surface layout. Thus, for even surfaces, the equation that delivers that surface may be used as a linguistic device (in combination with rotation, or specifying the “adumbration” of the viewed surface) for describing the structuring of the light in the environment relevant to the perception of even surface layout. The expression for “phenomenal

velocity" tells us "how" motion in general is essentially structured, thus this includes the motion of light. However, this still needs specific interpretation.

From Stillwell ' s statement,
y = n / (n + 1) . From The Geometric Pattern of Perception (Emmerson, 2009),
$$\eta = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} \tag{240}$$

$$\text{Solve}\left[\left\{\frac{2\pi r - r\theta}{2\pi}\text{^}n + \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\text{^}n == r\text{^}n,\ n > 2\right\},\ \{\theta\}\right]$$

$$\text{Solve}\left[\left\{(2\pi)^{-n}\,(2\pi r - r\theta)^n + (2\pi)^{-n}\left(4\pi r^2\theta - r^2\theta^2\right)^{n/2} == r^n,\ n > 2\right\},\ \{\theta\}\right]$$

$$\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} = n / (n+1) \tag{241}$$

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == n / (n+1),\ n\right]$$

$$\left\{\left\{n \to \frac{\sqrt{r^2\,(4\pi - \theta)\,\theta}}{2\pi - \sqrt{r^2\,(4\pi - \theta)\,\theta}}\right\}\right\} \tag{242}$$

$$\text{Solve}\left[2 == \frac{\sqrt{r^2\,(4\pi - \theta)\,\theta}}{2\pi - \sqrt{r^2\,(4\pi - \theta)\,\theta}},\ r\right]$$

$$\left\{\left\{r \to -\frac{4\pi}{3\sqrt{4\pi\theta - \theta^2}}\right\},\ \left\{r \to \frac{4\pi}{3\sqrt{4\pi\theta - \theta^2}}\right\}\right\}$$

Therefore, $r > \frac{4\pi}{3\sqrt{4\pi\theta - \theta^2}}$, and $\theta > \frac{2\pi\left(3r^2 + \sqrt{-4r^2 + 9r^4}\right)}{3r^2}$

$$x\text{^}n + y\text{^}n = z\text{^}n = \frac{2\pi r - r\theta}{2\pi}\text{^}n + \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\text{^}n == r\text{^}n == \text{Indeterminate} == \text{Indeterminate} \tag{243}$$

Indeterminate indeed equals an indeterminate, but where and how? There are still other configurations that may lead to trying to solve for a complex infinity. Complex infinity has specific geometric expression available in *The Geometric Pattern of Perception (Emmerson, 2009).*

$$r := \frac{2\pi\sqrt{(4\pi - \theta)\,\theta}}{(4\pi - \theta)\,\theta}$$

$$\texttt{r} := \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]+4\pi^2\,\texttt{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\texttt{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\texttt{Sin}[\beta]^2+8\pi^2\theta\,\texttt{Sin}[\beta]^2\right)$$

$$\beta := \texttt{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

```
<< Graphics'ParametricPlot3D';

<< Graphics`ParametricPlot3D';
```

$$\texttt{CylindricalPlot3D}\left[\frac{2\pi\,\texttt{r}-\texttt{r}\,\theta}{2\pi}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}+\frac{\sqrt{4\pi\,\texttt{r}^2\theta-\texttt{r}^2\theta^2}}{2\pi}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}} == \texttt{r}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}},\ \{\texttt{r},-1,1\},\ \{\theta,-2\pi,2\pi\}\right]$$

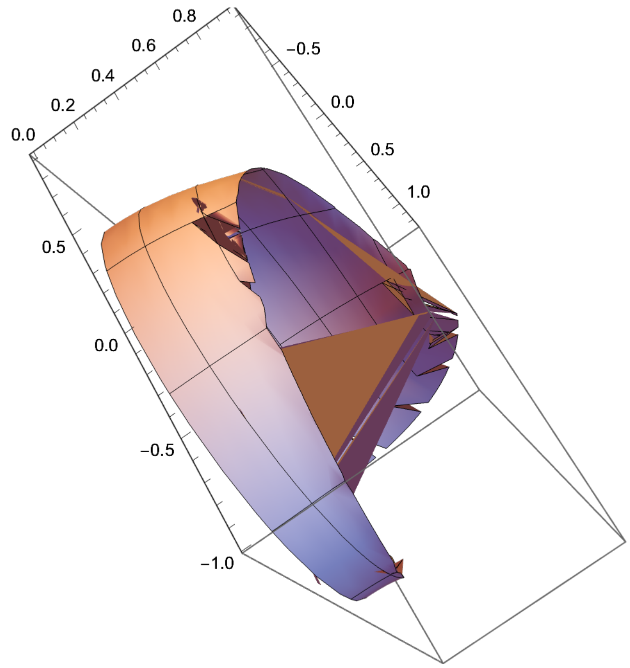
Get::noopen : Cannot open Graphics`ParametricPlot3D. ≫

$$\texttt{CylindricalPlot3D}\left[(2\pi)^{-\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}}\,(2\pi r-r\theta)^{\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}}+(2\pi)^{-\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}}\left(4\pi r^2\theta-r^2\theta^2\right)^{\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\left(2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}\right)}} == r^{\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}},\ \{r,-1,1\},\ \{\theta,-2\pi,2\pi\}\right]$$

$$\texttt{Solve}\left[\frac{2\pi\,\texttt{r}-\texttt{r}\,\theta}{2\pi}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}+\frac{\sqrt{4\pi\,\texttt{r}^2\theta-\texttt{r}^2\theta^2}}{2\pi}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}} == \texttt{r}\,\text{^}\,\frac{\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{\texttt{r}^2\,(4\pi-\theta)\,\theta}},\ \beta\right]$$

{{}}

$$\text{SphericalPlot3D}\left[r\wedge\frac{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}}{2\,\pi-\sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



"fermat.obj",

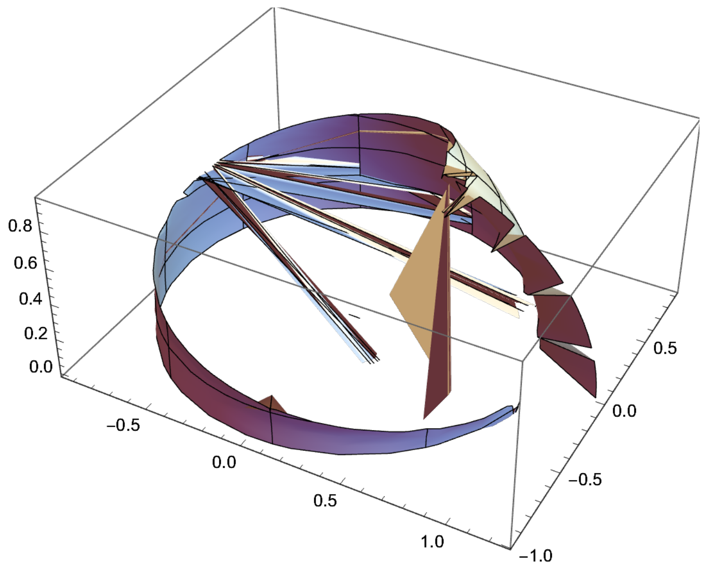
$$\text{Export}\Big[\text{"fermat.obj"},$$
$$\text{SphericalPlot3D}\left[r\wedge\frac{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}}{2\,\pi-\sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]\Big]$$

fermat.obj

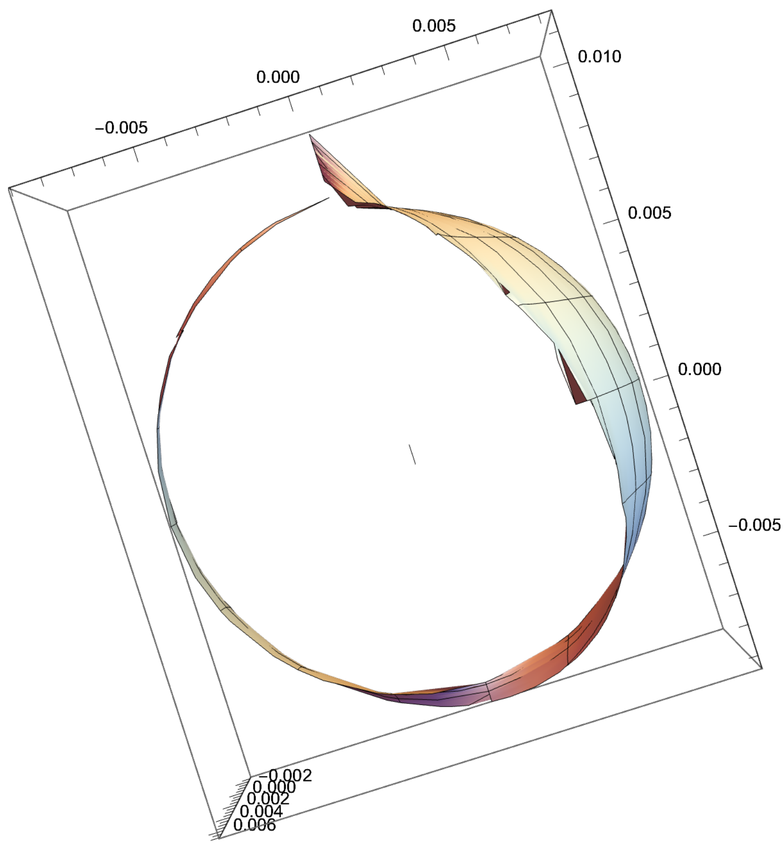
$$\text{Export}\Big[\text{"fermat4.3ds"},$$
$$\text{SphericalPlot3D}\left[.009\,r\wedge\frac{\sqrt{r^2\ (4\,\pi-\theta)\ \theta}}{2\,\pi-\sqrt{r^2\ (4\,\pi-\theta)\ \theta}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]\Big]$$

fermat4.3ds

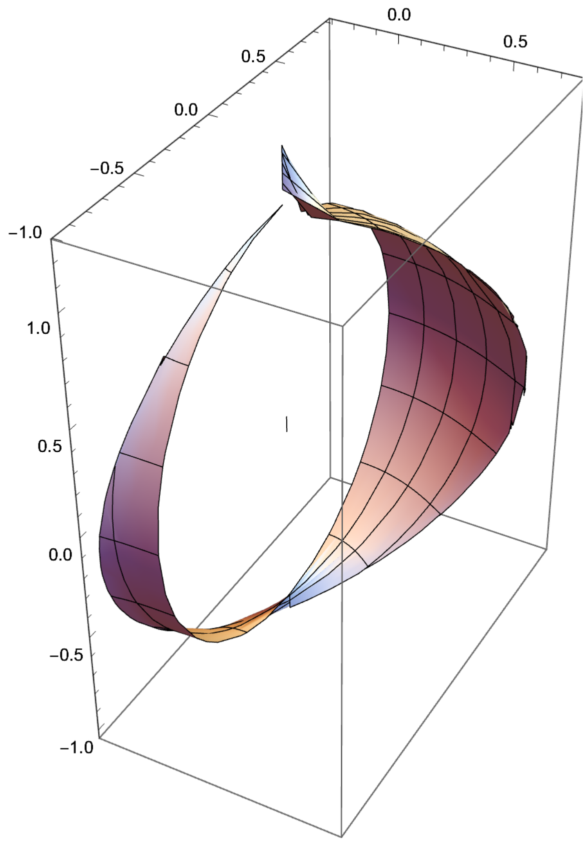
$$\texttt{SphericalPlot3D}\left[r^{\wedge}\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\beta,-\pi/2,\pi/2\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



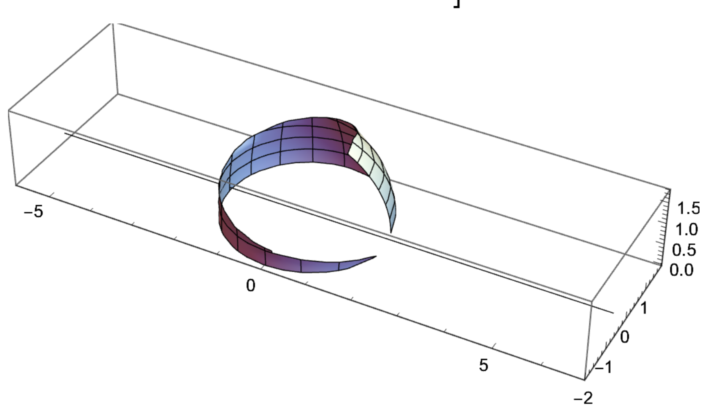
$$\texttt{SphericalPlot3D}\left[.009\,r^{\wedge}\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\}\right]$$



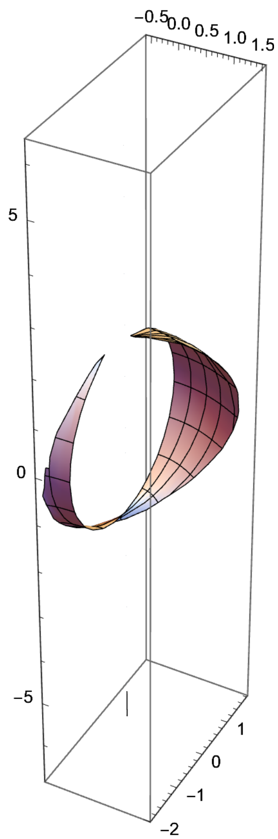
$$\text{SphericalPlot3D}\left[r^{\wedge}\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,r-r\,\theta}{2\,\pi}^{\wedge}\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}^{\wedge}\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\right.$$
$$\left.\{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



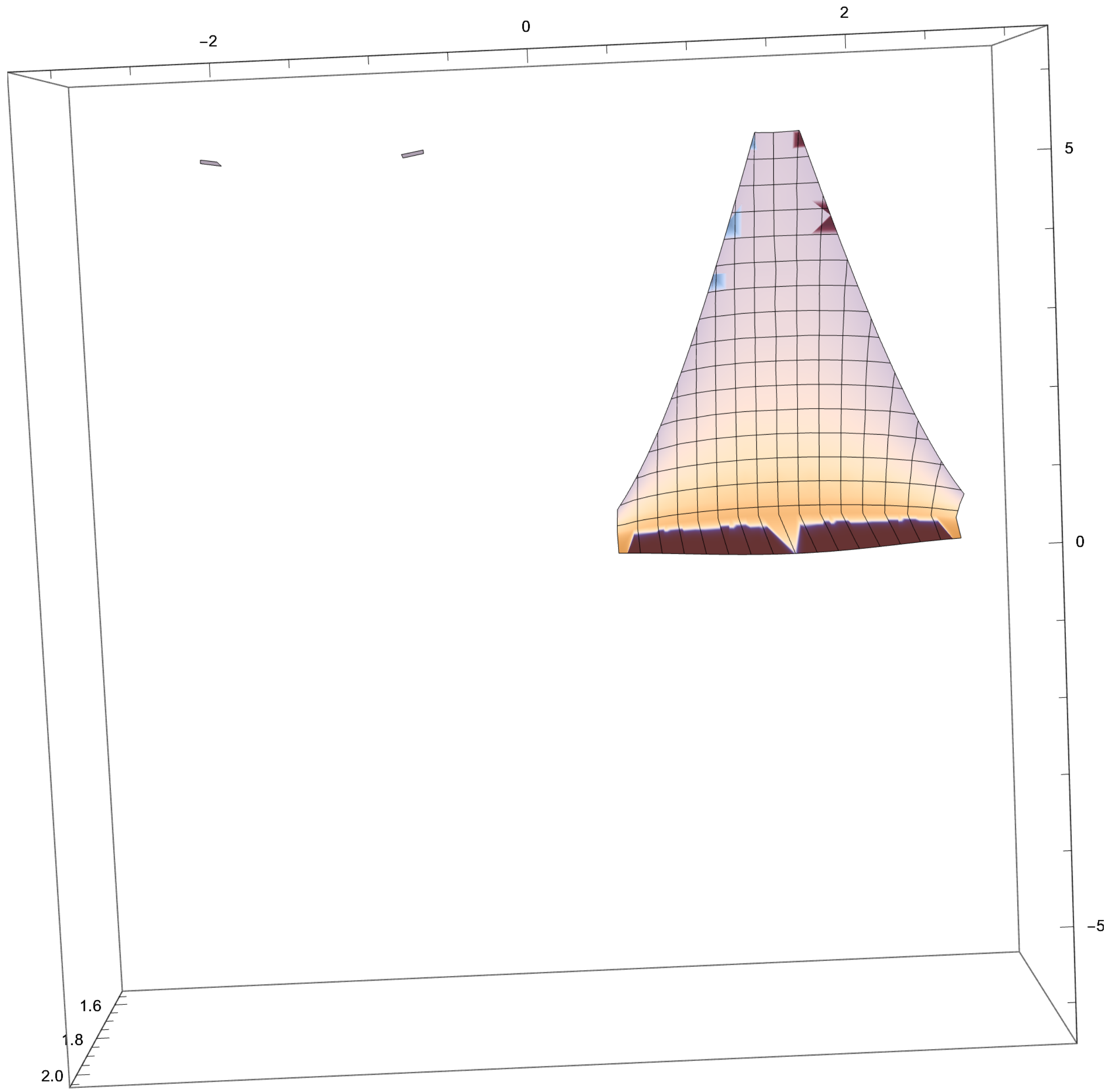
```
SphericalPlot3D[
```
$$\frac{2\pi r - r\theta}{2\pi}{}^{\wedge}\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}{}^{\wedge}\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}},$$
```
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
Export["pendantumuck.obj",
 Plot3D[
```
$$\frac{2\pi r - r\theta}{2\pi}{}^{\wedge}\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}}+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}{}^{\wedge}\frac{\sqrt{r^2\,(4\pi-\theta)\,\theta}}{2\pi-\sqrt{r^2\,(4\pi-\theta)\,\theta}},$$
```
  {β, -π, π}, {θ, -2 π, 2 π}]]
```

pendantumuck.obj

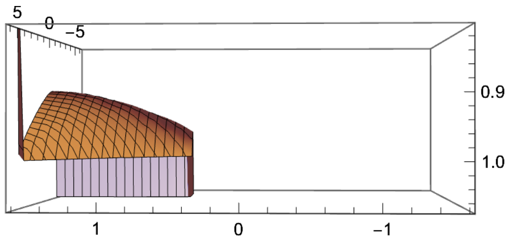
$$\text{Plot3D}\left[\frac{2\pi r - r\theta}{2\pi}\wedge\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}}+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\wedge\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}},\right.$$
$$\left.\{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi r - r\theta}{2\pi}\wedge\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}}+\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\wedge\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}} ==\right.$$
$$\left. r\wedge\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}}, \beta\right]$$

$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right]$$

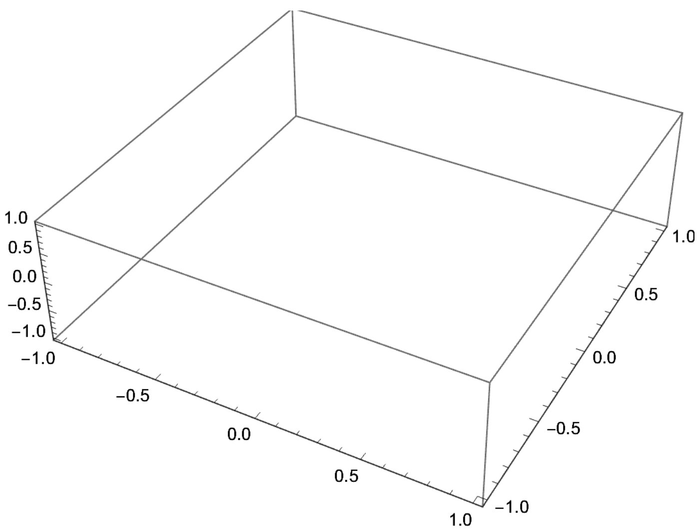
$$\text{Plot3D}\left[r \wedge \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi - \sqrt{r^2\ (4\pi - \theta)\ \theta}},\ \{\theta, -2\pi, 2\pi\},\ \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{RevolutionPlot3D}\left[r \wedge \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi - \sqrt{r^2\ (4\pi - \theta)\ \theta}},\ \{\theta, -2\pi, 2\pi\}\right]$$

Power::indet : Indeterminate expression $(0. + 0.\,i)^{0.+0.\,i}$ encountered. ≫

Power::indet : Indeterminate expression $(0. + 0.\,i)^{0.+0.\,i}$ encountered. ≫



$$\texttt{Export}\left[\texttt{"ringquest.obj"},\ \texttt{RevolutionPlot3D}\left[\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\wedge\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\wedge\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}},\ \{\theta,\ -\pi/2,\ \pi/2\}\right]\right]$$

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫

```
ringquest.obj
```

$$\texttt{RevolutionPlot3D}\left[\left(\frac{2\,\pi\,r - r\,\theta}{2\,\pi}\wedge\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}+\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\wedge\frac{\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{2\,\pi-\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}\right),\ \{\theta,\ -\pi/2,\ \pi/2\}\right]$$

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

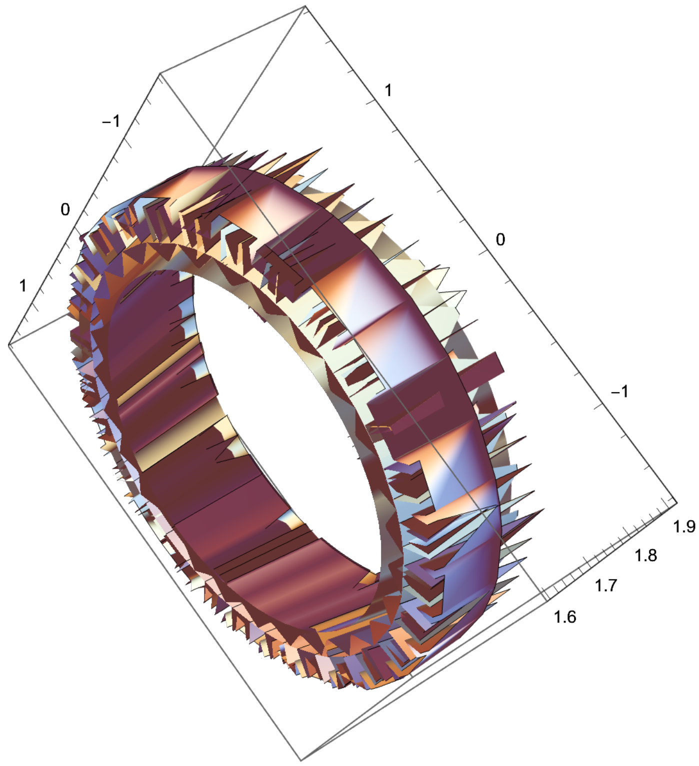
Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



$$\text{Solve}\Big[(2\pi)^{-\frac{\sqrt{\frac{(4\pi-\theta)\,\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}{2\pi-\sqrt{\frac{(4\pi-\theta)\,\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}}$$

$$\Bigg(\bigg(2\pi\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)-$$

$$\left(\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\right)\Big/\ \Big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+$$

$$8\pi^2\theta\,\text{Sin}[\beta]^2\Big)^{\frac{\sqrt{\frac{(4\pi-\theta)\,\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}{2\pi-\sqrt{\frac{(4\pi-\theta)\,\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}}+$$

$$(2\pi)^{-\frac{\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}{2\pi-\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}}$$

$$\left(\left(4\pi\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-\left(\theta^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2\right)^{\frac{\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}{2\left(2\pi-\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}\right)}} ==$$

$$\left(\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)\right)^{\frac{\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}{2\pi-\sqrt{\frac{(4\pi-\theta)\theta\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2}{\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2}}}}, \theta]$$

{{}}

$$\frac{2\pi r-r\theta}{2\pi}{}^\wedge\,\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}}+\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}{}^\wedge\,\frac{\sqrt{r^2(4\pi-\theta)\theta}}{2\pi-\sqrt{r^2(4\pi-\theta)\theta}}$$

Indeterminate

$$r \wedge \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi - \sqrt{r^2\ (4\pi - \theta)\ \theta}}$$

Indeterminate

$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right]$$

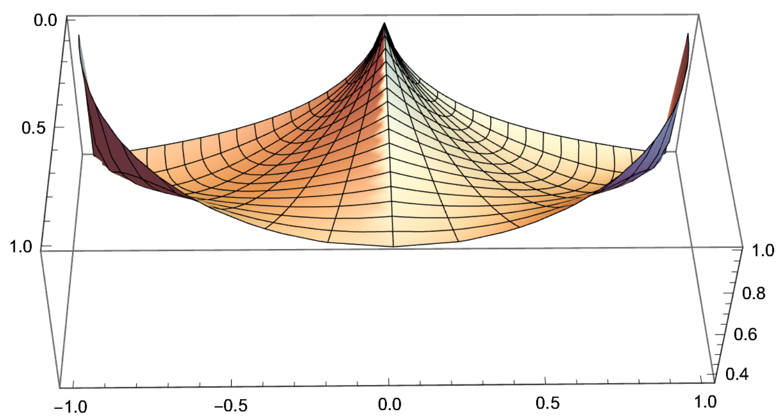
$$\text{Simplify}\left[r^{\frac{\sqrt{2}\ \sqrt{r^2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}{2\pi-\sqrt{2}\ \sqrt{r^2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}}}\right]$$

$$r^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}}$$

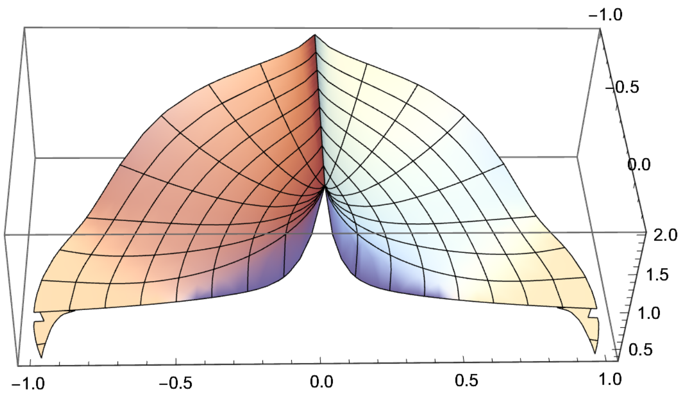
$$\text{Simplify}\left[\frac{2\pi r - r\theta}{2\pi} \wedge \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi - \sqrt{r^2\ (4\pi - \theta)\ \theta}} + \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} \wedge \frac{\sqrt{r^2\ (4\pi - \theta)\ \theta}}{2\pi - \sqrt{r^2\ (4\pi - \theta)\ \theta}}\right]$$

$$\left(-r\sqrt{\text{Cos}[\beta]^2}\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}} + \left(r^2\,\text{Sin}[\beta]^2\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{2-2\sqrt{r^2\,\text{Sin}[\beta]^2}}}$$

$$\text{RevolutionPlot3D}\left[r^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}},\ \{r, -1, 1\},\ \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{RevolutionPlot3D}\left[\left(-r\sqrt{\text{Cos}[\beta]^2}\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}}+\left(r^2\,\text{Sin}[\beta]^2\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{2-2\sqrt{r^2\,\text{Sin}[\beta]^2}}},\ \{r,-1,1\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\text{Solve}\left[r^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}}==\left(-r\sqrt{\text{Cos}[\beta]^2}\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{1-\sqrt{r^2\,\text{Sin}[\beta]^2}}}+\left(r^2\,\text{Sin}[\beta]^2\right)^{\frac{\sqrt{r^2\,\text{Sin}[\beta]^2}}{2-2\sqrt{r^2\,\text{Sin}[\beta]^2}}},\ \theta\right]$$

{{}}

Proven equality within the system of a cone for x^n + y^n = z^n, no matter what n is. Thus, because it is true for n<2, it is true for n>2.

$\Delta x\Delta p = (2\,\pi\,r - 2\,\pi\,x)\ (m_1\,v_1 - m_2\,v_2)$

if, $m_1 = m_2$

if, $v_1 = v_2$

if both

if $v_1 =$

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\ t\right] ==$$

$$\text{Solve}\left[\left(\sqrt{\left(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2}\right) == v,\ \theta\right]$$

{}

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{(v)^2}{c^2}}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\,\sqrt{4\,\pi\,r-r\,\theta}}}{2\,\pi}==r\,\text{Sin}[\beta],\theta\right]$$

$$\Big\{\Big\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\,0.5\,\Big(-1.12941\times10^{18}+12.5664\,v^2-1.\,\sqrt{\Big(\big(1.12941\times10^{18}-12.5664\,v^2\big)^2-4.\,\big(-8.98755\times10^{16}+v^2\big)\,\big(-3.54814\times10^{18}+39.4784\,v^2\big)\,\text{Sin}[\beta]^2\Big)}\Big)\Big\},\Big\{\theta\to\frac{1}{-8.98755\times10^{16}+v^2}\,0.5\,\Big(-1.12941\times10^{18}+12.5664\,v^2+\sqrt{\Big(\big(1.12941\times10^{18}-12.5664\,v^2\big)^2-4.\,\big(-8.98755\times10^{16}+v^2\big)\,\big(-3.54814\times10^{18}+39.4784\,v^2\big)\,\text{Sin}[\beta]^2\Big)}\Big)\Big\}\Big\}$$

```
v := r / t
```

$$\text{Solve}\Big[\theta==\frac{1}{-8.987551787368176\text{`}*\text{^}16+v^2}\,0.5\text{`}\,\Big(-1.1294090667581471\text{`}*\text{^}18+12.566370614359172\text{`}\,v^2+\sqrt{\Big(\big(1.1294090667581471\text{`}*\text{^}18-12.566370614359172\text{`}\,v^2\big)^2-4.\text{`}\,\big(-8.987551787368176\text{`}*\text{^}16+v^2\big)\,\big(-3.5481432270250993\text{`}*\text{^}18+39.47841760435743\text{`}\,v^2\big)\,\text{Sin}[\beta]^2\Big)}\Big),t\Big]$$

$$\Big\{\Big\{t\to-0.5\,\sqrt{\Big(-\big(2.\,r^2\,\big(-4.62529\times10^{17}+1.38333\times10^{34}\,\theta-1.10082\times10^{33}\,\theta^2-4.34585\times10^{34}\,\text{Sin}[\beta]^2\big)\big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)-2.\,\sqrt{\Big(\Big(r^4\,\big(-4.62529\times10^{17}+1.38333\times10^{34}\,\theta-1.10082\times10^{33}\,\theta^2-4.34585\times10^{34}\,\text{Sin}[\beta]^2\big)^2\Big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)^2-\big(4.\,r^4\,\big(-7.6958\times10^{16}\,\theta+6.12412\times10^{15}\,\theta^2+2.41771\times10^{17}\,\text{Sin}[\beta]^2\big)\big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)\Big)}\Big)}\Big\},$$

$$\Big\{t\to0.5\,\sqrt{\Big(-\big(2.\,r^2\,\big(-4.62529\times10^{17}+1.38333\times10^{34}\,\theta-1.10082\times10^{33}\,\theta^2-4.34585\times10^{34}\,\text{Sin}[\beta]^2\big)\big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)-2.\,\sqrt{\Big(\Big(r^4\,\big(-4.62529\times10^{17}+1.38333\times10^{34}\,\theta-1.10082\times10^{33}\,\theta^2-4.34585\times10^{34}\,\text{Sin}[\beta]^2\big)^2\Big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)^2-\big(4.\,r^4\,\big(-7.6958\times10^{16}\,\theta+6.12412\times10^{15}\,\theta^2+2.41771\times10^{17}\,\text{Sin}[\beta]^2\big)\big)\Big/\big(2.07727\times10^{35}-6.21637\times10^{50}\,\theta+4.94683\times10^{49}\,\theta^2+1.95293\times10^{51}\,\text{Sin}[\beta]^2\big)\Big)}\Big)}\Big\},$$

$$\left\{t \to -0.5 \sqrt{\left(-\left(2.\ r^2 \left(-4.62529\times 10^{17}+1.38333\times 10^{34}\,\theta-1.10082\times 10^{33}\,\theta^2-4.34585\times 10^{34}\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)+2.\sqrt{\left(\left(r^4\left(-4.62529\times 10^{17}+1.38333\times 10^{34}\,\theta-1.10082\times 10^{33}\,\theta^2-4.34585\times 10^{34}\,\text{Sin}[\beta]^2\right)^2\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)^2-\left(4.\ r^4\left(-7.6958\times 10^{16}\,\theta+6.12412\times 10^{15}\,\theta^2+2.41771\times 10^{17}\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)\right)}\right)}\right\},$$

$$\left\{t \to 0.5 \sqrt{\left(-\left(2.\ r^2 \left(-4.62529\times 10^{17}+1.38333\times 10^{34}\,\theta-1.10082\times 10^{33}\,\theta^2-4.34585\times 10^{34}\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)+2.\sqrt{\left(\left(r^4\left(-4.62529\times 10^{17}+1.38333\times 10^{34}\,\theta-1.10082\times 10^{33}\,\theta^2-4.34585\times 10^{34}\,\text{Sin}[\beta]^2\right)^2\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)^2-\left(4.\ r^4\left(-7.6958\times 10^{16}\,\theta+6.12412\times 10^{15}\,\theta^2+2.41771\times 10^{17}\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.07727\times 10^{35}-6.21637\times 10^{50}\,\theta+4.94683\times 10^{49}\,\theta^2+1.95293\times 10^{51}\,\text{Sin}[\beta]^2\right)\right)}\right)}\right\}\right\}$$

$$0.5\grave{}\sqrt{\left(-\left(2.\grave{}\ r^2\left(-4.6252927586946355\grave{}*\hat{}17+1.3833281122109134\grave{}*\hat{}34\,\theta-1.1008175348817346\grave{}*\hat{}33\,\theta^2-4.345853434826043\grave{}*\hat{}34\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.0772739051957146\grave{}*\hat{}35-6.21636652370892\grave{}*\hat{}50\,\theta+4.946827301596282\grave{}*\hat{}49\,\theta^2+1.9529291402905465\grave{}*\hat{}51\,\text{Sin}[\beta]^2\right)+2.\grave{}\sqrt{\left(\left(r^4\left(-4.6252927586946355\grave{}*\hat{}17+1.3833281122109134\grave{}*\hat{}34\,\theta-1.1008175348817346\grave{}*\hat{}33\,\theta^2-4.345853434826043\grave{}*\hat{}34\,\text{Sin}[\beta]^2\right)^2\right)\Big/\left(2.0772739051957146\grave{}*\hat{}35-6.21636652370892\grave{}*\hat{}50\,\theta+4.946827301596282\grave{}*\hat{}49\,\theta^2+1.9529291402905465\grave{}*\hat{}51\,\text{Sin}[\beta]^2\right)^2-\left(4.\grave{}\ r^4\left(-7.695800507960096\grave{}*\hat{}16\,\theta+6.124123459454841\grave{}*\hat{}15\,\theta^2+2.4177070339300032\grave{}*\hat{}17\,\text{Sin}[\beta]^2\right)\right)\Big/\left(2.0772739051957146\grave{}*\hat{}35-6.21636652370892\grave{}*\hat{}50\,\theta+4.946827301596282\grave{}*\hat{}49\,\theta^2+1.9529291402905465\grave{}*\hat{}51\,\text{Sin}[\beta]^2\right)\right)}\right)}$$

```
Solve[θ == 1/(-8.987551787368176`*^16 + v^2)
    0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
      √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 - 4.`
          (-8.987551787368176`*^16 + v^2)
          (-3.5481432270250993`*^18 + 39.47841760435743` v^2) Sin[β]^2)), θ]
```

$$\left\{\left\{\theta \to 3.32694 \times 10^{-49} \left(1.71243 \times 10^{49} - \frac{8.53229 \times 10^{14}\, r^4}{t^4} + \frac{2.6286 \times 10^{31}\, r^2}{t^2} - \frac{1}{t^4}\, 8.53229 \times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153 \times 10^{16}\, r^6\, t^2 - 5.93032 \times 10^{34}\, r^4\, t^4 - 4.25203 \times 10^{51}\, r^2\, t^6 + 1.83793 \times 10^{68}\, t^8\right)}\right)\right\},\right.$$

$$\left.\left\{\theta \to 3.32694 \times 10^{-49} \left(1.71243 \times 10^{49} - \frac{8.53229 \times 10^{14}\, r^4}{t^4} + \frac{2.6286 \times 10^{31}\, r^2}{t^2} + \frac{1}{t^4}\, 8.53229 \times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153 \times 10^{16}\, r^6\, t^2 - 5.93032 \times 10^{34}\, r^4\, t^4 - 4.25203 \times 10^{51}\, r^2\, t^6 + 1.83793 \times 10^{68}\, t^8\right)}\right)\right\}\right\}$$

```
θ := 3.3269445087319456`*^-49 (1.7124327770294835`*^49 -
    8.53228731259923`*^14 r^4/t^4 + 2.6285971414961507`*^31 r^2/t^2 + 1/t^4 8.53228731259923`*^14
    √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
       4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8))
```

```
D[1/(2 π) (√(4 π r^2 (1/(-8.987551787368176`*^16 + v^2)
      0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
         √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
            4.` (-8.987551787368176`*^16 + v^2)
             (-3.5481432270250993`*^18 + 39.47841760435743` v^2) Sin[β]^2))) -
    r^2 (1/(-8.987551787368176`*^16 + v^2) 0.5` (-1.1294090667581471`*^18 +
         12.566370614359172` v^2 +
         √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 -
            4.` (-8.987551787368176`*^16 + v^2) (-3.5481432270250993`*^18 +
               39.47841760435743` v^2) Sin[β]^2)))^2)), t]
```

$$\Bigg(\Bigg(12.5664\, r^4 \Bigg(-1.12941\times10^{18}+\frac{12.5664\, r^2}{t^2}+$$

$$\sqrt{\Bigg(\Big(1.12941\times10^{18}-\frac{12.5664\, r^2}{t^2}\Big)^2-3.3709\times10^{-50}\Big(-8.98755\times10^{16}+\frac{r^2}{t^2}\Big)}$$

$$\Big(-3.54814\times10^{18}+\frac{39.4784\, r^2}{t^2}\Big)\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+$$

$$\frac{2.6286\times10^{31}\, r^2}{t^2}+\frac{1}{t^4}\, 8.53229\times10^{14}\sqrt{\big(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-}$$

$$5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\big)\Bigg)$$

$$\Bigg(4\pi-3.32694\times10^{-49}\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+\frac{2.6286\times10^{31}\, r^2}{t^2}+$$

$$\frac{1}{t^4}\, 8.53229\times10^{14}\sqrt{\big(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-5.93032\times10^{34}\, r^4\, t^4-}$$

$$4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\big)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(\Bigg(\Big(-8.98755\times10^{16}+\frac{r^2}{t^2}\Big)^2 t^3\Bigg)-\Bigg(1.\, r^4\Bigg(-1.12941\times10^{18}+\frac{12.5664\, r^2}{t^2}+$$

$$\sqrt{\Bigg(\Big(1.12941\times10^{18}-\frac{12.5664\, r^2}{t^2}\Big)^2-3.3709\times10^{-50}\Big(-8.98755\times10^{16}+\frac{r^2}{t^2}\Big)}$$

$$\Big(-3.54814\times10^{18}+\frac{39.4784\, r^2}{t^2}\Big)\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+$$

$$\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\,\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi-3.32694\times10^{-49}\,\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\,\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)\Bigg)\Bigg)^2\Bigg)\Bigg/$$

$$\left(\left(\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)^3\,t^3\right)+\frac{1}{-8.98755\times10^{16}+\frac{r^2}{t^2}}\right.$$

$$6.28319\,r^2\,\Bigg(-\frac{25.1327\,r^2}{t^3}+$$

$$\Bigg(\frac{50.2655\,r^2\left(1.12941\times10^{18}-\frac{12.5664\,r^2}{t^2}\right)}{t^3}+$$

$$1.12148\times10^{-98}\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(-3.54814\times10^{18}+\frac{39.4784\,r^2}{t^2}\right)$$

$$\Bigg(\frac{3.41291\times10^{15}\,r^4}{t^5}-\frac{5.25719\times10^{31}\,r^2}{t^3}+\Big(4.26614\times10^{14}\,\big(-1.23231\times10^{17}\,r^6\,t-2.37213\times10^{35}\,r^4\,t^3-2.55122\times10^{52}\,r^2\,t^5+1.47034\times10^{69}\,t^7\big)\Big)\Big/$$

$$\left(t^4\,\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)-\frac{1}{t^5}\,3.41291\times10^{15}\,\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)$$

$$\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\,\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)-$$

$$3.3709\times10^{-50}\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(-3.54814\times10^{18}+\frac{39.4784\,r^2}{t^2}\right)$$
$$\left(\frac{3.41291\times10^{15}\,r^4}{t^5}-\frac{5.25719\times10^{31}\,r^2}{t^3}+\left(4.26614\times10^{14}\left(-1.23231\times10^{17}\,r^6\,t-\right.\right.\right.$$
$$\left.\left.2.37213\times10^{35}\,r^4\,t^3-2.55122\times10^{52}\,r^2\,t^5+1.47034\times10^{69}\,t^7\right)\right)\Big/$$
$$\left(t^4\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+\right.}\right.$$
$$\left.\left.1.83793\times10^{68}\,t^8\right)\right)-\frac{1}{t^5}\,3.41291\times10^{15}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-\right.}$$
$$\left.\left.5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)\right)$$
$$\left(4\,\pi-3.32694\times10^{-49}\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\right.\right.$$
$$\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-\right.}$$
$$\left.\left.\left.4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)\right)\right)+$$
$$\frac{1}{t^3}\,2.66156\times10^{-48}\,r^2\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\right.$$
$$\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-\right.}$$
$$\left.\left.5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)\right)$$
$$\left(4\,\pi-3.32694\times10^{-49}\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\right.\right.$$
$$\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-\right.}$$
$$\left.\left.\left.4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)\right)\right)+\frac{1}{t^3}\,6.7418\times10^{-50}\,r^2$$
$$\left(-3.54814\times10^{18}+\frac{39.4784\,r^2}{t^2}\right)\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\right.$$
$$\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-\right.}$$
$$\left.\left.5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)\right)$$
$$\left(4\,\pi-3.32694\times10^{-49}\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\right.\right.$$

$$\frac{2.6286\times 10^{31}\, r^2}{t^2} + \frac{1}{t^4}\, 8.53229\times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153\times 10^{16}\, r^6\, t^2 - 5.93032\times 10^{34}\, r^4\, t^4 - 4.25203\times 10^{51}\, r^2\, t^6 + 1.83793\times 10^{68}\, t^8\right)}\Bigg)\Bigg)\Bigg)\Bigg) \Big/$$

$$\Bigg(2 \sqrt{\Bigg(\left(1.12941\times 10^{18} - \frac{12.5664\, r^2}{t^2}\right)^2 - 3.3709\times 10^{-50} \left(-8.98755\times 10^{16} + \frac{r^2}{t^2}\right)}$$

$$\left(-3.54814\times 10^{18} + \frac{39.4784\, r^2}{t^2}\right) \Bigg(1.71243\times 10^{49} - \frac{8.53229\times 10^{14}\, r^4}{t^4} +$$

$$\frac{2.6286\times 10^{31}\, r^2}{t^2} + \frac{1}{t^4}\, 8.53229\times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153\times 10^{16}\, r^6\, t^2 - 5.93032\times 10^{34}\, r^4\, t^4 - 4.25203\times 10^{51}\, r^2\, t^6 + 1.83793\times 10^{68}\, t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi - 3.32694\times 10^{-49} \Bigg(1.71243\times 10^{49} - \frac{8.53229\times 10^{14}\, r^4}{t^4} + \frac{2.6286\times 10^{31}\, r^2}{t^2} +$$

$$\frac{1}{t^4}\, 8.53229\times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153\times 10^{16}\, r^6\, t^2 - 5.93032\times 10^{34}\, r^4\, t^4 - 4.25203\times 10^{51}\, r^2\, t^6 + 1.83793\times 10^{68}\, t^8\right)}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg) -$$

$$\Bigg(0.5\, r^2 \Bigg(-1.12941\times 10^{18} + \frac{12.5664\, r^2}{t^2} + \sqrt{\Bigg(\left(1.12941\times 10^{18} - \frac{12.5664\, r^2}{t^2}\right)^2 -}$$

$$3.3709\times 10^{-50} \left(-8.98755\times 10^{16} + \frac{r^2}{t^2}\right) \left(-3.54814\times 10^{18} + \frac{39.4784\, r^2}{t^2}\right)$$

$$\Bigg(1.71243\times 10^{49} - \frac{8.53229\times 10^{14}\, r^4}{t^4} + \frac{2.6286\times 10^{31}\, r^2}{t^2} +$$

$$\frac{1}{t^4}\, 8.53229\times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153\times 10^{16}\, r^6\, t^2 - 5.93032\times 10^{34}\, r^4\, t^4 - 4.25203\times 10^{51}\, r^2\, t^6 + 1.83793\times 10^{68}\, t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi - 3.32694\times 10^{-49} \Bigg(1.71243\times 10^{49} - \frac{8.53229\times 10^{14}\, r^4}{t^4} +$$

$$\frac{2.6286\times 10^{31}\, r^2}{t^2} + \frac{1}{t^4}\, 8.53229\times 10^{14} \sqrt{\left(1.\, r^8 - 6.16153\times 10^{16}\, r^6\, t^2 - 5.93032\times 10^{34}\, r^4\, t^4 - 4.25203\times 10^{51}\, r^2\, t^6 + 1.83793\times 10^{68}\, t^8\right)}\Bigg)\Bigg)\Bigg)\Bigg)$$

$$\left(-\frac{25.1327\, r^2}{t^3}+\left(\frac{50.2655\, r^2\left(1.12941\times10^{18}-\frac{12.5664\, r^2}{t^2}\right)}{t^3}+1.12148\times10^{-98}\right.\right.$$

$$\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(-3.54814\times10^{18}+\frac{39.4784\, r^2}{t^2}\right)$$

$$\left(\frac{3.41291\times10^{15}\, r^4}{t^5}-\frac{5.25719\times10^{31}\, r^2}{t^3}+\left(4.26614\times10^{14}\left(-1.23231\times10^{17}\, r^6\, t-\right.\right.\right.$$

$$\left.\left.2.37213\times10^{35}\, r^4\, t^3-2.55122\times10^{52}\, r^2\, t^5+1.47034\times10^{69}\, t^7\right)\right)\Big/\left(t^4\right.$$

$$\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+\right.}$$

$$\left.\left.1.83793\times10^{68}\, t^8\right)\right)-\frac{1}{t^5}\,3.41291\times10^{15}\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-\right.}$$

$$\left.\left.5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\right)\right)$$

$$\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+\frac{2.6286\times10^{31}\, r^2}{t^2}+\right.$$

$$\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-\right.}$$

$$\left.\left.5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\right)\right)-$$

$$3.3709\times10^{-50}\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(-3.54814\times10^{18}+\frac{39.4784\, r^2}{t^2}\right)$$

$$\left(\frac{3.41291\times10^{15}\, r^4}{t^5}-\frac{5.25719\times10^{31}\, r^2}{t^3}+\left(4.26614\times10^{14}\left(-1.23231\times10^{17}\, r^6\, t-\right.\right.\right.$$

$$\left.\left.2.37213\times10^{35}\, r^4\, t^3-2.55122\times10^{52}\, r^2\, t^5+1.47034\times10^{69}\, t^7\right)\right)\Big/\left(t^4\right.$$

$$\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+\right.}$$

$$\left.\left.1.83793\times10^{68}\, t^8\right)\right)-\frac{1}{t^5}\,3.41291\times10^{15}\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-\right.}$$

$$\left.\left.5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\right)\right)$$

$$\left(4\pi-3.32694\times10^{-49}\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+\right.\right.$$

$$\frac{2.6286\times10^{31}\, r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\, r^8-6.16153\times10^{16}\, r^6\, t^2-\right.}$$

$$\left.\left.\left.5.93032\times10^{34}\, r^4\, t^4-4.25203\times10^{51}\, r^2\, t^6+1.83793\times10^{68}\, t^8\right)\right)\right)+$$

$$\frac{1}{t^3}\,2.66156\times10^{-48}\, r^2\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\, r^4}{t^4}+\right.$$

$$\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi-3.32694\times10^{-49}\,\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)\Bigg)+$$

$$\frac{1}{t^3}\,6.7418\times10^{-50}\,r^2\left(-3.54814\times10^{18}+\frac{39.4784\,r^2}{t^2}\right)\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi-3.32694\times10^{-49}\,\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)\Bigg)\Bigg)\Big/$$

$$\Bigg(2\sqrt{\Bigg(\Bigg(\left(1.12941\times10^{18}-\frac{12.5664\,r^2}{t^2}\right)^2-3.3709\times10^{-50}\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)}$$

$$\left(-3.54814\times10^{18}+\frac{39.4784\,r^2}{t^2}\right)\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\Bigg)\Bigg(4\,\pi-$$

$$3.32694\times10^{-49}\,\Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}\,8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-\right.}$$

$$4.25203\times10^{51}\ r^2\ t^6 + 1.83793\times10^{68}\ t^8\Big)\Big)\Big)\Big)\Big)\Big)\Big)\Big/$$

$$\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)^2\Bigg)\Bigg/\ \Bigg(4\,\pi\,\sqrt{\Bigg(\Bigg(\Bigg(6.28319\ r^2\ \Bigg(-1.12941\times10^{18}+\frac{12.5664\ r^2}{t^2}+}$$

$$\sqrt{\Bigg(\Bigg(\left(1.12941\times10^{18}-\frac{12.5664\ r^2}{t^2}\right)^2-3.3709\times10^{-50}\ \left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)}$$

$$\left(-3.54814\times10^{18}+\frac{39.4784\ r^2}{t^2}\right)\ \Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\ r^4}{t^4}+$$

$$\frac{2.6286\times10^{31}\ r^2}{t^2}+\frac{1}{t^4}\ 8.53229\times10^{14}\ \sqrt{\big(1.\ r^8-6.16153\times10^{16}\ r^6\ t^2-}$$

$$5.93032\times10^{34}\ r^4\ t^4-4.25203\times10^{51}\ r^2\ t^6+1.83793\times10^{68}\ t^8\big)}\Bigg)\Bigg)\ \Bigg(4\,\pi-$$

$$3.32694\times10^{-49}\ \Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\ r^4}{t^4}+\frac{2.6286\times10^{31}\ r^2}{t^2}+$$

$$\frac{1}{t^4}\ 8.53229\times10^{14}\ \sqrt{\big(1.\ r^8-6.16153\times10^{16}\ r^6\ t^2-5.93032\times10^{34}\ r^4\ t^4-}$$

$$4.25203\times10^{51}\ r^2\ t^6+1.83793\times10^{68}\ t^8\big)}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)-\Bigg(0.25\ r^2\ \Bigg(-1.12941\times10^{18}+\frac{12.5664\ r^2}{t^2}+$$

$$\sqrt{\Bigg(\Bigg(\left(1.12941\times10^{18}-\frac{12.5664\ r^2}{t^2}\right)^2-3.3709\times10^{-50}\ \left(-8.98755\times10^{16}+\frac{r^2}{t^2}\right)}$$

$$\left(-3.54814\times10^{18}+\frac{39.4784\ r^2}{t^2}\right)\ \Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\ r^4}{t^4}+$$

$$\frac{2.6286\times10^{31}\ r^2}{t^2}+\frac{1}{t^4}\ 8.53229\times10^{14}\ \sqrt{\big(1.\ r^8-6.16153\times10^{16}\ r^6\ t^2-}$$

$$5.93032\times10^{34}\ r^4\ t^4-4.25203\times10^{51}\ r^2\ t^6+1.83793\times10^{68}\ t^8\big)}\Bigg)$$

$$\Bigg(4\,\pi-3.32694\times10^{-49}\ \Bigg(1.71243\times10^{49}-\frac{8.53229\times10^{14}\ r^4}{t^4}+$$

$$\frac{2.6286\times10^{31}\ r^2}{t^2}+\frac{1}{t^4}\ 8.53229\times10^{14}\ \sqrt{\big(1.\ r^8-6.16153\times10^{16}\ r^6\ t^2-}$$

$$5.93032\times10^{34}\ r^4\ t^4-4.25203\times10^{51}\ r^2\ t^6+$$

$$1.83793 \times 10^{68}\, t^{8})))))^{2}) \Big/ \left(\left(-8.98755 \times 10^{16} + \frac{r^{2}}{t^{2}}\right)^{2}\right))$$

RevolutionPlot3D[

$$\Bigg(\Bigg(12.566370614359172\text{`}\ r^{4}\ \Bigg(-1.1294090667581471\text{`}*\wedge 18 + \frac{12.566370614359172\text{`}\ r^{2}}{t^{2}} +$$

$$\sqrt{\Bigg(\Bigg(1.1294090667581471\text{`}*\wedge 18 - \frac{12.566370614359172\text{`}\ r^{2}}{t^{2}}\Bigg)^{2}} -$$

$$3.370899555370967\text{`}*\wedge{-50}\ \left(-8.987551787368176\text{`}*\wedge 16 + \frac{r^{2}}{t^{2}}\right)$$

$$\left(-3.5481432270250993\text{`}*\wedge 18 + \frac{39.47841760435743\text{`}\ r^{2}}{t^{2}}\right)$$

$$\Bigg(1.7124327770294835\text{`}*\wedge 49 - \frac{8.53228731259923\text{`}*\wedge 14\, r^{4}}{t^{4}} +$$

$$\frac{2.6285971414961507\text{`}*\wedge 31\, r^{2}}{t^{2}} + \frac{1}{t^{4}}\, 8.53228731259923\text{`}*\wedge 14$$

$$\sqrt{}\,\big(1.\text{`}\ r^{8} - 6.16152983412695\text{`}*\wedge 16\, r^{6}\, t^{2} - 5.930324312706987\text{`}*\wedge 34\, r^{4}\, t^{4} -$$

$$4.252029524247228\text{`}*\wedge 51\, r^{2}\, t^{6} + 1.8379263355222364\text{`}*\wedge 68\, t^{8}\big)\Bigg)$$

$$\Bigg(4\,\pi - 3.3269445087319456\text{`}*\wedge{-49}\ \Bigg(1.7124327770294835\text{`}*\wedge 49 -$$

$$\frac{8.53228731259923\text{`}*\wedge 14\, r^{4}}{t^{4}} + \frac{2.6285971414961507\text{`}*\wedge 31\, r^{2}}{t^{2}} +$$

$$\frac{1}{t^{4}}\, 8.53228731259923\text{`}*\wedge 14\ \sqrt{}\,\big(1.\text{`}\ r^{8} - 6.16152983412695\text{`}*\wedge 16\, r^{6}\, t^{2} -$$

$$5.930324312706987\text{`}*\wedge 34\, r^{4}\, t^{4} - 4.252029524247228\text{`}*\wedge 51$$

$$r^{2}\, t^{6} + 1.8379263355222364\text{`}*\wedge 68\, t^{8}\big)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg) \Big/$$

$$\Bigg(\Bigg(\left(-8.987551787368176\text{`}*\wedge 16 + \frac{r^{2}}{t^{2}}\right)^{2} t^{3}\Bigg) - \Bigg(1.\text{`}\ r^{4}\ \Bigg(-1.1294090667581471\text{`}*\wedge 18 +$$

$$\frac{12.566370614359172\text{`}\ r^{2}}{t^{2}} +$$

$$\sqrt{\Bigg(\Bigg(1.1294090667581471\text{`}*\wedge 18 - \frac{12.566370614359172\text{`}\ r^{2}}{t^{2}}\Bigg)^{2}} -$$

$$3.370899555370967\text{`}*\wedge{-50}\ \left(-8.987551787368176\text{`}*\wedge 16 + \frac{r^{2}}{t^{2}}\right)$$

$$\left(-3.5481432270250993`*^18+\frac{39.47841760435743`\ r^2}{t^2}\right)$$

$$\left(1.7124327770294835`*^49-\frac{8.53228731259923`*^14\ r^4}{t^4}+\frac{2.6285971414961507`*^31\ r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^14\sqrt{\left(1.`\ r^8-6.16152983412695`*^16\ r^6\ t^2-5.930324312706987`*^34\ r^4\ t^4-4.252029524247228`*^51\ r^2\ t^6+1.8379263355222364`*^68\ t^8\right)}\right)$$

$$\left(4\pi-3.3269445087319456`*^-49\left(1.7124327770294835`*^49-\frac{8.53228731259923`*^14\ r^4}{t^4}+\frac{2.6285971414961507`*^31\ r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^14\sqrt{\left(1.`\ r^8-6.16152983412695`*^16\ r^6\ t^2-5.930324312706987`*^34\ r^4\ t^4-4.252029524247228`*^51\ r^2\ t^6+1.8379263355222364`*^68\ t^8\right)}\right)\right)\Bigg)\Bigg)^2\Bigg)\Big/$$

$$\left(\left(\left(-8.987551787368176`*^16+\frac{r^2}{t^2}\right)^3 t^3\right)+\frac{1}{-8.987551787368176`*^16+\frac{r^2}{t^2}}\right.$$

6.283185307179586`

r^2

$$\left(-\frac{25.132741228718345`\ r^2}{t^3}+\right.$$

$$\left(\frac{1}{t^3}50.26548245743669`\ r^2\left(1.1294090667581471`*^18-\frac{12.566370614359172`\ r^2}{t^2}\right)+\right.$$

$$1.1214795765228395`*^-98\left(-8.987551787368176`*^16+\frac{r^2}{t^2}\right)$$

$$\left(-3.5481432270250993`*^18+\frac{39.47841760435743`\ r^2}{t^2}\right)$$

$$\left(\frac{3.412914925039692`*^15\ r^4}{t^5}-\frac{5.257194282992301`*^31\ r^2}{t^3}+\left(4.266143656299615`*^14\left(-1.23230596682539`*^17\ r^6\ t-2.3721297250827947`*^35\ r^4\ t^3-2.551217714548337`*^52\ r^2\ t^5+1.4703410684177891`*^69\ t^7\right)\right)\Big/\right.$$

$$\left(t^4\sqrt{\left(1.`\ r^8-6.16152983412695`*^16\ r^6\ t^2-5.930324312706987`*^34\ r^4\ t^4-4.252029524247228`*^51\ r^2\ t^6+1.8379263355222364`*^68\ t^8\right)}\right)-$$

$$\frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}$$

$$\left(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) -$$

$$3.370899555370967`*^-50 \left(-8.987551787368176`*^16 + \frac{r^2}{t^2}\right)$$

$$\left(-3.5481432270250993`*^18 + \frac{39.47841760435743` r^2}{t^2}\right)$$

$$\left(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} + \left(4.266143656299615`*^14 \left(-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 - 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7\right)\right) \Big/ \left(t^4 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) - \frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) \left(4 \pi - 3.3269445087319456`*^-49\right.$$

$$\left.\left(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right)\right) +$$

$$\frac{1}{t^3} 2.6615556069855565`*^-48 r^2 \left(-8.987551787368176`*^16 + \frac{r^2}{t^2}\right)$$

$$\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)$$

$$\left(4\pi-3.3269445087319456`*^{\wedge}-49\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)\right)+\frac{1}{t^3}6.741799110741934`*^{\wedge}-50$$

$$r^2\left(-3.5481432270250993`*^{\wedge}18+\frac{39.47841760435743`\,r^2}{t^2}\right)$$

$$\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)$$

$$\left(4\pi-3.3269445087319456`*^{\wedge}-49\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)\right)\right)\Bigg/$$

$$\left(2\sqrt{\left(\left(1.1294090667581471`*^{\wedge}18-\frac{12.566370614359172`\,r^2}{t^2}\right)^2-3.370899555370967`*^{\wedge}-50\left(-8.987551787368176`*^{\wedge}16+\frac{r^2}{t^2}\right)\right.}\right.$$

$$\left(-3.5481432270250993`*^{\wedge}18+\frac{39.47841760435743`\,r^2}{t^2}\right)$$
$$\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}\,8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)$$
$$\left(4\,\pi-3.3269445087319456`*^{\wedge}{-49}\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}\,8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)\right)\Bigg)\Bigg)\Bigg)\Bigg)-$$
$$\Bigg(0.5`\,r^2\left(-1.1294090667581471`*^{\wedge}18+\frac{12.566370614359172`\,r^2}{t^2}+\right.$$
$$\sqrt{\Bigg(\left(1.1294090667581471`*^{\wedge}18-\frac{12.566370614359172`\,r^2}{t^2}\right)^2-}$$
$$3.370899555370967`*^{\wedge}{-50}\left(-8.987551787368176`*^{\wedge}16+\frac{r^2}{t^2}\right)$$
$$\left(-3.5481432270250993`*^{\wedge}18+\frac{39.47841760435743`\,r^2}{t^2}\right)$$
$$\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}\,8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)$$
$$\left(4\,\pi-3.3269445087319456`*^{\wedge}{-49}\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\right.\right.$$

$$\frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\Big)\Big)\Big)\Big)\Big)$$

$$\Bigg(-\frac{25.132741228718345` r^2}{t^3} + \Bigg(\frac{1}{t^3} 50.26548245743669` r^2 \left(1.1294090667581471`*^18 - \frac{12.566370614359172` r^2}{t^2}\right) +$$

$$1.1214795765228395`*^-98 \left(-8.987551787368176`*^16 + \frac{r^2}{t^2}\right) \left(-3.5481432270250993`*^18 + \frac{39.47841760435743` r^2}{t^2}\right)$$

$$\Bigg(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} + \big(4.266143656299615`*^14 (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 - 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)\big) \Big/ \Big(t^4 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\Big) - \frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\Bigg)$$

$$\Bigg(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\Bigg) -$$

$$3.370899555370967`*^-50 \left(-8.987551787368176`*^16 + \frac{r^2}{t^2}\right) \left(-3.5481432270250993`*^18 + \frac{39.47841760435743` r^2}{t^2}\right)$$

$$\Bigg(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} +$$

$$\left(4.266143656299615`*^{\wedge}14 \left(-1.23230596682539`*^{\wedge}17\, r^6\, t - 2.3721297250827947`*^{\wedge}35\, r^4\, t^3 - 2.551217714548337`*^{\wedge}52\, r^2\, t^5 + 1.4703410684177891`*^{\wedge}69\, t^7\right)\right) \Big/ \left(t^4 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right) -$$

$$\frac{1}{t^5}\, 3.412914925039692`*^{\wedge}15 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)} \left(4\,\pi - 3.3269445087319456`*^{\wedge}{-49} \left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)\right) +$$

$$\frac{1}{t^3}\, 2.6615556069855565`*^{\wedge}{-48}\, r^2 \left(-8.987551787368176`*^{\wedge}16 + \frac{r^2}{t^2}\right) \left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)$$

$$\left(4\,\pi - 3.3269445087319456`*^{\wedge}{-49} \left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)\right) + \frac{1}{t^3}\, 6.741799110741934`*^{\wedge}{-50}$$

$$r^2 \left(-3.5481432270250993`*^{\wedge}18 + \frac{39.47841760435743`\, r^2}{t^2}\right)$$

$$\left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)$$

$$\left(4\,\pi - 3.3269445087319456`*^{\wedge}{-49} \left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)\right)\Bigg) \Bigg/$$

$$\Bigg(2 \sqrt{\Bigg(\left(1.1294090667581471`*^{\wedge}18 - \frac{12.566370614359172`\, r^2}{t^2}\right)^2 -}$$

$$3.370899555370967`*^{\wedge}{-50} \left(-8.987551787368176`*^{\wedge}16 + \frac{r^2}{t^2}\right) \left(-3.5481432270250993`*^{\wedge}18 + \frac{39.47841760435743`\, r^2}{t^2}\right)$$

$$\left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)$$

$$\left(4\,\pi - 3.3269445087319456`*^{\wedge}{-49} \left(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right)\right)\Bigg)\Bigg)\Bigg) \Bigg/$$

$$\left(-8.987551787368176\text{`}*\text{^}16+\frac{r^2}{t^2}\right)^2\Bigg)\Bigg/\ \Bigg(4\,\pi\,\sqrt{\Bigg(\Bigg(\Bigg(6.283185307179586\text{`}\ r^2}$$

$$\left(-1.1294090667581471\text{`}*\text{^}18+\frac{12.566370614359172\text{`}\ r^2}{t^2}+\right.$$

$$\sqrt{\Bigg(\Bigg(1.1294090667581471\text{`}*\text{^}18-\frac{12.566370614359172\text{`}\ r^2}{t^2}\Bigg)^2-}$$

$$3.370899555370967\text{`}*\text{^}{-50}\left(-8.987551787368176\text{`}*\text{^}16+\frac{r^2}{t^2}\right)$$

$$\left(-3.5481432270250993\text{`}*\text{^}18+\frac{39.47841760435743\text{`}\ r^2}{t^2}\right)$$

$$\Bigg(1.7124327770294835\text{`}*\text{^}49-\frac{8.53228731259923\text{`}*\text{^}14\,r^4}{t^4}+$$

$$\frac{2.6285971414961507\text{`}*\text{^}31\,r^2}{t^2}+\frac{1}{t^4}\,8.53228731259923\text{`}*\text{^}14\,\sqrt{\Big(1.\text{`}\ r^8-}$$

$$6.16152983412695\text{`}*\text{^}16\,r^6\,t^2-5.930324312706987\text{`}*\text{^}34\,r^4\,t^4-$$

$$4.252029524247228\text{`}*\text{^}51\,r^2\,t^6+1.8379263355222364\text{`}*\text{^}68\,t^8\Big)}\Bigg)$$

$$\Bigg(4\,\pi-3.3269445087319456\text{`}*\text{^}{-49}\,\Bigg(1.7124327770294835\text{`}*\text{^}49-$$

$$\frac{8.53228731259923\text{`}*\text{^}14\,r^4}{t^4}+\frac{2.6285971414961507\text{`}*\text{^}31\,r^2}{t^2}+\frac{1}{t^4}$$

$$8.53228731259923\text{`}*\text{^}14\,\sqrt{\Big(1.\text{`}\ r^8-6.16152983412695\text{`}*\text{^}16\,r^6\,t^2-}$$

$$5.930324312706987\text{`}*\text{^}34\,r^4\,t^4-4.252029524247228\text{`}*\text{^}51$$

$$r^2\,t^6+1.8379263355222364\text{`}*\text{^}68\,t^8\Big)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(-8.987551787368176\text{`}*\text{^}16+\frac{r^2}{t^2}\right)-\Bigg(0.25\text{`}\ r^2\,\Bigg(-1.1294090667581471\text{`}*\text{^}18+$$

$$\frac{12.566370614359172\text{`}\ r^2}{t^2}+$$

$$\sqrt{\Bigg(\Bigg(1.1294090667581471\text{`}*\text{^}18-\frac{12.566370614359172\text{`}\ r^2}{t^2}\Bigg)^2-}$$

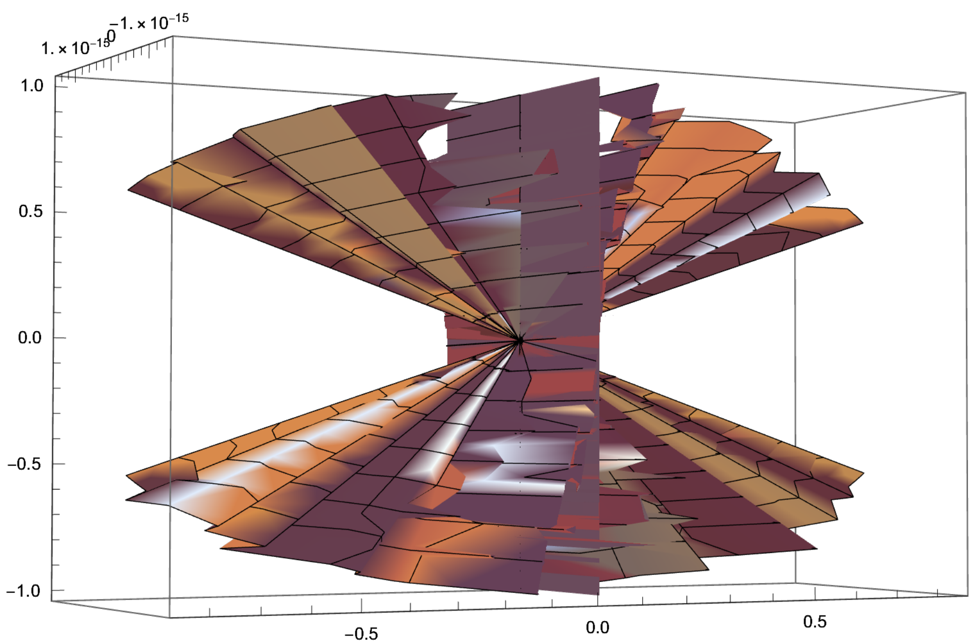
$$3.370899555370967\text{`}*\text{^}{-50}\left(-8.987551787368176\text{`}*\text{^}16+\frac{r^2}{t^2}\right)$$

$$\left(-3.5481432270250993\text{`}*\text{^}18+\frac{39.47841760435743\text{`}\ r^2}{t^2}\right)$$

$$\Bigg(1.7124327770294835\text{`}*\text{^}49 - \frac{8.53228731259923\text{`}*\text{^}14\, r^4}{t^4} + \frac{2.6285971414961507\text{`}*\text{^}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923\text{`}*\text{^}14 \sqrt{\left(1.\text{`}\, r^8 - 6.16152983412695\text{`}*\text{^}16\, r^6\, t^2 - 5.930324312706987\text{`}*\text{^}34\, r^4\, t^4 - 4.252029524247228\text{`}*\text{^}51\, r^2\, t^6 + 1.8379263355222364\text{`}*\text{^}68\, t^8\right)}\Bigg)$$

$$\Bigg(4\,\pi - 3.3269445087319456\text{`}*\text{^}{-49}\,\Bigg(1.7124327770294835\text{`}*\text{^}49 - \frac{8.53228731259923\text{`}*\text{^}14\, r^4}{t^4} + \frac{2.6285971414961507\text{`}*\text{^}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923\text{`}*\text{^}14 \sqrt{\left(1.\text{`}\, r^8 - 6.16152983412695\text{`}*\text{^}16\, r^6\, t^2 - 5.930324312706987\text{`}*\text{^}34\, r^4\, t^4 - 4.252029524247228\text{`}*\text{^}51\, r^2\, t^6 + 1.8379263355222364\text{`}*\text{^}68\, t^8\right)}\Bigg)\Bigg)\Bigg)\Bigg)^2\Bigg) \Big/$$

$$\left(-8.987551787368176\text{`}*\text{^}16 + \left(\frac{r^2}{t^2}\right)^2\right)\Bigg)\Bigg], \{r, -1, 1\}, \{t, -1, 1\}\Bigg]$$



$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]$$

Algebraic, Geometric Interpretations of the Uncertainty Principle

by Parker Emmerson

My goal in this paper is to introspect into the visualization of the uncertainty principle for differences between "transcendental-phenomenological" velocity and derivative velocity. Some of our fundamental equations are:

$h \approx \Delta x \Delta p = (2\pi r - 2\pi x)(m_1 v_1 - m_2 v_2)$ discovered by Heisenberg.

If mass is constant, then we can factor out mass.

$h \approx \Delta x \Delta p = (2\pi r - 2\pi x)\, m\, (v_1 - v_2)$

h := 6.6260695729 × 10 - 34 J * s

c := 2.99792458 (10^8) m / s

c := 2.99792458 (10^8)

In order to construct the correct expression for the velocity that is equal to the derivative of the height of the cone with respect to time, we must first calculate the angle related to the arc length taken out of the initial circle in terms of the phenomenological velocity.

$$\mathrm{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r\,\mathrm{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}}\right\}\right\}$$

We will look at both the case of $v_2 = \left(\sqrt{}\left(-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2\right)\right) \Big/ \left(\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}\right)$

and

$v_1 = \left(\sqrt{}\left(-1.12941\times 10^{18}\,\theta + 8.98755\times 10^{16}\,\theta^2 + 3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2\right)\right) \Big/$

$$\left(\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}\right)$$

we will look at both the case of $v_1 =$

$$D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, t\right] \text{ and } v_2 = D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, t\right]$$

$$\mathbf{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == r\,\mathrm{Sin}[\beta], \theta\right]$$

$$\left\{\left\{\theta \to \frac{1}{-8.98755\times10^{16}+v^2} 0.5\left(-1.12941\times10^{18}+12.5664\,v^2-1.\sqrt{\left(\left(1.12941\times10^{18}-12.5664\,v^2\right)^2 - 4.\left(-8.98755\times10^{16}+v^2\right)\left(-3.54814\times10^{18}+39.4784\,v^2\right)\mathrm{Sin}[\beta]^2\right)}\right)\right\}, \left\{\theta \to \frac{1}{-8.98755\times10^{16}+v^2} 0.5\left(-1.12941\times10^{18}+12.5664\,v^2+\sqrt{\left(\left(1.12941\times10^{18}-12.5664\,v^2\right)^2 - 4.\left(-8.98755\times10^{16}+v^2\right)\left(-3.54814\times10^{18}+39.4784\,v^2\right)\mathrm{Sin}[\beta]^2\right)}\right)\right\}\right\}$$

We then have the option of setting the velocity equal to either the radius divided by time or the height divided by time. We then solve for the time. I will do this for both the height divided by time and the radius of the initial circle divided by time.

v := r / t

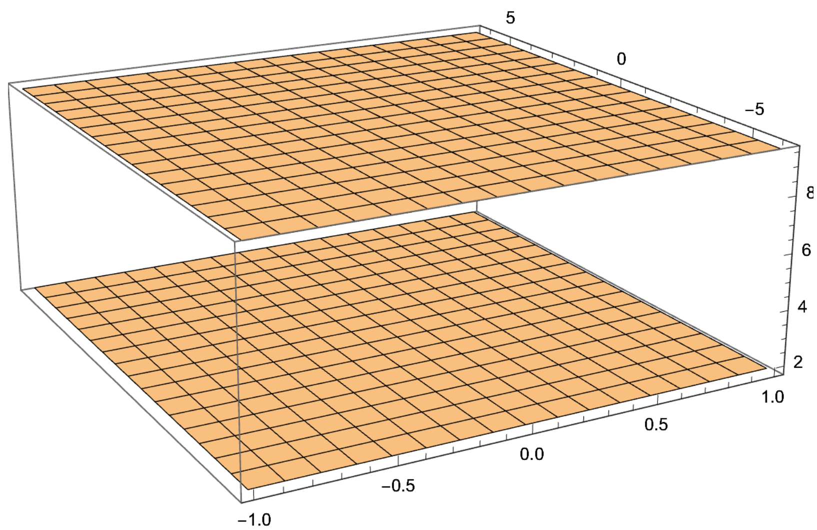
$$\beta := \mathrm{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$\text{Solve}\Big[\theta == \frac{1}{-8.987551787368176`*^16 + v^2} 0.5` \Big(-1.1294090667581471`*^18 + 12.566370614359172` v^2 + \sqrt{\Big(\big(1.1294090667581471`*^18 - 12.566370614359172` v^2\big)^2 - 4.` \big(-8.987551787368176`*^16 + v^2\big) \big(-3.5481432270250993`*^18 + 39.47841760435743` v^2\big) \text{Sin}[\beta]^2\Big)}\Big), \theta\Big]$$

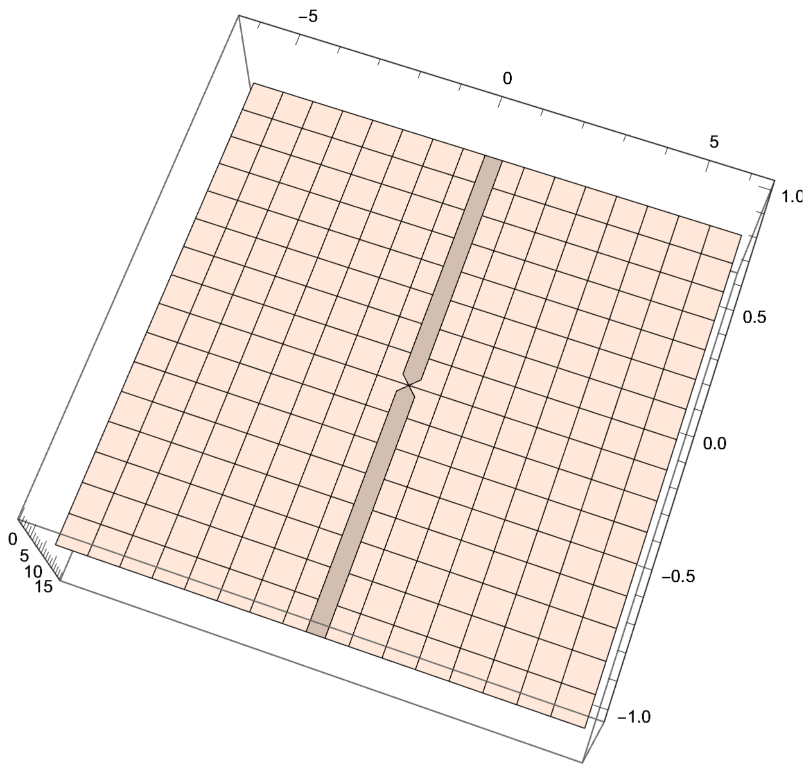
$$\Big\{\Big\{\theta \to 3.32694 \times 10^{-49} \Big(1.71243 \times 10^{49} - \frac{8.53229 \times 10^{14}\, r^4}{t^4} + \frac{2.6286 \times 10^{31}\, r^2}{t^2} - \frac{1}{t^4} 8.53229 \times 10^{14} \sqrt{\big(1.\, r^8 - 6.16153 \times 10^{16}\, r^6\, t^2 - 5.93032 \times 10^{34}\, r^4\, t^4 - 4.25203 \times 10^{51}\, r^2\, t^6 + 1.83793 \times 10^{68}\, t^8\big)}\Big)\Big\},$$

$$\Big\{\theta \to 3.32694 \times 10^{-49} \Big(1.71243 \times 10^{49} - \frac{8.53229 \times 10^{14}\, r^4}{t^4} + \frac{2.6286 \times 10^{31}\, r^2}{t^2} + \frac{1}{t^4} 8.53229 \times 10^{14} \sqrt{\big(1.\, r^8 - 6.16153 \times 10^{16}\, r^6\, t^2 - 5.93032 \times 10^{34}\, r^4\, t^4 - 4.25203 \times 10^{51}\, r^2\, t^6 + 1.83793 \times 10^{68}\, t^8\big)}\Big)\Big\}\Big\}$$

```
Plot3D[
 {3.3269445087319456`*^-49 (1.7124327770294835`*^49 - (8.53228731259923`*^14 r^4)/t^4 +
     (2.6285971414961507`*^31 r^2)/t^2 - 1/t^4 8.53228731259923`*^14
      √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
        4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)),
  3.3269445087319456`*^-49 (1.7124327770294835`*^49 - (8.53228731259923`*^14 r^4)/t^4 +
     (2.6285971414961507`*^31 r^2)/t^2 +
     1/t^4 8.53228731259923`*^14 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 -
        5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 +
        1.8379263355222364`*^68 t^8))}, {r, -1, 1}, {t, -2 π, 2 π}]
```



$$\text{Plot3D}\Big[3.3269445087319456`*^{\wedge}-49\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right),\{r,-1,1\},\{t,-2\pi,2\pi\}\Big]$$



$$\theta := 3.3269445087319456`*^{\wedge}-49\left(1.7124327770294835`*^{\wedge}49-\frac{8.53228731259923`*^{\wedge}14\,r^4}{t^4}+\frac{2.6285971414961507`*^{\wedge}31\,r^2}{t^2}+\frac{1}{t^4}8.53228731259923`*^{\wedge}14\sqrt{\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)}\right)$$

$$v_1 = D\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, t\right]$$

$$\left(4.18076\times10^{-48}\,r^2\left(\frac{3.41291\times10^{15}\,r^4}{t^5}-\frac{5.25719\times10^{31}\,r^2}{t^3}+\left(4.26614\times10^{14}\left(-1.23231\times10^{17}\,r^6\,t-2.37213\times10^{35}\,r^4\,t^3-2.55122\times10^{52}\,r^2\,t^5+1.47034\times10^{69}\,t^7\right)\right)\Big/\left(t^4\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)-\frac{1}{t^5}3.41291\times10^{15}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)-\right.$$

$$2.21371\times10^{-97}\,r^2\left(\frac{3.41291\times10^{15}\,r^4}{t^5}-\frac{5.25719\times10^{31}\,r^2}{t^3}+\left(4.26614\times10^{14}\left(-1.23231\times10^{17}\,r^6\,t-2.37213\times10^{35}\,r^4\,t^3-2.55122\times10^{52}\,r^2\,t^5+1.47034\times10^{69}\,t^7\right)\right)\Big/\left(t^4\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)-\frac{1}{t^5}3.41291\times10^{15}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)$$

$$\left.\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)\right)\Big/$$

$$\left(4\pi\sqrt{\left(4.18076\times10^{-48}\,r^2\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)-1.10686\times10^{-97}\,r^2\left(1.71243\times10^{49}-\frac{8.53229\times10^{14}\,r^4}{t^4}+\frac{2.6286\times10^{31}\,r^2}{t^2}+\frac{1}{t^4}8.53229\times10^{14}\sqrt{\left(1.\,r^8-6.16153\times10^{16}\,r^6\,t^2-5.93032\times10^{34}\,r^4\,t^4-4.25203\times10^{51}\,r^2\,t^6+1.83793\times10^{68}\,t^8\right)}\right)^2\right)}\right)$$

Plot3D[$\left(4.1807617710132735`*^{\wedge}-48\; r^2\left(\frac{3.412914925039692`*^{\wedge}15\; r^4}{t^5}-\right.\right.$

$$\frac{5.257194282992301\text{`}*{\wedge}31\,r^2}{t^3} + (4.266143656299615\text{`}*{\wedge}14$$

$$(-1.23230596682539\text{`}*{\wedge}17\,r^6\,t - 2.3721297250827947\text{`}*{\wedge}35\,r^4\,t^3 -$$

$$2.551217714548337\text{`}*{\wedge}52\,r^2\,t^5 + 1.4703410684177891\text{`}*{\wedge}69\,t^7)) \Big/$$

$$(t^4\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 - 5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 -$$

$$4.252029524247228\text{`}*{\wedge}51\,r^2\,t^6 + 1.8379263355222364\text{`}*{\wedge}68\,t^8)) -$$

$$\frac{1}{t^5}\,3.412914925039692\text{`}*{\wedge}15\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 -$$

$$5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 - 4.252029524247228\text{`}*{\wedge}51\,r^2\,t^6 +$$

$$1.8379263355222364\text{`}*{\wedge}68\,t^8)\Big) -$$

$$2.2137119528363295\text{`}*{\wedge}{-97}\,r^2\,\Big(\frac{3.412914925039692\text{`}*{\wedge}15\,r^4}{t^5} -$$

$$\frac{5.257194282992301\text{`}*{\wedge}31\,r^2}{t^3} + (4.266143656299615\text{`}*{\wedge}14$$

$$(-1.23230596682539\text{`}*{\wedge}17\,r^6\,t - 2.3721297250827947\text{`}*{\wedge}35\,r^4\,t^3 -$$

$$2.551217714548337\text{`}*{\wedge}52\,r^2\,t^5 + 1.4703410684177891\text{`}*{\wedge}69\,t^7)) \Big/$$

$$(t^4\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 - 5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 -$$

$$4.252029524247228\text{`}*{\wedge}51\,r^2\,t^6 + 1.8379263355222364\text{`}*{\wedge}68\,t^8)) -$$

$$\frac{1}{t^5}\,3.412914925039692\text{`}*{\wedge}15\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 -$$

$$5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 -$$

$$4.252029524247228\text{`}*{\wedge}51\,r^2\,t^6 + 1.8379263355222364\text{`}*{\wedge}68\,t^8)\Big)$$

$$\Big(1.7124327770294835\text{`}*{\wedge}49 - \frac{8.53228731259923\text{`}*{\wedge}14\,r^4}{t^4} +$$

$$\frac{2.6285971414961507\text{`}*{\wedge}31\,r^2}{t^2} + \frac{1}{t^4}\,8.53228731259923\text{`}*{\wedge}14$$

$$\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 - 5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 -$$

$$4.252029524247228\text{`}*{\wedge}51\,r^2\,t^6 + 1.8379263355222364\text{`}*{\wedge}68\,t^8)\Big)\Big) \Big/$$

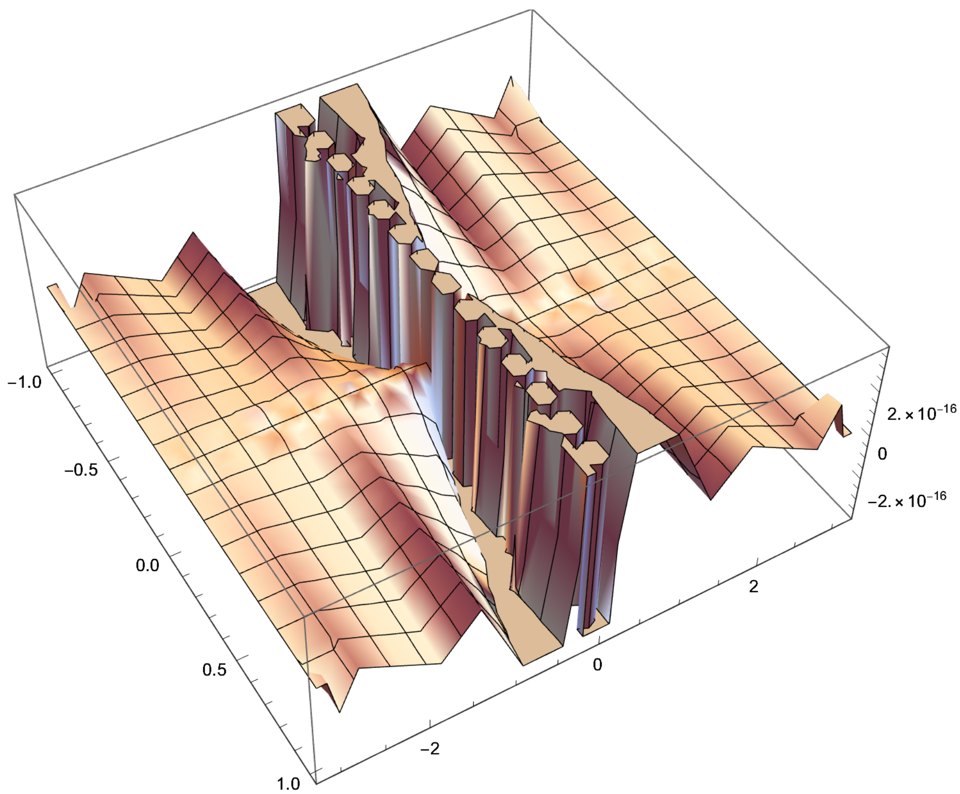
$$\Big(4\,\pi\sqrt{}\Big(\Big(4.1807617710132735\text{`}*{\wedge}{-48}\,r^2\,\Big(1.7124327770294835\text{`}*{\wedge}49 -$$

$$\frac{8.53228731259923\text{`}*{\wedge}14\,r^4}{t^4} +$$

$$\frac{2.6285971414961507\text{`}*{\wedge}31\,r^2}{t^2} + \frac{1}{t^4}\,8.53228731259923\text{`}*{\wedge}14$$

$$\sqrt{}(1.\text{`}\,r^8 - 6.16152983412695\text{`}*{\wedge}16\,r^6\,t^2 - 5.930324312706987\text{`}*{\wedge}34\,r^4\,t^4 -$$

```
4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)] -
 1.1068559764181647`*^-97 r^2 (1.7124327770294835`*^49 -
   8.53228731259923`*^14 r^4/t^4 + 2.6285971414961507`*^31 r^2/t^2 +
   1/t^4 8.53228731259923`*^14 Sqrt[(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 -
        5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 +
        1.8379263355222364`*^68 t^8)^2])), {r, -1, 1}, {t, -π, π}]
```




```
RevolutionPlot3D[(4.1807617710132735`*^-48 r^2 (3.412914925039692`*^15 r^4/t^5 -
    5.257194282992301`*^31 r^2/t^3 + (4.266143656299615`*^14
       (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
         2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
     (t^4 Sqrt[(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
         4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)] -
```

$$\frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)} -$$

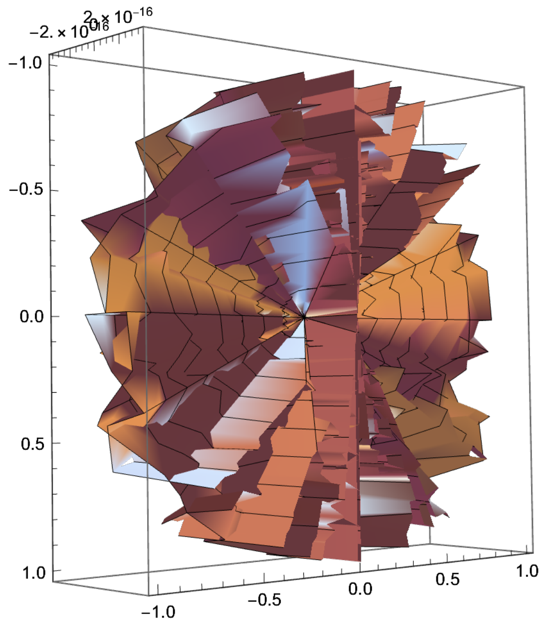
$$2.2137119528363295`*^-97 r^2 \left(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} + (4.266143656299615`*^14 (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 - 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) \Big/ \left(t^4 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) - \frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right)$$

$$\left(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right)\Big/$$

$$\Bigg(4 \pi \sqrt{\Bigg(} 4.1807617710132735`*^-48 r^2 \left(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) -$$

$$1.1068559764181647`*^-97 r^2 \Bigg(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} +$$

$$\frac{1}{t^4} 8.53228731259923`*^14 \sqrt{\left(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8\right)}^2 \Bigg)\Bigg), \{r, -1, 1\}, \{t, -\pi, \pi\}\Bigg]$$



```
Solve[θ == 1/(-8.987551787368176`*^16 + v^2)
  0.5` (-1.1294090667581471`*^18 + 12.566370614359172` v^2 +
    √((1.1294090667581471`*^18 - 12.566370614359172` v^2)^2 - 4.`
        (-8.987551787368176`*^16 + v^2)
        (-3.5481432270250993`*^18 + 39.47841760435743` v^2) Sin[β]^2)), t]
```

$$\left\{\left\{t\to -0.5\sqrt{\left(-\frac{2.\,r^2\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}-2.\sqrt{\left(\frac{r^4\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)^2}{\left(2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2\right)^2}-\frac{4.\,r^4\left(2.43561\times10^{15}+8.53229\times10^{14}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}\right)}\right)}\right\},\right.$$

$$\left\{t\to 0.5\sqrt{\left(-\frac{2.\,r^2\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}-2.\sqrt{\left(\frac{r^4\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)^2}{\left(2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2\right)^2}-\frac{4.\,r^4\left(2.43561\times10^{15}+8.53229\times10^{14}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}\right)}\right)}\right\},$$

$$\left\{t\to -0.5\sqrt{\left(-\frac{2.\,r^2\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}+2.\sqrt{\left(\frac{r^4\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)^2}{\left(2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2\right)^2}-\frac{4.\,r^4\left(2.43561\times10^{15}+8.53229\times10^{14}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}\right)}\right)}\right\},$$

$$\left.\left\{t\to 0.5\sqrt{\left(-\frac{2.\,r^2\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}+2.\sqrt{\left(\frac{r^4\left(6.64679\times10^{32}-2.6286\times10^{31}\,\theta\right)^2}{\left(2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2\right)^2}-\frac{4.\,r^4\left(2.43561\times10^{15}+8.53229\times10^{14}\,\theta\right)}{2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2}\right)}\right)}\right\}\right\}$$

```
t := 0.5` √(-(2.` r^2 (6.646791914659577`*^32 - 2.6285971414961507`*^31 θ)) /
      (2.652268423469232`*^49 - 1.7124327770294835`*^49 θ +
        1.50288049195799`*^48 θ^2) +
    2.` √((r^4 (6.646791914659577`*^32 - 2.6285971414961507`*^31 θ)^2) /
          (2.652268423469232`*^49 - 1.7124327770294835`*^49 θ +
             1.50288049195799`*^48 θ^2)^2 -
         (4.` r^4 (2.435611652890208`*^15 + 8.53228731259923`*^14 θ)) /
          (2.652268423469232`*^49 - 1.7124327770294835`*^49 θ +
            1.50288049195799`*^48 θ^2)))
```

```
r := (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) -
     (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ) / (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)
```

```
x := (2 π r - r θ)/(2 π)
```

```
θ := 2 (π + √(π^2 - π^2 Sin[β]^2))
```

```
m :=
  (7.372495999759142`*^-51 (1.6880179234807384`*^10 θ √(-3.5294033336192096`*^16 θ +
            2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) -
        4.029845948245144`*^9 θ^2 √(-3.5294033336192096`*^16 θ +
            2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) +
        2.1378996752068695`*^8 θ^3 √(-3.5294033336192096`*^16 θ +
            2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2))) /
   (-12.566370614359172` θ √(-4.487190804107819`*^15 θ +
          3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16 Sin[β]^2) +
     1.` θ^2 √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14 θ^2 +
          1.40969256654408`*^16 Sin[β]^2) +
     6.283185307179586` √(12.566370614359172` θ - 1.` θ^2) Sin[β]
      √(-4.487190804107819`*^15 θ +
          3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16 Sin[β]^2))
```

```
RevolutionPlot3D[
 (2 π r - 2 π x) m (((4.1807617710132735`*^-48 r^2 ((3.412914925039692`*^15 r^4)/t^5 -
```

$$\frac{5.257194282992301`*^{\wedge}31\, r^2}{t^3} + \Big(4.266143656299615`*^{\wedge}14$$
$$\Big(-1.23230596682539`*^{\wedge}17\, r^6\, t - 2.3721297250827947`*^{\wedge}35\, r^4\, t^3 -$$
$$2.551217714548337`*^{\wedge}52\, r^2\, t^5 + 1.4703410684177891`*^{\wedge}69\, t^7\Big)\Big) \Big/$$
$$\Big(t^4 \sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 -$$
$$4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\Big)\Big) -$$
$$\frac{1}{t^5}\, 3.412914925039692`*^{\wedge}15 \sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6$$
$$t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51$$
$$r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\Big)\Bigg) -$$
$$2.2137119528363295`*^{\wedge}-97\, r^2 \Bigg(\frac{3.412914925039692`*^{\wedge}15\, r^4}{t^5} -$$
$$\frac{5.257194282992301`*^{\wedge}31\, r^2}{t^3} + \Big(4.266143656299615`*^{\wedge}14$$
$$\Big(-1.23230596682539`*^{\wedge}17\, r^6\, t - 2.3721297250827947`*^{\wedge}35\, r^4\, t^3 -$$
$$2.551217714548337`*^{\wedge}52\, r^2\, t^5 + 1.4703410684177891`*^{\wedge}69\, t^7\Big)\Big) \Big/$$
$$\Big(t^4 \sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 -$$
$$4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\Big)\Big) -$$
$$\frac{1}{t^5}\, 3.412914925039692`*^{\wedge}15 \sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6$$
$$t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51$$
$$r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\Big)\Bigg)$$
$$\Bigg(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} +$$
$$\frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14$$
$$\sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4$$
$$t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\Big)\Bigg)\Bigg/$$
$$\Bigg(4\,\pi \sqrt{}\Bigg(4.1807617710132735`*^{\wedge}-48\, r^2 \Bigg(1.7124327770294835`*^{\wedge}49 -$$
$$\frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} +$$
$$\frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14$$
$$\sqrt{}\Big(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 -$$

```
                4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
        1.1068559764181647`*^-97 r^2 (1.7124327770294835`*^49 -
            8.53228731259923`*^14 r^4 / t^4 + 2.6285971414961507`*^31 r^2 / t^2 +
            1/t^4 8.53228731259923`*^14 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 -
                5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51
                r^2 t^6 + 1.8379263355222364`*^68 t^8))^2)))) -
  ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))),
 {β, -π, π}, {θ, -2
   π,
  2
   π}]

(2 π r - 2 π x) m (v1 - v2)

ΔxΔp = (2 π r - 2 π x) m (v1 - v2) =
  (2 π r - 2 π x) m ((((4.1807617710132735`*^-48 r^2 (3.412914925039692`*^15 r^4 / t^5 -
          5.257194282992301`*^31 r^2 / t^3 + (4.266143656299615`*^14
            (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
              2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
          (t^4 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
              4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
          1/t^5 3.412914925039692`*^15 √(1.` r^8 - 6.16152983412695`*^16
              r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
             4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
       2.2137119528363295`*^-97 r^2 (3.412914925039692`*^15 r^4 / t^5 -
```

$$\frac{5.257194282992301`*^31 r^2}{t^3} + \Big(4.266143656299615`*^14$$

$$\Big(-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -$$

$$2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7\Big)\Big) \Big/$$

$$\Big(t^4 \sqrt{}\Big(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -$$

$$4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8\Big)\Big) -$$

$$\frac{1}{t^5} 3.412914925039692`*^15 \sqrt{}\Big(1.` r^8 - 6.16152983412695`*^16$$

$$r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -$$

$$4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8\Big)\Bigg)$$

$$\Bigg(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} +$$

$$\frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14$$

$$\sqrt{}\Big(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -$$

$$4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8\Big)\Bigg)\Bigg) \Big/$$

$$\Bigg(4 \pi \sqrt{}\Bigg(4.1807617710132735`*^-48 r^2 \Bigg(1.7124327770294835`*^49 -$$

$$\frac{8.53228731259923`*^14 r^4}{t^4} +$$

$$\frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14$$

$$\sqrt{}\Big(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -$$

$$4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8\Big)\Bigg) -$$

$$1.1068559764181647`*^-97 r^2 \Bigg(1.7124327770294835`*^49 -$$

$$\frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} +$$

$$\frac{1}{t^4} 8.53228731259923`*^14 \sqrt{}\Big(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 -$$

$$5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51$$

$$r^2 t^6 + 1.8379263355222364`*^68 t^8\Big)\Bigg)^2\Bigg)\Bigg)\Bigg) -$$

$$\Big(\Big(\sqrt{}\Big(-1.1294090667581471`*^18 \theta + 8.987551787368176`*^16 \theta^2 +$$

```
3.5481432270250993`*^18 Sin[β]^2)) /
(√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))))
```

```
RevolutionPlot3D[
 (7.372495999759142`*^-51 θ (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] + 4 π^2 Sin[β]^2 -
      (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ)
   (1.6880179234807384`*^10 θ √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) -
     4.029845948245144`*^9 θ^2 √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2) +
     2.1378996752068695`*^8 θ^3 √(-3.5294033336192096`*^16 θ +
          2.808609933552555`*^15 θ^2 + 1.1087947584453435`*^17 Sin[β]^2))
   (-(√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
            3.5481432270250993`*^18 Sin[β]^2)) /
      (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
     ((4.1807617710132735`*^-48 (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] +
              4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ)^2
          ((1.0921327760127014`*^17 (-4 π θ + θ^2 + 2 π √((4 π - θ) θ) Sin[β] +
                  4 π^2 Sin[β]^2 - (2 π^2 √((4 π - θ) θ) Sin[β]^3)/(4 π - θ) -
                  (2 π^2 √((4 π - θ) θ) Sin[β]^3)/θ)^4) / ((16 π^2 θ - 12 π θ^2 + 2 θ^3 -
                  16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)^4 (-(2.` (6.646791914659577`*^32 -
```

$$2.6285971414961507\grave{}*\hat{}31\,\theta)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right.$$

$$\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\,\sqrt{\Big(\Big(\big(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta\big)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.\grave{}\,\big(2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14$$

$$\theta\big)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$\left.2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^{5/2}\right)-$$

$$\left(4.205755426393841`*^{\wedge}32 \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right.$$

$$\left(-\left(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\right.\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)-$$

$$\Big(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14$$

$$\theta) \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\;\big(16\pi^2\theta-12\pi\theta^2+$$

$$\left.\left.\left.2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\right)\right)^{3/2}\right)+$$

$$\left(6.825829850079384\grave{}*\hat{}15\;\left(-\left(6.16152983412695\grave{}*\hat{}16\;\left(-4\pi\theta+\right.\right.\right.\right.$$

$$\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\sqrt{\left(-\left(2.\grave{}\;(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\right.\right.}$$

$$\theta)\;\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\left.\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\;\big(16\pi^2\theta-12\pi\theta^2+$$

$$2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+2.\grave{}$$

$$\sqrt{\left(\left((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\right.\right.}$$

$$\theta)^2\;\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+\right.$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 -$$
$$1.7124327770294835\grave{}*\hat{}49\,\theta +$$
$$1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big) - \Big(4.\grave{}$$
$$(2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14$$
$$\theta)\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 -$$
$$1.7124327770294835\grave{}*\hat{}49\,\theta +$$
$$1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^6 -$$

$$\Big(2.9651621563534934\grave{}*\hat{}34\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$
$$\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$
$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Big(-\Big(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$
$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\ \theta + 1.50288049195799`*^{48}\ \theta^2\big)\ \big(16\ \pi^2\ \theta - 12\ \pi\ \theta^2 + 2\ \theta^3 - 16\ \pi^3\ \text{Sin}[\beta]^2 + 8\ \pi^2\ \theta\ \text{Sin}[\beta]^2\big)^2\Big) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\ \theta)^2\ \Bigg(-4\ \pi\ \theta + \theta^2 + 2\ \pi\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta] + 4\ \pi^2\ \text{Sin}[\beta]^2 - \frac{2\ \pi^2\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\ \pi - \theta} - \frac{2\ \pi^2\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\ \theta + 1.50288049195799`*^{48}\ \theta^2\big)^2\ \big(16\ \pi^2\ \theta - 12\ \pi\ \theta^2 + 2\ \theta^3 - 16\ \pi^3\ \text{Sin}[\beta]^2 + 8\ \pi^2\ \theta\ \text{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.`$$

$$(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\ \theta)\ \Bigg(-4\ \pi\ \theta + \theta^2 + 2\ \pi\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta] + 4\ \pi^2\ \text{Sin}[\beta]^2 - \frac{2\ \pi^2\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\ \pi - \theta} - \frac{2\ \pi^2\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\ \theta + 1.50288049195799`*^{48}\ \theta^2\big)\ \big(16\ \pi^2\ \theta - 12\ \pi\ \theta^2 + 2\ \theta^3 - 16\ \pi^3\ \text{Sin}[\beta]^2 + 8\ \pi^2\ \theta\ \text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^{3/2}\Bigg)\Bigg/$$

$$\big(16\ \pi^2\ \theta - 12\ \pi\ \theta^2 + 2\ \theta^3 - 16\ \pi^3\ \text{Sin}[\beta]^2 + 8\ \pi^2\ \theta\ \text{Sin}[\beta]^2\big)^4 -$$

$$\Bigg(7.972555357963553`*^{50}\ \Bigg(-4\ \pi\ \theta + \theta^2 + 2\ \pi\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta] + 4\ \pi^2\ \text{Sin}[\beta]^2 - \frac{2\ \pi^2\ \sqrt{(4\ \pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\ \pi - \theta} -$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2$$

$$\left(-\left(2.\grave{}\,(6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)\right.\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49\right.\right.$$

$$\left.\theta+1.50288049195799\grave{}*\wedge 48\,\theta^2\right)\,\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.$$

$$\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)+2.\grave{}$$

$$\sqrt{\left(\left((6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\right.\right.}$$

$$\theta)^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\wedge 49-\right.\right.$$

$$1.7124327770294835\grave{}*\wedge 49\,\theta+$$

$$\left.1.50288049195799\grave{}*\wedge 48\,\theta^2\right)^2\,\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.$$

$$\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right)-\left(4.\grave{}\right.$$

$$(2.435611652890208\grave{}*\wedge 15+8.53228731259923\grave{}*\wedge 14$$

$$\theta)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right)\Big)\Big)^{5/2}\Big) \Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 + 1.1487039597013978`*^{67}$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg) \Big/$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg) \Big/}$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)^2\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right) - \Bigg(4.`$$

$$(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + \right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49-1.7124327770294835\grave{}*\verb|^|49$$

$$\theta+1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)\;\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^{7/2}\Big)\Big)\Big/$$

$$\Big(\Big(-\Big(2.\grave{}\;(6.646791914659577\grave{}*\verb|^|32-2.6285971414961507\grave{}*\verb|^|31\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49-1.7124327770294835\grave{}*\verb|^|49$$

$$\theta+1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+$$

$$2.\grave{}\;\sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\verb|^|32-2.6285971414961507\grave{}*\verb|^|31\,\theta)^2}$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49-1.7124327770294835\grave{}*\verb|^|49$$

$$\theta+1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)^2\;\big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.\grave{}\;(2.435611652890208\grave{}*\verb|^|15+8.53228731259923\grave{}*\verb|^|14$$

$$\theta)\ \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+\right.$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$
$$\Big(\big(2.652268423469232`{*}^{\wedge}49-1.7124327770294835`{*}^{\wedge}49$$
$$\theta+1.50288049195799`{*}^{\wedge}48\,\theta^2\big)\ \big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^2$$

$$\sqrt{\Bigg(\Bigg(\Bigg(1.`\ \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.}$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^8\right)\Big/$$
$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^8-$$
$$\Bigg(1.5403824585317376`{*}^{\wedge}16\ \left(-4\,\pi\,\theta+\theta^2+\right.$$
$$2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$
$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^6$$
$$\Bigg(-\Bigg(2.`\ (6.646791914659577`{*}^{\wedge}32-2.6285971414961507`{*}^{\wedge}31\,\theta)$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+\right.$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\Big(\big(2.652268423469232`{*}^{\wedge}49-1.7124327770294835`{*}^{\wedge}49$$
$$\theta+1.50288049195799`{*}^{\wedge}48\,\theta^2\big)\ \big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^32 - 2.6285971414961507`*^31\ \theta)^2 \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg) \Big/}$$

$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\ \theta + 1.50288049195799`*^48\,\theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.`\ (2.435611652890208`*^15 + 8.53228731259923`*^14\ \theta) \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg) \Big/$$

$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\ \theta + 1.50288049195799`*^48\,\theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg) \Big/$$

$$\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^6 -$$

$$\Bigg(3.706452695441867`*^33 \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^32 - 2.6285971414961507`*^31\ \theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big)+$$

$$2.\grave{}\,\sqrt{\Bigg(\Bigg(\Big(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta\Big)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.\grave{}\,\big(2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14\,\theta\big)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^2\Big)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4 -$$

$$\Bigg(6.643796131636294\grave{}*\verb|^|49\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big) -$$

$$\left(4.` \, (2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\right)\Bigg)\Bigg)^3\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2 +$$

$$7.179399748133736`*^{65}$$

$$\left(-\left(2.` \, (6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/\right.$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right) + 2.`$$

$$\sqrt{\left(\left((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\right.\right.\right.}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49$$

$$\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)^2$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2$$

$$\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-\Big(4.\text{`}\,(2.435611652890208\text{`}*\text{^}15+$$

$$8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49$$

$$\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^4\Big)\Big)-$$

$$\Big(1.0921327760127014\text{`}*\text{^}17\,\sqrt{\Big(\Big(\Big(1.\text{`}\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}$$

$$\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\right)\Big/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^8-$$

$$\Big(1.5403824585317376\text{`}*\text{^}16\,\Big(-4\,\pi\,\theta+\theta^2+$$

$$2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Big(-\Big(2.\text{`}\,(6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2\Big)+2.\text{`}$$

$$\sqrt{\Bigg(\Bigg(\big(6.646791914659577\text{`*^}32-2.6285971414961507\text{`*^}31\,\theta\big)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)-\Bigg(4.\text{`}\,\big(2.435611652890208\text{`*^}15+8.53228731259923\text{`*^}14\,\theta\big)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^6 -$$

$$\Bigg(3.706452695441867\grave{}*\hat{}33\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$

$$\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.\grave{}\;(6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49$$

$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\;\Big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.\grave{}\;\sqrt{\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32 -}$$

$$2.6285971414961507\grave{}*\hat{}31\,\theta)^2$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 -$$

$$1.7124327770294835\grave{}*\hat{}49\,\theta +$$

$$1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\;\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big) -$$

$$\Bigg(4.\grave{}\;(2.435611652890208\grave{}*\hat{}15 +$$

$$8.53228731259923\grave{}*\hat{}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\right)^4\Big)\Big)\Big)^2\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6.643796131636294\grave{}*\hat{}49\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\,\sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\ (2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^3\Bigg)\Big/$$

$$\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2+$$

$$7.179399748133736`*^{\wedge}65$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\ \theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)^2\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\ \theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg)\Big/$$

$$\Big(-\Big(2.`\ (6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge49-1.7124327770294835\grave{}*\wedge49\,\theta+1.50288049195799\grave{}*\wedge48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\wedge32-2.6285971414961507\grave{}*\wedge31\,\theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232\grave{}*\wedge49-1.7124327770294835\grave{}*\wedge49\,\theta+1.50288049195799\grave{}*\wedge48\,\theta^2\big)^2\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)-$$

$$\Bigg(4.\grave{}\,(2.435611652890208\grave{}*\wedge15+8.53228731259923\grave{}*\wedge14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge49-1.7124327770294835\grave{}*\wedge49\,\theta+1.50288049195799\grave{}*\wedge48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)\Bigg)^{5/2}\Bigg)\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Big(2.2137119528363295`*^{-97}$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2$$

$$\Big(\Big(1.0921327760127014`*^{17}\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/$$

$$\Big(\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4$$

$$\Big(-\Big(2.`\,(6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\big)$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Big(\Big((6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)^2}$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.\text{`}\,(2.435611652890208\text{`}*\text{^}15+8.53228731259923\text{`}*\text{^}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)^{5/2}\Bigg)-$$

$$\Bigg(4.205755426393841\text{`}*\text{^}32\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Bigg(\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^2$$

$$\Bigg(-\Bigg(2.\text{`}\,(6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\text{`}\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-\Bigg(4.\text{`}\,(2.435611652890208\text{`}*\text{^}15+8.53228731259923\text{`}*\text{^}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Bigg)\Bigg)^{3/2}}+$$

$$\Bigg(6.825829850079384`*^{15}\Bigg(-\Bigg(6.16152983412695`*^{16}\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^6$$

$$\sqrt{\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\big)\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)^2\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\big)^2\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.`$$

$$(2.435611652890208`*^{15}+8.53228731259923`*^{14}\,\theta)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} -$$
$$\left.\left.\frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49 -$$
$$1.7124327770294835`*^{\wedge}49\,\theta +$$
$$1.50288049195799`*^{\wedge}48\,\theta^2\Big)\ \Big(16\pi^2\theta - 12\pi\theta^2 +$$
$$\left.\left.\left.\left.2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\right)\right)\right)\Big/$$
$$\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^6 -$$
$$\Bigg(2.9651621563534934`*^{\wedge}34\ \Bigg(-4\pi\theta + \theta^2 + 2\pi$$
$$\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2 \mathrm{Sin}[\beta]^2 -$$
$$\left.\frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4$$
$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)$$
$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\ \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] +$$
$$4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} -$$
$$\left.\left.\frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)$$
$$\Big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta$$
$$\left.\left.\mathrm{Sin}[\beta]^2\right)^2\right) + 2.`\ \sqrt{\Big(\Big(\Big(6.646791914659577`*^{\wedge}32 -}$$
$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$
$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\ \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] +$$
$$4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.\grave{}$$

$$(2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14\,\theta)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\left.\left.\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\right)\right)^{3/2}\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4 -$$

$$\Big(7.972555357963553\grave{}*\hat{}50\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Big(-\Big(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)$$
$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big)+2.`\sqrt{\Big(\Big(\Big(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta\Big)^2}$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-\Big(4.`$$
$$(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^{5/2}\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2+1.1487039597013978`*^{\wedge}67$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + 2.\grave{}$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)^2\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.\grave{}$$

$$(2.435611652890208\grave{}*\verb|^|15 + 8.53228731259923\grave{}*\verb|^|14\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^{7/2}\Big)\Big)\Big/$$

$$\Bigg(\Bigg(-\Bigg(2.\grave{}\;(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big)+$$

$$2.\grave{}\;\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Bigg(4.\grave{}\;(2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14$$

$$\theta)\;\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\left(\left(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\right) \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\right)\Big)\Big)^2$$

$$\sqrt{\Bigg(\Bigg(\Bigg(1.` \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\Bigg)\Bigg/}$$

$$\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^8 -$$

$$\Bigg(1.5403824585317376`*^{\wedge}16 \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.` \left(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta\right) \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\left(\left(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\right) \left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg(\left(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta\right)^2 \left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} -\right.}$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)-\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^6-$$

$$\Bigg(3.706452695441867`*^{\wedge}33\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Bigg)\Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Bigg)\Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)^2\Bigg)}\Bigg/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4 -$$

$$\Big(6.643796131636294`*^{49}\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$

$$\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)$$

$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)\ \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.\grave{}\ \sqrt{\Bigg(\Bigg((6.646791914659577\grave{}*\verb|^|32 - 2.6285971414961507\grave{}*\verb|^|31\,\theta)^2}$$

$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49\,\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)^2\ \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.\grave{}\ (2.435611652890208\grave{}*\verb|^|15 + 8.53228731259923\grave{}*\verb|^|14\,\theta)$$

$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`{*}^{\wedge}49-$$

$$1.7124327770294835`{*}^{\wedge}49\,\theta+$$

$$1.50288049195799`{*}^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$\left.\left.\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\right)\right)\right)^3\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2+$$

$$7.179399748133736`{*}^{\wedge}65$$

$$\Big(-\Big(2.`\,\,(6.646791914659577`{*}^{\wedge}32-2.6285971414961507`{*}^{\wedge}31\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`{*}^{\wedge}49-1.7124327770294835`{*}^{\wedge}49$$

$$\theta+1.50288049195799`{*}^{\wedge}48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta$$

$$\text{Sin}[\beta]^2\big)^2\Big)+2.`\,\sqrt{\Big(\Big(\big(6.646791914659577`{*}^{\wedge}32-}$$

$$2.6285971414961507`{*}^{\wedge}31\,\theta\big)^2$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`{*}^{\wedge}49-1.7124327770294835`{*}^{\wedge}49$$

$$\theta+1.50288049195799`{*}^{\wedge}48\,\theta^2\big)^2$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)-\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^4\Big)\Big)-$$

$$\Bigg(1.0921327760127014`*^{\wedge}17\,\sqrt{\Bigg(\Bigg(\Bigg(1.`\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^8\Bigg)\Big/}$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^8-$$

$$\Bigg(1.5403824585317376`*^{\wedge}16\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^6$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)$$
$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) + 2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2$$
$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6 -$$

$$\Bigg(3.706452695441867`*^{\wedge}33\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$

$$\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Big(-\Big(2.\grave{}\ (6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Big)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49$$

$$\theta+1.50288049195799\grave{}*\wedge 48\,\theta^2\big)\ \big(16\pi^2\theta-$$

$$12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+$$

$$2.\grave{}\ \sqrt{\Big(\Big((6.646791914659577\grave{}*\wedge 32-}$$

$$2.6285971414961507\grave{}*\wedge 31\,\theta)^2$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\left.\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-$$

$$1.7124327770294835\grave{}*\wedge 49\,\theta+$$

$$1.50288049195799\grave{}*\wedge 48\,\theta^2\big)^2\ \big(16\pi^2\theta-12\pi\theta^2+$$

$$2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.\grave{}\ (2.435611652890208\grave{}*\wedge 15+$$

$$8.53228731259923\grave{}*\wedge 14\,\theta)$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-$$

$$1.7124327770294835\grave{}*\hat{}49\,\theta+$$

$$1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$\left.\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\right)\right)^2\right)\Big/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4-$$

$$\Bigg(6.643796131636294\grave{}*\hat{}49\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi$$

$$\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.\grave{}\,\,(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-$$

$$\left.12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^2\right)+$$

$$2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32-}$$

$$2.6285971414961507\grave{}*\hat{}31\,\theta)^2$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 -$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta +$$

$$1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big) -$$

$$\Big(4.\text{`}\ (2.435611652890208\text{`}*\text{^}15 +$$

$$8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 -$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta +$$

$$1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$\left.\left.\left.2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\right)\right)^3\right)\Big/$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2 +$$

$$7.179399748133736\text{`}*\text{^}65$$

$$\Big(-\Big(2.\text{`}\ (6.646791914659577\text{`}*\text{^}32 - 2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 - 1.7124327770294835\text{`}*\text{^}49$$

$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)$$
$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta$$
$$\text{Sin}[\beta]^2\Big)^2\Big) + 2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32 -}$$
$$2.6285971414961507\grave{}*\hat{}31\,\theta)^2$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49$$
$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2$$
$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2$$
$$\theta\,\text{Sin}[\beta]^2\Big)^4\Big) - \Bigg(4.\grave{}\,(2.435611652890208\grave{}*\hat{}15 +$$
$$8.53228731259923\grave{}*\hat{}14\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49$$
$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Bigg)\Bigg)^4\Bigg)\Bigg)\Bigg/$$
$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big) +$$

$$2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)^2 \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/ \Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)^2 \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) - \Bigg(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\ \theta) \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/ \Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Bigg)^{5/2}}\Bigg)$$

$$\Bigg(1.7124327770294835`*^{\wedge}49 - \Bigg(1.3651659700158768`*^{\wedge}16 \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4$$

$$\Big(-\Big(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\ \sqrt{\Big(\Big((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\ \Big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Big(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14$$

$$\theta)\ \Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$
$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$\left.\left.\left.2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\right)\right)^2\right)+$$

$$\Big(1.0514388565984603`*^{\wedge}32\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2$$

$$\Big(-\Big(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$
$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)$$
$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big)+$$

$$2.`\,\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\right)^2 \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right) -$$

$$\left(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\ \theta) \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right) \Big/$$

$$\left(\left(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\right) \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right)\Bigg)\Bigg)\Bigg) +$$

$$\Bigg(1.3651659700158768`*^{\wedge}16 \sqrt{\Bigg(\Bigg(\Bigg(1.`\ \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^8\Bigg) \Big/}$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^8 -$$

$$\Bigg(1.5403824585317376`*^{\wedge}16 \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49$$

$$\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta$$

$$\text{Sin}[\beta]^2\big)^2\Big) + 2.\grave{}\,\sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\text{^}32 -}$$

$$2.6285971414961507\grave{}*\text{^}31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49$$

$$\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2$$

$$\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Big(4.\grave{}\,(2.435611652890208\grave{}*\text{^}15 +$$

$$8.53228731259923\grave{}*\text{^}14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49$$

$$\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6 -$$

$$\Bigg(3.706452695441867\text{`}*\text{^}33\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Bigg(-\Bigg(2.\text{`}\,(6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\text{`}\sqrt{\Bigg(\Bigg((6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-$$

$$\Big(4.\text{`}\,(2.435611652890208\text{`}*\text{^}15+8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Big)\Big)^2\Big)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6.643796131636294`*^{\wedge}49\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^3\Bigg)\Bigg/$$

$$\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2+$$

$$7.179399748133736`*^{\wedge}65$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big)+2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\left.\left.\left.\left.\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\right)\right)^4\right)\right)\Big/$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Bigg)^2\Bigg)\Bigg)\Big/$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)\Big/$$

$$\left(4\,\pi\,\sqrt{\left(\left(\left(4.1807617710132735\grave{}*\hat{}-48\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.\right.\right.\right.}\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2$$

$$\left(1.7124327770294835\grave{}*\hat{}49-\left(1.3651659700158768\grave{}*\hat{}16\right.\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right.$$

$$\left(-\left(2.\grave{}\,\left(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta\right)\right.\right.$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\right.\right.$$

$$\left.\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\,\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.$$

$$\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)+2.\grave{}$$

$$\sqrt{\left(\left(\left(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\right.\right.\right.}$$

$$\theta)^2 \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\big(\texttt{2.652268423469232`*\^{}49}-\texttt{1.7124327770294835`*\^{}49}$$

$$\theta+\texttt{1.50288049195799`*\^{}48}\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2$$

$$\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-\Bigg(\texttt{4.`}\ (\texttt{2.435611652890208`*\^{}15}+$$

$$\texttt{8.53228731259923`*\^{}14}\,\theta)\ \Bigg(-4\,\pi\,\theta+\theta^2+$$

$$2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\big(\texttt{2.652268423469232`*\^{}49}-\texttt{1.7124327770294835`*\^{}49}$$

$$\theta+\texttt{1.50288049195799`*\^{}48}\,\theta^2\big)\ \big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^2\Big)+$$

$$\Bigg(\texttt{1.0514388565984603`*\^{}32}\ \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Bigg(\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2$$

$$\Bigg(-\Bigg(\texttt{2.`}\ (\texttt{6.646791914659577`*\^{}32}-\texttt{2.6285971414961507`*\^{}31}\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{2}\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*\verb|^|49-1.7124327770294835`*\verb|^|49\,\theta+1.50288049195799`*\verb|^|48\,\theta^{2}\big)\left(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+2\,\theta^{3}-16\,\pi^{3}\,\mathrm{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\mathrm{Sin}[\beta]^{2}\right)^{2}\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*\verb|^|32-2.6285971414961507`*\verb|^|31\,\theta)^{2}\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{4}\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*\verb|^|49-1.7124327770294835`*\verb|^|49\,\theta+1.50288049195799`*\verb|^|48\,\theta^{2}\big)^{2}\left(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+2\,\theta^{3}-16\,\pi^{3}\,\mathrm{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\mathrm{Sin}[\beta]^{2}\right)^{4}\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*\verb|^|15+8.53228731259923`*\verb|^|14\,\theta)\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{4}\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*\verb|^|49-1.7124327770294835`*\verb|^|49\,\theta+1.50288049195799`*\verb|^|48\,\theta^{2}\big)\left(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+2\,\theta^{3}-16\,\pi^{3}\,\mathrm{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\mathrm{Sin}[\beta]^{2}\right)^{4}\Big)\Bigg)\Bigg)\Bigg)+$$

$$\Bigg(1.3651659700158768`*^16 \sqrt{\Bigg(\Bigg(1.` \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}$$

$$\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^8\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^8 -$$

$$\Bigg(1.5403824585317376`*^16 \Big(-4\,\pi\,\theta + \theta^2 +$$

$$2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^6$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^32 -$$

$$2.6285971414961507`*^31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49$$

$$\theta + 1.50288049195799`*^48\,\theta^2\big)\,\big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.` \sqrt{\Big(\Big((6.646791914659577`*^32 -}$$

$$2.6285971414961507`*^31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) -$$

$$\Big(4.\text{`}\,(2.435611652890208\text{`*^}15 + 8.53228731259923\text{`*^}14\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6 -$$

$$\Big(3.706452695441867\text{`*^}33\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Big(-\Big(2.\text{`}\,(6.646791914659577\text{`*^}32 - 2.6285971414961507\text{`*^}31\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\sqrt{\Bigg(\bigg(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Big(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\bigg)\Bigg)^2\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6.643796131636294`*^{\wedge}49\,\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-$$

$$\left(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right)\Big)\Big)^3\Big)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 +$$

$$7.179399748133736\grave{}*\hat{}65\left(-\left(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/\right.$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right) +$$

$$2.\grave{}\sqrt{\left(\left(\left((6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)^2\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + \right.\right.\right.\right.}$$

$$4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14\,\theta) \Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^4\Big)\Big)\Big/$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta) \Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.` \sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)^2 \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\ \theta) \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^2\Big)\Big) \Big/}$$

$$\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2 -$$

$$\Big(1.1068559764181647`*^{\wedge}-97$$

$$\Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^2$$

$$\Bigg(1.7124327770294835`*^{\wedge}49 - \Bigg(1.3651659700158768`*^{\wedge}16$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Bigg(\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)$$

$$\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta$$

$$\mathrm{Sin}[\beta]^2\big)^2\Big)+2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-}$$

$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

$$4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-$$

$$\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-$$

$$1.7124327770294835`*^{\wedge}49\,\theta+$$

$$1.50288049195799`*^48\,\theta^2)^2$$
$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\right.$$
$$\left.\theta\,\text{Sin}[\beta]^2\right)^4\Big) - \Big(4.`\,(2.435611652890208`*^15 +$$
$$8.53228731259923`*^14\,\theta)$$
$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/$$
$$\Big(\big(2.652268423469232`*^49 -$$
$$1.7124327770294835`*^49\,\theta +$$
$$1.50288049195799`*^48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)^2\Big) +$$
$$\Big(1.0514388565984603`*^32\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}$$
$$\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$
$$\Big(\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2$$
$$\Big(-\Big(2.`\,(6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)$$
$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$
$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\ \theta)^2\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)^2\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\ \theta)\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg) +$$

$$\Bigg(1.3651659700158768`*^{\wedge}16\ \sqrt{\Bigg(\Bigg(1.`\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^8-$$

$$\Bigg(1.5403824585317376\text{`}*\text{^}16\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.\text{`}\,(6.646791914659577\text{`}*\text{^}32-$$

$$2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49-$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta+$$

$$1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big)+$$

$$2.\text{`}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\text{`}*\text{^}32-}$$

$$2.6285971414961507\text{`}*\text{^}31\,\theta)^2$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49-$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta+$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^6-\Bigg(3.706452695441867`*^{\wedge}33$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\operatorname{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2 \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta] + 4\,\pi^2\,\operatorname{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\operatorname{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta) \left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta] + 4\,\pi^2\,\operatorname{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\operatorname{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^2\Bigg)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4-\Bigg(6.643796131636294\grave{}*\wedge 49$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49\,\theta+1.50288049195799\grave{}*\wedge 48\,\theta^2\big)\,\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\,\sqrt{\Bigg(\Bigg((6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49\,\theta+$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^3\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2+7.179399748133736`*^{\wedge}65$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big)+$$

$$2.`\,\sqrt{\Big(\Big(\Big(6.646791914659577`*^{\wedge}32-}$$

$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-$$

$$1.7124327770294835`*^{\wedge}49\,\theta+$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.`\,(2.435611652890208`*^{\wedge}15+$$

$$8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-$$

$$1.7124327770294835`*^{\wedge}49\,\theta+$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^4\Big)\Big)\Big/$$

$$\Big(-\Big(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31$$

$$\theta)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big) + 2.`\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)^2\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) - \Bigg(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Bigg)^2\Bigg)^2\Bigg)}\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Big(\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)$$

```
(-12.566370614359172` θ √(-4.487190804107819`*^15
        θ +
       3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2) +
   1.` θ^2 √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2) +
   6.283185307179586` √(12.566370614359172` θ - 1.` θ^2)
     Sin[
      β]
     √(-4.487190804107819`*^15
        θ +
       3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2))), {β, -π / 2, π / 2}]
```

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

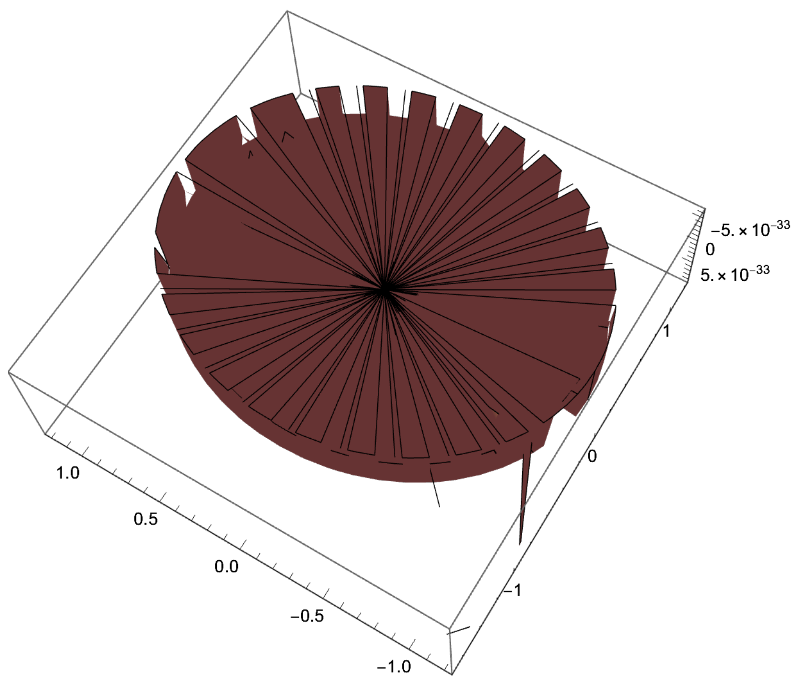
Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

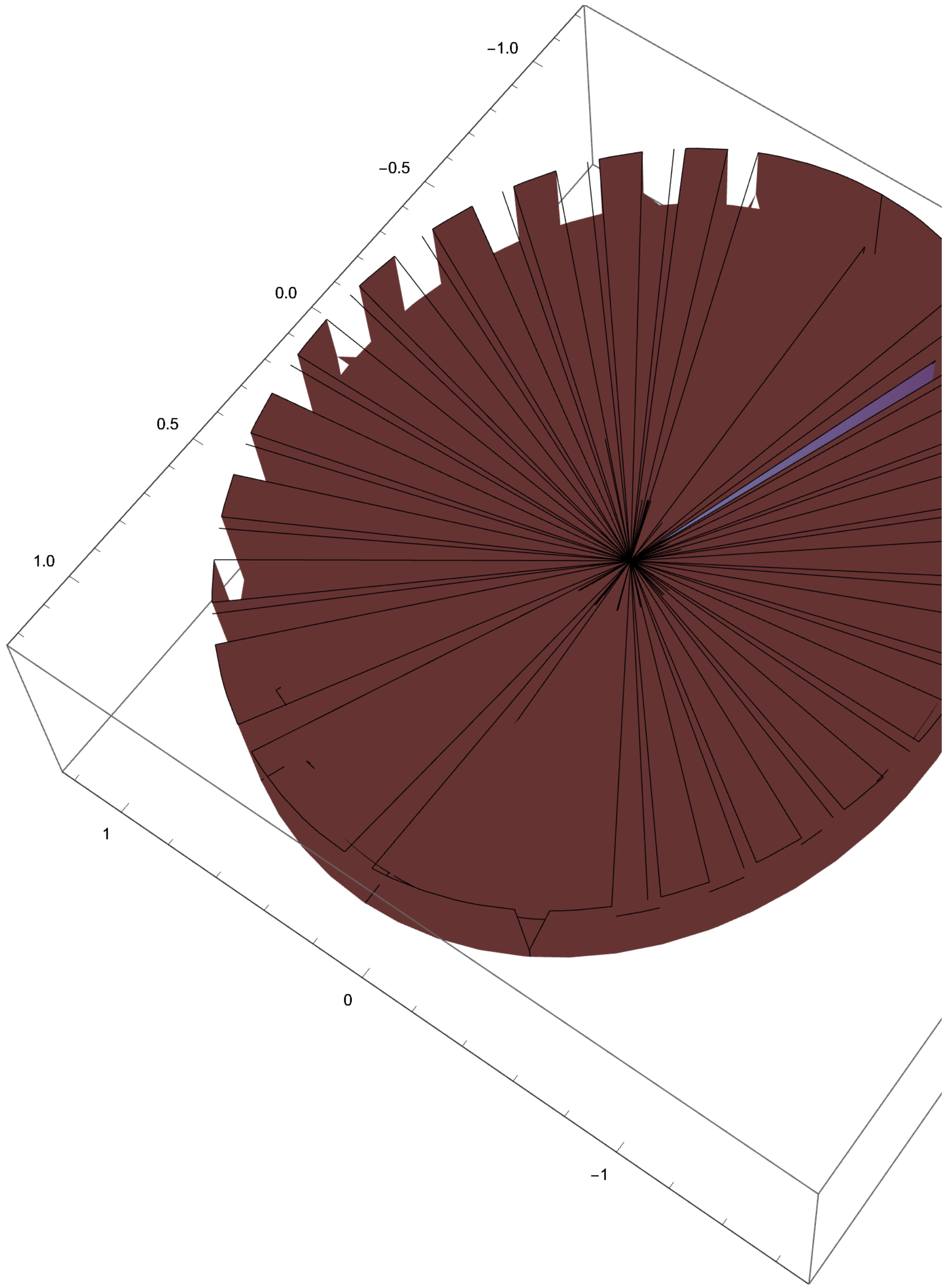
General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫


−5. × 10^−33
0
5. × 10^−33
1
0
−1
1.0
0.5
0.0
−0.5
−1.0



$h \approx (2\pi r - 2\pi x)\, m\, (v_1 - v_2)$

$(2\pi r - 2\pi x)\, m\, (v_1 - v_2) \geq \hbar / 2$

for a relatively constant mass

$(2\pi r - 2\pi x)\, m\, (v_1 - v_2) = (2\pi r - 2\pi x)\, m\, (v_1 - v_2) \geq \hbar / 2$

$$(2\,\pi\,r-2\,\pi\,x)\,m\,(v_1-v_2)=(2\,\pi\,r-2\,\pi\,x)\,m\left(\left(\sqrt{}\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\right)-v_2\right)\geq\hbar/2$$

$$v_1=\left(\sqrt{}\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\right)$$

$$v_2=D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},t\right]$$

$$(2\,\pi\,r-2\,\pi\,x)\,m\,(v_1-v_2)=(2\,\pi\,r-2\,\pi\,x)\,m\left(\left(\sqrt{}\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2}\right)-D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},t\right]\right)\geq\hbar/2$$

$$D\left[\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi},t\right]==\Bigg(4.1807617710132735`*^{\wedge}-48\,r^2\left(\frac{3.412914925039692`*^{\wedge}15\,r^4}{t^5}-\frac{5.257194282992301`*^{\wedge}31\,r^2}{t^3}+\left(4.266143656299615`*^{\wedge}14\left(-1.23230596682539`*^{\wedge}17\,r^6\,t-2.3721297250827947`*^{\wedge}35\,r^4\,t^3-2.551217714548337`*^{\wedge}52\,r^2\,t^5+1.4703410684177891`*^{\wedge}69\,t^7\right)\right)\Big/\left(t^4\sqrt{}\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)\right)-\frac{1}{t^5}\,3.412914925039692`*^{\wedge}15\sqrt{}\left(1.`\,r^8-6.16152983412695`*^{\wedge}16\,r^6\,t^2-5.930324312706987`*^{\wedge}34\,r^4\,t^4-4.252029524247228`*^{\wedge}51\,r^2\,t^6+1.8379263355222364`*^{\wedge}68\,t^8\right)\right)-$$

$$2.2137119528363295`*^{\wedge}-97\,r^2\left(\frac{3.412914925039692`*^{\wedge}15\,r^4}{t^5}-\frac{5.257194282992301`*^{\wedge}31\,r^2}{t^3}+\left(4.266143656299615`*^{\wedge}14\right.\right.$$

$$\left(-1.23230596682539`*^{\wedge}17\, r^6\, t - 2.3721297250827947`*^{\wedge}35\, r^4\, t^3 - 2.551217714548337`*^{\wedge}52\, r^2\, t^5 + 1.4703410684177891`*^{\wedge}69\, t^7\right)\Big) \Big/ \left(t^4 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\right) - \frac{1}{t^5}\, 3.412914925039692`*^{\wedge}15 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg)$$

$$\Bigg(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg)\Bigg) \Bigg/$$

$$\Bigg(4\pi \sqrt{\Bigg(4.1807617710132735`*^{\wedge}\text{-}48\, r^2 \Bigg(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg) - 1.1068559764181647`*^{\wedge}\text{-}97\, r^2 \Bigg(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4}\, 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg)^2\Bigg)}\Bigg)$$

Using the definitions of time, t, velocity trans - phen., $v_{1,2}$, velocity instant, $v_{2,1}$, and mass of a particle whose energy is equal to hν, the photon layed out earlier in the piece, we can visualize :

$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right]$$

SphericalPlot3D[

$$(2\pi r - 2\pi x)\, m \Big(\Big(\sqrt{\Big(-1.129409066758147`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 +}$$

$$3.5481432270250993`*^18 \text{Sin}[\beta]^2)) \Big/$$

$$\left(\sqrt{-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2}\right) -$$

$$\Bigg(\Bigg(4.1807617710132735`*^-48 r^2 \left(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} + (4.266143656299615`*^14 (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 - 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) \Big/ (t^4 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}) - \frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right) -$$

$$2.2137119528363295`*^-97 r^2 \left(\frac{3.412914925039692`*^15 r^4}{t^5} - \frac{5.257194282992301`*^31 r^2}{t^3} + (4.266143656299615`*^14 (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 - 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) \Big/ (t^4 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}) - \frac{1}{t^5} 3.412914925039692`*^15 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right)$$

$$\left(1.7124327770294835`*^49 - \frac{8.53228731259923`*^14 r^4}{t^4} + \frac{2.6285971414961507`*^31 r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^14 \sqrt{(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)}\right)\Bigg)\Bigg/$$

$$\Bigg(4 \pi \sqrt{\Bigg(4.1807617710132735`*^-48 r^2 \Big(1.7124327770294835`*^49 -}$$

$$\frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6 t^2 - 5.930324312706987`*^{\wedge}34\, r^4 t^4 - 4.252029524247228`*^{\wedge}51\, r^2 t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)} \Bigg) - 1.1068559764181647`*^{\wedge}{-97}$$

$$r^2 \Bigg(1.7124327770294835`*^{\wedge}49 - \frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} + \frac{1}{t^4} 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6 t^2 - 5.930324312706987`*^{\wedge}34\, r^4 t^4 - 4.252029524247228`*^{\wedge}51\, r^2 t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg)^2 \Bigg)\Bigg)\Bigg)\Bigg), \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

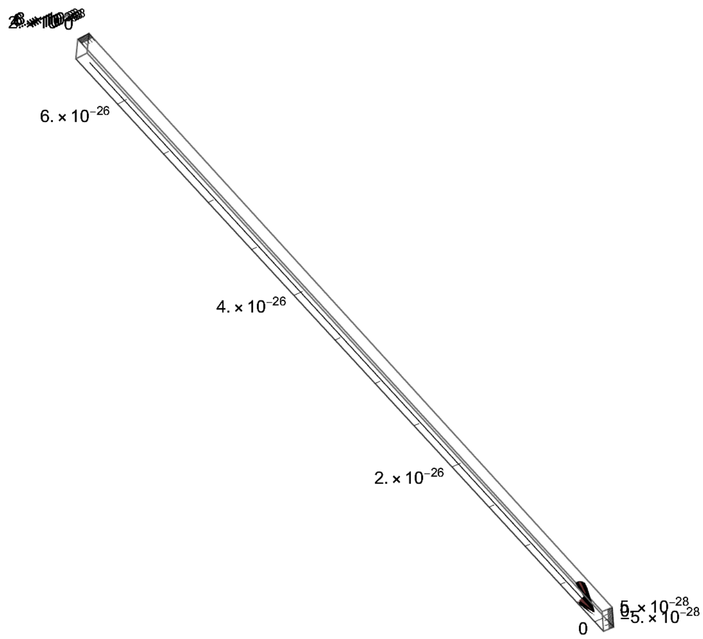
∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^2}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

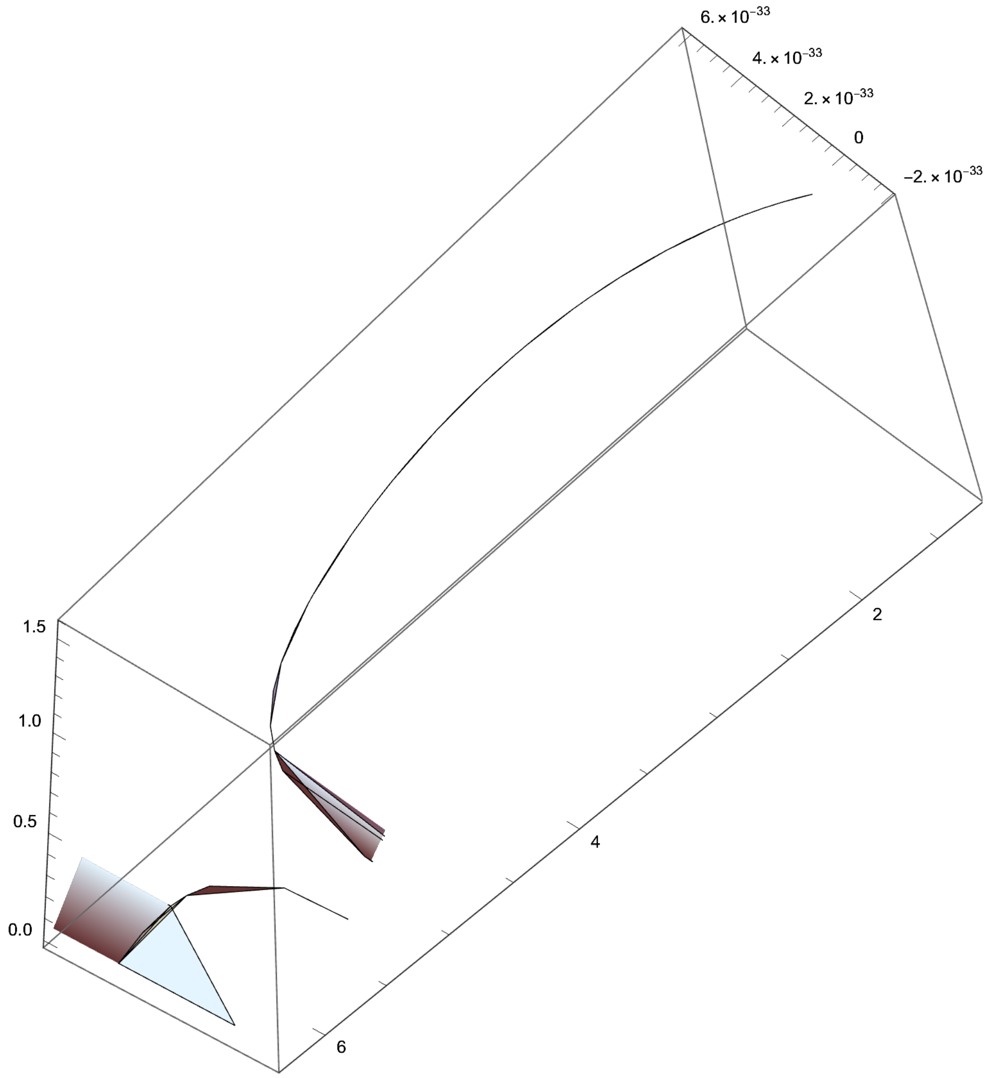
∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫




```
RevolutionPlot3D[
 (2 π r - 2 π x) m ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
    (((4.1807617710132735`*^-48 r^2 (3.412914925039692`*^15 r^4/t^5 -
            5.257194282992301`*^31 r^2/t^3 + (4.266143656299615`*^14
               (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
                 2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
             (t^4 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
                   4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
            1/t^5 3.412914925039692`*^15 √(1.` r^8 - 6.16152983412695`*^16 r^6
                 t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51
                 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
         2.2137119528363295`*^-97 r^2 (3.412914925039692`*^15 r^4/t^5 -
            5.257194282992301`*^31 r^2/t^3 + (4.266143656299615`*^14
```

```
(-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
    2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
  (t^4 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
      4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
 1/t^5 3.412914925039692`*^15 √(1.` r^8 - 6.16152983412695`*^16 r^6
      t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51
      r^2 t^6 + 1.8379263355222364`*^68 t^8))
(1.7124327770294835`*^49 - (8.53228731259923`*^14 r^4)/t^4 +
  (2.6285971414961507`*^31 r^2)/t^2 + 1/t^4 8.53228731259923`*^14
  √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4
      t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8))) /
(4 π √(4.1807617710132735`*^-48 r^2 (1.7124327770294835`*^49 -
      (8.53228731259923`*^14 r^4)/t^4 + (2.6285971414961507`*^31 r^2)/t^2 +
      1/t^4 8.53228731259923`*^14 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 -
         5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51 r^2 t^6 +
         1.8379263355222364`*^68 t^8)) - 1.1068559764181647`*^-97
    r^2 (1.7124327770294835`*^49 - (8.53228731259923`*^14 r^4)/t^4 +
       (2.6285971414961507`*^31 r^2)/t^2 + 1/t^4 8.53228731259923`*^14
        √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4
           t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68
           t^8))^2))), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
RevolutionPlot3D[
 (2 π r - 2 π x) m ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
    (((4.1807617710132735`*^-48 r^2 (3.412914925039692`*^15 r^4 / t^5 -
             5.257194282992301`*^31 r^2 / t^3 + (4.266143656299615`*^14
                (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
                  2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
```

```
(t^4 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
      4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
  1/t^5 3.412914925039692`*^15 √(1.` r^8 - 6.16152983412695`*^16 r^6
      t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51
      r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
2.2137119528363295`*^-97 r^2 (3.412914925039692`*^15 r^4/t^5 -
  5.257194282992301`*^31 r^2/t^3 + (4.266143656299615`*^14
     (-1.23230596682539`*^17 r^6 t - 2.3721297250827947`*^35 r^4 t^3 -
       2.551217714548337`*^52 r^2 t^5 + 1.4703410684177891`*^69 t^7)) /
   (t^4 √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
       4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
  1/t^5 3.412914925039692`*^15 √(1.` r^8 - 6.16152983412695`*^16 r^6
      t^2 - 5.930324312706987`*^34 r^4 t^4 - 4.252029524247228`*^51
      r^2 t^6 + 1.8379263355222364`*^68 t^8))
(1.7124327770294835`*^49 - 8.53228731259923`*^14 r^4/t^4 +
  2.6285971414961507`*^31 r^2/t^2 + 1/t^4 8.53228731259923`*^14
   √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4
      t^4 - 4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8))) /
(4 π √((4.1807617710132735`*^-48 r^2 (1.7124327770294835`*^49 -
     8.53228731259923`*^14 r^4/t^4 +
     2.6285971414961507`*^31 r^2/t^2 + 1/t^4 8.53228731259923`*^14
      √(1.` r^8 - 6.16152983412695`*^16 r^6 t^2 - 5.930324312706987`*^34 r^4 t^4 -
         4.252029524247228`*^51 r^2 t^6 + 1.8379263355222364`*^68 t^8)) -
   1.1068559764181647`*^-97 r^2 (1.7124327770294835`*^49 -
```

$$\frac{8.53228731259923`*^{\wedge}14\, r^4}{t^4} + \frac{2.6285971414961507`*^{\wedge}31\, r^2}{t^2} +$$

$$\frac{1}{t^4} 8.53228731259923`*^{\wedge}14 \sqrt{\left(1.`\, r^8 - 6.16152983412695`*^{\wedge}16\, r^6\, t^2 - 5.930324312706987`*^{\wedge}34\, r^4\, t^4 - 4.252029524247228`*^{\wedge}51\, r^2\, t^6 + 1.8379263355222364`*^{\wedge}68\, t^8\right)}\Bigg)^2\Bigg)\Bigg)\Bigg)\Bigg)\Bigg), \{\theta, -2\pi, 2\pi\}\Big]$$

Power::infy : Infinite expression $\frac{1}{0. + 0. i}$ encountered. ≫

∞::indet : Indeterminate expression $(0. + 0. i)$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0. i}$ encountered. ≫

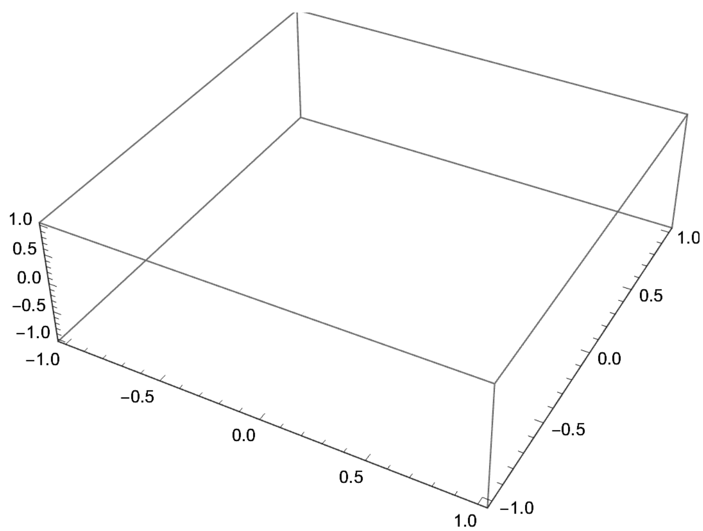
∞::indet : Indeterminate expression $(0. + 0. i)$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0. + 0. i}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression $(0. + 0. i)$ ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



```
SphericalPlot3D[
 (2 π r - 2 π x) m ((√ (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
    D[√(4 π r^2 θ - r^2 θ^2) / (2 π), t]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

General::ivar : $0.5\sqrt{-\frac{2.\,(\ll1\gg)\,(-4\,\pi\,\theta+\ll7\gg)^2}{\left(2.65227\times10^{49}-\ll23\gg\theta+\ll21\gg\ll1\gg\right)\ll1\gg}+2.\,\sqrt{\text{Power}[\ll2\gg]\ll3\gg-\ll1\gg}}$ is not a valid variable. ≫

General::ivar : $6.02924\times10^{-11}-3.48132\times10^{-11}\,i$ is not a valid variable. ≫

General::ivar : $5.95132\times10^{-11}-3.80336\times10^{-11}\,i$ is not a valid variable. ≫

General::stop : Further output of General::ivar will be suppressed during this calculation. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

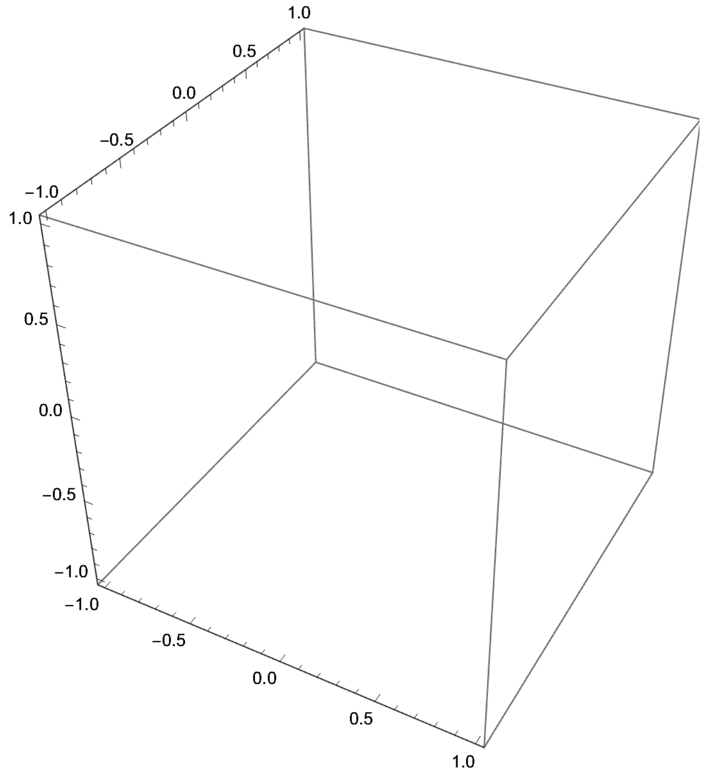
∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



$$\texttt{RevolutionPlot3D}\Big[(2\,\pi\,r - 2\,\pi\,x)\;m\left(\left(\sqrt{}\left(-1.1294090667581471\text{`}{*}\text{^}18\;\theta + 8.987551787368176\text{`}{*}\text{^}16\;\theta^2 + 3.5481432270250993\text{`}{*}\text{^}18\;\text{Sin}[\beta]^2\right)\right)\Big/\left(\sqrt{-12.566370614359172\text{`}\;\theta + \theta^2 + 39.47841760435743\text{`}\;\text{Sin}[\beta]^2}\right) - \text{D}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,t\right]\right),\,\{\theta,\,-2\,\pi,\,2\,\pi\}\Big]$$

General::ivar : $0.5\sqrt{-\frac{8.58058\times10^{-18}\,(\ll1\gg)^2}{(\ll1\gg)^2}+1.7764\times10^{-17}\sqrt{\frac{\ll1\gg^4}{\ll1\gg^4}}}$ is not a valid variable. ≫

General::ivar : $0.5\sqrt{-\frac{8.58058\times10^{-18}\,(\ll1\gg)^2}{(-\ll18\gg-\ll18\gg\ll1\gg)^2}+1.7764\times10^{-17}\sqrt{\frac{\ll1\gg^4}{\ll1\gg^4}}}$ is not a valid variable. ≫

General::ivar : $0.5\sqrt{-\frac{8.58058\times10^{-18}\,(\ll1\gg)^2}{(-\ll18\gg-\ll18\gg\ll1\gg)^2}+1.7764\times10^{-17}\sqrt{\frac{\ll1\gg^4}{\ll1\gg^4}}}$ is not a valid variable. ≫

General::stop : Further output of General::ivar will be suppressed during this calculation. ≫

RevolutionPlot3D::exclul : $\{\text{Im}[(4\,\pi-\theta)\,\theta]-0,\ \text{Im}[(4\,\pi-\theta)\,\theta]-0,\ \ll8\gg,\ \ll2\gg\}$ must be a list of equalities or real−valued functions. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity $\text{Sin}[\beta]^3$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

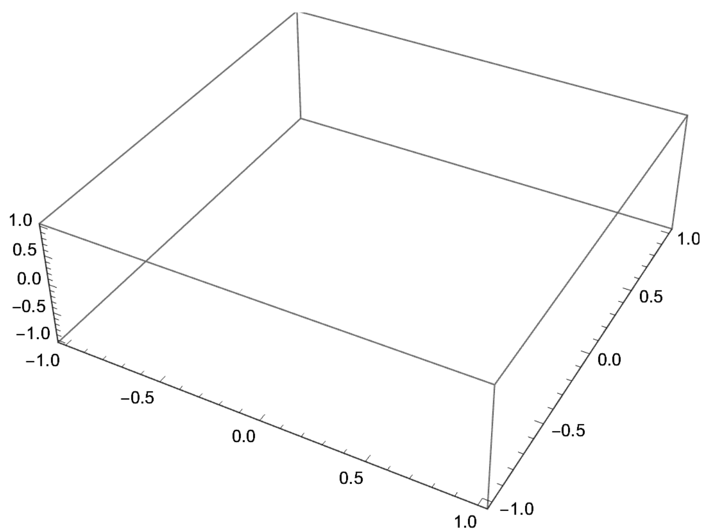
∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity $\text{Sin}[\beta]^3$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression $0.\,\pi^2$ ComplexInfinity $\text{Sin}[\beta]^3$ encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫




```
Plot3D[(2 π r - 2 π x) m ((√ (-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) -
   D[√(4 π r^2 θ - r^2 θ^2) / (2 π), t]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

General::ivar : $0.5\sqrt{-\frac{2.\,(\ll 1\gg)(-4\,\pi\,\theta+\ll 7\gg)^2}{(2.65227\times 10^{49}-\ll 23\gg\,\theta+\ll 21\gg\ll 1\gg)\ll 1\gg}+2.\,\sqrt{\text{Power}[\ll 2\gg]\ll 3\gg-\ll 1\gg}}$ is not a valid variable. ≫

GeometryPlot3D$\Big[\Big(7.3725\times 10^{-51}\,\theta\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]+$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)$$

$$\Big(1.68802\times10^{10}\,\theta\,\sqrt{-3.5294\times10^{16}\,\theta+2.80861\times10^{15}\,\theta^2+1.10879\times10^{17}\,\mathrm{Sin}[\beta]^2}\, -$$
$$4.02985\times10^{9}\,\theta^2\,\sqrt{-3.5294\times10^{16}\,\theta+2.80861\times10^{15}\,\theta^2+1.10879\times10^{17}\,\mathrm{Sin}[\beta]^2}\, +$$
$$2.1379\times10^{8}\,\theta^3\,\sqrt{-3.5294\times10^{16}\,\theta+2.80861\times10^{15}\,\theta^2+1.10879\times10^{17}\,\mathrm{Sin}[\beta]^2}\Big)$$

$$\Bigg(-\partial_{0.5\,\sqrt{-\frac{2.\,(6.64679\times10^{32}-2.6286\times10^{31}\,\theta)\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2}{(2.65227\times10^{49}-1.71243\times10^{49}\,\theta+1.50288\times10^{48}\,\theta^2)\,(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2)^2}+2.\,\sqrt{\frac{(6.64679\times10^{32}-2.6286\times}{(2.65227\times10}}}$$

$$\frac{1}{2\,\pi}\left(\sqrt{\left(\left(4\,\pi\,\theta\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.\right.}\right.$$
$$\left.\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2-$$
$$\left(\theta^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\right.\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\left.\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\right) +$$

$$\left.\left.\frac{\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2}}\right)\right)\Big/$$

$$\Big(\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+$$
$$8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)$$
$$\Big(-12.5664\,\theta\,\sqrt{-4.48719\times10^{15}\,\theta+3.57079\times10^{14}\,\theta^2+1.40969\times10^{16}\,\mathrm{Sin}[\beta]^2}\, +$$
$$1.\,\theta^2\,\sqrt{-4.48719\times10^{15}\,\theta+3.57079\times10^{14}\,\theta^2+1.40969\times10^{16}\,\mathrm{Sin}[\beta]^2}\, +$$
$$6.28319\,\sqrt{12.5664\,\theta-1.\,\theta^2}\,\mathrm{Sin}[\beta]$$
$$\sqrt{-4.48719\times10^{15}\,\theta+3.57079\times10^{14}\,\theta^2+1.40969\times10^{16}\,\mathrm{Sin}[\beta]^2}\Big)\Big),$$

$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\left\{\beta,\,-\frac{\pi}{2},\,\frac{\pi}{2}\right\}\Big]$$

RevolutionPlot3D[

$$\Bigg(7.372495999759142`*^-51\,\theta\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)$$

$$\big(1.6880179234807384`*^10\,\theta\,\sqrt{}\big(-3.5294033336192096`*^16\,\theta+$$
$$2.808609933552555`*^15\,\theta^2+1.1087947584453435`*^17\,\text{Sin}[\beta]^2\big)-$$
$$4.029845948245144`*^9\,\theta^2\,\sqrt{}\big(-3.5294033336192096`*^16\,\theta+$$
$$2.808609933552555`*^15\,\theta^2+1.1087947584453435`*^17\,\text{Sin}[\beta]^2\big)+$$
$$2.1378996752068695`*^8\,\theta^3\,\sqrt{}\big(-3.5294033336192096`*^16\,\theta+$$
$$2.808609933552555`*^15\,\theta^2+1.1087947584453435`*^17\,\text{Sin}[\beta]^2\big)\big)$$

$$\Bigg(-\big(\sqrt{}\big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+$$

$$3.5481432270250993`*^18\,\text{Sin}[\beta]^2\big)\big)\Big/$$

$$\Big(\sqrt{-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2}\Big)+$$

$$\Bigg(\Bigg(4.1807617710132735`*^-48\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(\Bigg(1.0921327760127014`*^17\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/\Bigg(\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-$$

$$16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\,\Bigg(-\Bigg(2.`\,(6.646791914659577`*^32-$$

$$2.6285971414961507`*^31\,\theta)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}$$

$$\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big) +$$

$$2.\text{`}\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\text{`*^}32 - 2.6285971414961507\text{`*^}31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.\text{`}\,(2.435611652890208\text{`*^}15 + 8.53228731259923\text{`*^}14\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^{5/2}\Bigg) -$$

$$\Bigg(4.205755426393841\text{`*^}32\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2$$

$$\Big(-\Big(\texttt{2.`}\;(\texttt{6.646791914659577`*\^{}32}-\texttt{2.6285971414961507`*\^{}31}\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(\texttt{2.652268423469232`*\^{}49}-\texttt{1.7124327770294835`*\^{}49}$$

$$\theta+\texttt{1.50288049195799`*\^{}48}\,\theta^2\Big)$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$\texttt{2.`}\;\sqrt{\Big(\Big((\texttt{6.646791914659577`*\^{}32}-\texttt{2.6285971414961507`*\^{}31}\,\theta)^2}$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(\texttt{2.652268423469232`*\^{}49}-\texttt{1.7124327770294835`*\^{}49}$$

$$\theta+\texttt{1.50288049195799`*\^{}48}\,\theta^2\Big)^2\;\Big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Big(\texttt{4.`}\;(\texttt{2.435611652890208`*\^{}15}+\texttt{8.53228731259923`*\^{}14}$$

$$\theta)\;\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\ \theta+1.50288049195799\text{`}*\text{^}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\ \text{Sin}[\beta]^2+8\,\pi^2\,\theta\ \text{Sin}[\beta]^2\big)^4\big)\Big)\Big)^{3/2}\Big)+$$

$$\Bigg(6.825829850079384\text{`}*\text{^}15\ \Bigg(-\Bigg(6.16152983412695\text{`}*\text{^}16\ \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\,\pi^2\ \text{Sin}[\beta]^2-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^6$$

$$\sqrt{\Bigg(-\Bigg(2.\text{`}\ (6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\ \theta)\ \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\,\pi^2\ \text{Sin}[\beta]^2-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\ \theta+1.50288049195799\text{`}*\text{^}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\ \text{Sin}[\beta]^2+8\,\pi^2\,\theta\ \text{Sin}[\beta]^2\big)^2\Big)+2.\text{`}$$

$$\sqrt{\Bigg(\Bigg((6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\ \theta)^2\ \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]+4\,\pi^2\ \text{Sin}[\beta]^2-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\ \sqrt{(4\,\pi-\theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\ \theta+$$

$$1.50288049195799`*^{\wedge}48\,\theta^2)^2\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Bigg) - \Bigg(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Bigg(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^6 -$$

$$\Bigg(2.9651621563534934`*^{\wedge}34\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Bigg(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Bigg) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2 \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta) \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)^{3/2}\Bigg) \Big/}$$

$$\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4 - \Big(7.972555357963553`*^{50} \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2$$

$$\left(-\left(2.` (6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)\right.\right.$$
$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$
$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + 2.`$$
$$\sqrt{\Bigg(\Bigg((6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/}$$
$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`$$
$$(2.435611652890208`*^15 + 8.53228731259923`*^14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$
$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta +$$

$$1.50288049195799`*^{48}\,\theta^2)\ \left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Big)\Big)^{5/2}\Big)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2+$$

$$1.1487039597013978`*^{67}$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\Big)\ \left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)^2\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\Big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\Big)^2\ \left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-\Bigg(4.`$$

$$(2.435611652890208`*^{15}+8.53228731259923`*^{14}\,\theta)\ \Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\wedge 49-1.7124327770294835\text{`}*\wedge 49$$

$$\theta+1.50288049195799\text{`}*\wedge 48\,\theta^2\big)\;\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$\left.\left.\left.\left.2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\right)^4\right)\right)^{7/2}\right)\right)\bigg/$$

$$\Bigg(\Bigg(-\Bigg(2.\text{`}\;(6.646791914659577\text{`}*\wedge 32-2.6285971414961507\text{`}*\wedge 31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+$$

$$4\,\pi^2\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\wedge 49-1.7124327770294835\text{`}*\wedge 49$$

$$\theta+1.50288049195799\text{`}*\wedge 48\,\theta^2\big)$$

$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\right)^2\right)+$$

$$2.\text{`}\;\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\text{`}*\wedge 32-2.6285971414961507\text{`}*\wedge 31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+$$

$$4\,\pi^2\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\bigg/$$

$$\Big(\big(2.652268423469232\text{`}*\wedge 49-1.7124327770294835\text{`}*\wedge 49$$

$$\theta+1.50288049195799\text{`}*\wedge 48\,\theta^2\big)^2\;\big(16\,\pi^2\,\theta-$$

$$\left.12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\operatorname{Sin}[\beta]^2\big)^4\right)-$$

$$\Bigg(4.\text{`}\;(2.435611652890208\text{`}*\wedge 15+8.53228731259923\text{`}*\wedge 14$$

$$\theta)\;\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\wedge 49 - 1.7124327770294835\grave{}*\wedge 49$$

$$\theta + 1.50288049195799\grave{}*\wedge 48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^2$$

$$\sqrt{\Big(\Big(1.\grave{}\,\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^8\right)\Big/$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^8 -$$

$$\Big(1.5403824585317376\grave{}*\wedge 16\,\,\Big(-4\,\pi\,\theta + \theta^2 +$$

$$2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Big(-\Big(2.\grave{}\,\,(6.646791914659577\grave{}*\wedge 32 - 2.6285971414961507\grave{}*\wedge 31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\wedge 49 - 1.7124327770294835\grave{}*\wedge 49$$

$$\theta + 1.50288049195799\grave{}*\wedge 48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^2\Big) + 2.\grave{}$$

$$\sqrt{\Big(\Big(\Big(6.646791914659577\grave{}*\wedge 32 - 2.6285971414961507\grave{}*\wedge 31}$$

$$\theta)^2 \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)^6-$$

$$\Bigg(3.706452695441867`*^{\wedge}33\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*\hat{}49 - 1.7124327770294835`*\hat{}49$$

$$\theta + 1.50288049195799`*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\,\sqrt{\Big(\Big(\Big((6.646791914659577`*\hat{}32 -}$$

$$2.6285971414961507`*\hat{}31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*\hat{}49 -$$

$$1.7124327770294835`*\hat{}49\,\theta +$$

$$1.50288049195799`*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Big(4.`\,(2.435611652890208`*\hat{}15 +$$

$$8.53228731259923`*\hat{}14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*\hat{}49 -$$

$$1.7124327770294835`*\hat{}49\,\theta +$$

$$1.50288049195799`*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^2\Big) \Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4 -$$

$$\Bigg(6.643796131636294`*^49\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg) \Big/$$

$$\Big(\Big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.`\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg) \Big/$$

$$\Big(\Big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big) -$$

$$\left(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\right)\Bigg)\Bigg)^3\Bigg)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2+$$

$$7.179399748133736\grave{}*\hat{}65$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)+2.\grave{}$$

$$\sqrt{\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\right.}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-\Big(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^4\Big)\Big)-$$

$$\Bigg(1.0921327760127014`*^{\wedge}17\,\sqrt{\Bigg(\Bigg(\Bigg(1.`\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\Bigg)\Big/}$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^8-$$

$$\Bigg(1.5403824585317376`*^{\wedge}16\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^2\Big)+2.`$$

$$\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31}$$

$$\theta)^2\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2$$

$$\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)-\Big(4.`\,(2.435611652890208`*^{\wedge}15+$$

$$8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^6 -$$

$$\left(\text{3.706452695441867`*^33}\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right.$$

$$\left(-\left(\text{2.`}\,(\text{6.646791914659577`*^32} - \text{2.6285971414961507`*^31}\,\theta)\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/\right.$$

$$\left(\left(\text{2.652268423469232`*^49} - \text{1.7124327770294835`*^49}\,\theta + \text{1.50288049195799`*^48}\,\theta^2\right)\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right) +$$

$$\text{2.`}\,\sqrt{\left(\left((\text{6.646791914659577`*^32} - \text{2.6285971414961507`*^31}\,\theta)^2\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/\right.}$$

$$\left(\left(\text{2.652268423469232`*^49} - \text{1.7124327770294835`*^49}\,\theta + \text{1.50288049195799`*^48}\,\theta^2\right)^2\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\right) -$$

$$\left(\text{4.`}\,(\text{2.435611652890208`*^15} + \text{8.53228731259923`*^14}\,\theta)\right.$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49\,\theta+1.50288049195799\grave{}*\wedge 48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)\Big)^2\Big)\Big/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6.643796131636294\grave{}*\wedge 49\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\wedge 49-1.7124327770294835\grave{}*\wedge 49\,\theta+1.50288049195799\grave{}*\wedge 48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\wedge 32-2.6285971414961507\grave{}*\wedge 31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*\hat{}49-$$
$$1.7124327770294835`*\hat{}49\,\theta+$$
$$1.50288049195799`*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.`\,(2.435611652890208`*\hat{}15+$$

$$8.53228731259923`*\hat{}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*\hat{}49-$$
$$1.7124327770294835`*\hat{}49\,\theta+$$
$$1.50288049195799`*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^3\Big)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^2+$$
$$7.179399748133736`*\hat{}65$$

$$\Big(-\Big(2.`\,(6.646791914659577`*\hat{}32-2.6285971414961507`*\hat{}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg/\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^4\Bigg)}\Bigg)\Bigg/$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg(\bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\bigg)\bigg/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)-$$

$$\bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\bigg)\bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)\Bigg)^{5/2}\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2-$$

$$\Bigg(2.2137119528363295`*^-97\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(\Bigg(1.0921327760127014`*^17\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Bigg(\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^32-2.6285971414961507`*^31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^49-1.7124327770294835`*^49\,\theta+1.50288049195799`*^48\,\theta^2\big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^32-2.6285971414961507`*^31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*\text{^}49-1.7124327770294835`*\text{^}49\,\theta+1.50288049195799`*\text{^}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*\text{^}15+8.53228731259923`*\text{^}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*\text{^}49-1.7124327770294835`*\text{^}49\,\theta+1.50288049195799`*\text{^}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^{5/2}\Bigg)-$$

$$\Bigg(4.205755426393841`*\text{^}32\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Bigg(\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*\text{^}32-2.6285971414961507`*\text{^}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^2\Big)+$$

$$2.`\sqrt{\Big(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\;\big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)-$$

$$\Big(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14$$

$$\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49$$

$$\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\;\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$\left.2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^{3/2}\right)+$$

$$\Bigg(6.825829850079384`*^{15}\Bigg(-\Bigg(6.16152983412695`*^{16}\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^6$$

$$\sqrt{\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\big)\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^{32}-2.6285971414961507`*^{31}\,\theta)^2}$$

$$\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{49}-1.7124327770294835`*^{49}\,\theta+1.50288049195799`*^{48}\,\theta^2\big)^2\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.`$$

$$(2.435611652890208`*^{15}+8.53228731259923`*^{14}\,\theta)\Big(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\mathrm{Sin}[\beta]+$$

```
4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
  (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)^4)/
((2.652268423469232`*^49 -
   1.7124327770294835`*^49 θ +
   1.50288049195799`*^48 θ^2) (16 π^2 θ - 12 π θ^2 +
   2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)^4))))/
(16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ Sin[β]^2)^6 -
(2.9651621563534934`*^34 (-4 π θ + θ^2 + 2 π
   Sqrt[(4 π - θ) θ] Sin[β] + 4 π^2 Sin[β]^2 -
   (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)^4
 (-(2.` (6.646791914659577`*^32 - 2.6285971414961507`*^31 θ)
   (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
    (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/θ)^2)/
  ((2.652268423469232`*^49 - 1.7124327770294835`*^49
    θ + 1.50288049195799`*^48 θ^2)
   (16 π^2 θ - 12 π θ^2 + 2 θ^3 - 16 π^3 Sin[β]^2 + 8 π^2 θ
    Sin[β]^2)^2) + 2.` Sqrt[(((6.646791914659577`*^32 -
    2.6285971414961507`*^31 θ)^2
   (-4 π θ + θ^2 + 2 π Sqrt[(4 π - θ) θ] Sin[β] +
    4 π^2 Sin[β]^2 - (2 π^2 Sqrt[(4 π - θ) θ] Sin[β]^3)/(4 π - θ) -
```

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)^{3/2}\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4 -$$

$$\Bigg(7.972555357963553`*^{\wedge}50\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 - 1.7124327770294835\grave{}*\verb|^|49$$

$$\theta + 1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta$$

$$\text{Sin}[\beta]^2\big)^2\Big) + 2.\grave{}\,\sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\verb|^|32 -}$$

$$2.6285971414961507\grave{}*\verb|^|31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 -$$

$$1.7124327770294835\grave{}*\verb|^|49\,\theta +$$

$$1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Big(4.\grave{}$$

$$(2.435611652890208\grave{}*\verb|^|15 + 8.53228731259923\grave{}*\verb|^|14$$

$$\theta)\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\verb|^|49 -$$

$$1.7124327770294835\grave{}*\verb|^|49\,\theta +$$

$$1.50288049195799\grave{}*\verb|^|48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^{5/2}\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2 +$$

$$1.1487039597013978\grave{}*\verb|^|67$$

$$\left(-\left(2.\grave{}\ (6.646791914659577\grave{}*\text{^}32 - 2.6285971414961507\grave{}*\text{^}31\ \theta)\right.\right.$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta] +\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\left.\left.\frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49\right.\right.$$

$$\left.\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\right)\ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +\right.$$

$$\left.\left.2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right) + 2.\grave{}$$

$$\sqrt{\left(\left(\left((6.646791914659577\grave{}*\text{^}32 - 2.6285971414961507\grave{}*\text{^}31\right.\right.\right.}$$

$$\theta)^2\ \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta] +\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\left.\left.\frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49\right.\right.$$

$$\left.\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\right)^2\ \left(16\,\pi^2\,\theta - 12\,\pi\right.$$

$$\left.\left.\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right) - \left(4.\grave{}\right.$$

$$(2.435611652890208\grave{}*\text{^}15 + 8.53228731259923\grave{}*\text{^}14$$

$$\theta)\ \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta] +\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\left.\left.\frac{2\,\pi^2\ \sqrt{(4\,\pi - \theta)\ \theta}\ \text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\text{^}49 - 1.7124327770294835\grave{}*\text{^}49\right.\right.$$

$$\left.\theta + 1.50288049195799\grave{}*\text{^}48\,\theta^2\right)\ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +\right.$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^{7/2}\Big)\Big)\Big/$$

$$\Bigg(\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49$$

$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.\grave{}\ \sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49$$

$$\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\ \Big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big) -$$

$$\Bigg(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14$$

$$\theta)\ \Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\right)\Bigg)\Bigg)^2$$

$$\sqrt{\Bigg(\Bigg(\Bigg(1.`\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\Bigg)\Big/}$$

$$\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^8 -$$

$$\Bigg(1.5403824585317376`*^{16}\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\left(\left(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\right)\left(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\right) + 2.`$$

$$\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\left(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} -\right.}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^15 + 8.53228731259923`*^14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^49 - 1.7124327770294835`*^49\,\theta + 1.50288049195799`*^48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6 -$$

$$\Big(3.706452695441867`*^33\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Big(-\Big(2.`\,(6.646791914659577`*^32 - 2.6285971414961507`*^31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^2\Bigg)\Bigg/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4 -$$

$$\Big(6.643796131636294`*^{49}\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$

$$\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.\text{`}\;(6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+$$

$$2.\text{`}\sqrt{\Bigg(\Bigg((6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)^2}$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.\text{`}\;(2.435611652890208\text{`}*\text{^}15+8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\;\mathrm{Sin}[\beta]+$$

$$4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\ \Big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^3\Big)\Big/$$

$$\Big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\Big)^2 + 7.179399748133736\grave{}*\hat{}65$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\ \Big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \text{Sin}[\beta]^2 + 8\pi^2\theta\,\text{Sin}[\beta]^2\Big)^2\Big) + 2.\grave{}\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\Bigg(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta] + 4\pi^2 \text{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) - \Big(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15 + 8.53228731259923\grave{}*\hat{}14\,\theta)$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^4\Big)\Big) -$$

$$\Bigg(1.0921327760127014\grave{}*\hat{}17\,\sqrt{\Bigg(\Bigg(\Bigg(1.\grave{}\ \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^8\Bigg)\Bigg/}$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^8 -$$

$$\Bigg(1.5403824585317376\grave{}*\hat{}16\,\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^6$$

$$\Bigg(-\Bigg(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -\right.$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta$$

$$\text{Sin}[\beta]^2\big)^2\Big)+2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32-}$$

$$2.6285971414961507\grave{}*\hat{}31\,\theta)^2$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2$$

$$\theta\,\text{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.\grave{}\,\,(2.435611652890208\grave{}*\hat{}15+$$

$$8.53228731259923\grave{}*\hat{}14\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$

$$2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6-$$

$$\Bigg(3.706452695441867\grave{}*\hat{}33\,\,\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi$$

$$\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^32-2.6285971414961507`*^31\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^49-1.7124327770294835`*^49\,\theta+1.50288049195799`*^48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^32-2.6285971414961507`*^31\,\theta)^2}$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^49-1.7124327770294835`*^49\,\theta+1.50288049195799`*^48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^15+8.53228731259923`*^14\,\theta)$$

$$\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49 -$$

$$1.7124327770294835`*^{\wedge}49\,\theta +$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^2\Big)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4 -$$

$$\Big(6.643796131636294`*^{\wedge}49\,\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi$$

$$\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 -$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Big(-\Big(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$

$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.`\,\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 -}$$

$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 -$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta +$$

$$1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)^2\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +\right.$$

$$\left.2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big) -$$

$$\Big(4.\text{`}\,\,(2.435611652890208\text{`}*\text{^}15 +$$

$$8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 -$$

$$1.7124327770294835\text{`}*\text{^}49\,\theta +$$

$$1.50288049195799\text{`}*\text{^}48\,\theta^2\Big)\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +\right.$$

$$\left.\left.\left.\left.2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\right)\right)^3\right)\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2 +$$

$$7.179399748133736\text{`}*\text{^}65$$

$$\Big(-\Big(2.\text{`}\,\,(6.646791914659577\text{`}*\text{^}32 - 2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\text{`}*\text{^}49 - 1.7124327770294835\text{`}*\text{^}49$$

$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)$$
$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta$$
$$\mathrm{Sin}[\beta]^2\Big)^2\Big) + 2.`\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577`*^{\wedge}32 -}$$
$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2$$
$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2$$
$$\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big) - \Bigg(4.`\,(2.435611652890208`*^{\wedge}15 +$$
$$8.53228731259923`*^{\wedge}14\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Bigg)\Bigg)^4\Bigg)\Bigg)\Bigg/$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)$$
$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big) +$$
$$2.`\sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2}$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2$$
$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) -$$
$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$
$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^{5/2}\Bigg)$$
$$\Bigg(1.7124327770294835`*^{\wedge}49 - \Bigg(1.3651659700158768`*^{\wedge}16$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4$$

$$\Big(-\Big(2.\grave{}\ (6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\grave{}\ \sqrt{\Big(\Big(\Big((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2}$$

$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$

$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)^2\ \Big(16\,\pi^2\,\theta-$$

$$12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4\Big)-$$

$$\Big(4.\grave{}\ (2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14$$

$$\theta)\ \Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\right.\right.$$
$$\left.\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\right)\,\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.$$
$$\left.\left.\left.\left.2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^4\right)\right)\right)^2\right)+$$

$$\left(1.0514388565984603\grave{}*\hat{}32\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.\right.$$
$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2\right.$$
$$\left(-\left(2.\grave{}\,\left(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta\right)\right.\right.$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+4\,\pi^2\,\operatorname{Sin}[\beta]^2-\right.$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\left(\left(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\right.\right.$$
$$\left.\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\right)$$
$$\left.\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\operatorname{Sin}[\beta]^2+8\,\pi^2\,\theta\,\operatorname{Sin}[\beta]^2\right)^2\right)+$$
$$2.\grave{}\,\sqrt{\left(\left(\left(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta\right)^2\right.\right.}$$
$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]+\right.$$
$$4\,\pi^2\,\operatorname{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\operatorname{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2$$
$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) -$$
$$\Bigg(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$
$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49$$
$$\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg) +$$
$$\Bigg(1.3651659700158768`*^{\wedge}16\,\sqrt{\Bigg(\Bigg(\Bigg(1.`\ \Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}$$
$$\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^8\Bigg)\Big/$$
$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^8 -$$
$$\Bigg(1.5403824585317376`*^{\wedge}16\,\Bigg(-4\,\pi\,\theta + \theta^2 +$$
$$2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 -$$
$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^6$$
$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)$$
$$\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big)+2.\grave{}\,\sqrt{\Bigg(\Bigg(\Bigg((6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)^2\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)-\Bigg(4.\grave{}\,(2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14\,\theta)\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)}\Bigg)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6-$$

$$\Bigg(3.706452695441867`*^{\wedge}33\ \Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\ \big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big)+$$

$$2.`\sqrt{\Bigg(\Bigg((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\ \big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\ (2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Bigg(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4\Bigg)\Bigg)^2\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^4-$$

$$\Bigg(6.643796131636294`*^{\wedge}49\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Bigg(\Big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\Big)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\right)^2\Bigg)+$$

$$2.`\sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*\text{^}49-1.7124327770294835`*\text{^}49\,\theta+1.50288049195799`*\text{^}48\,\theta^2\big)^2\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\Big)-$$

$$\Bigg(4.`\ (2.435611652890208`*\text{^}15+8.53228731259923`*\text{^}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\left(\left(2.652268423469232`*\text{^}49-1.7124327770294835`*\text{^}49\,\theta+1.50288049195799`*\text{^}48\,\theta^2\right)\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^4\right)\Bigg)\Bigg)^3\Bigg)\Bigg/$$

$$\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)^2+$$

$$7.179399748133736`*\text{^}65$$

$$\Bigg(-\Bigg(2.`\ (6.646791914659577`*\text{^}32-2.6285971414961507`*\text{^}31\,\theta)$$

$$\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\right.$$

$$
\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/
$$

$$
\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\;\theta + 1.50288049195799`*^{\wedge}48\;\theta^2\big)
\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) + 2.`\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2}
$$

$$
\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/
$$

$$
\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\;\theta + 1.50288049195799`*^{\wedge}48\;\theta^2\big)^2
\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)
$$

$$
\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\;\text{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/
$$

$$
\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\;\theta + 1.50288049195799`*^{\wedge}48\;\theta^2\big)\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^4\Big)\Big)\Big/
$$

$$
\Big(-\Big(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)
$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\text{`}\sqrt{\Bigg(\Bigg(\Big((6.646791914659577\text{`}*\text{^}32-2.6285971414961507\text{`}*\text{^}31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)-$$

$$\Bigg(4.\text{`}\,(2.435611652890208\text{`}*\text{^}15+8.53228731259923\text{`}*\text{^}14\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49-1.7124327770294835\text{`}*\text{^}49\,\theta+1.50288049195799\text{`}*\text{^}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\mathrm{Sin}[\beta]^2+8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Bigg)^2\Bigg)\Bigg)\Big/$$

$$\left.\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\right)\Big/$$

$$\Bigg(4\,\pi\,\sqrt{\Bigg(\Bigg(\Bigg(4.1807617710132735\grave{}*\hat{}{-48}\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2}$$

$$\Bigg(1.7124327770294835\grave{}*\hat{}49 - \Bigg(1.3651659700158768\grave{}*\hat{}16\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Bigg(\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232\grave{}*\hat{}49 - 1.7124327770294835\grave{}*\hat{}49\,\theta + 1.50288049195799\grave{}*\hat{}48\,\theta^2\Big)\,\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2\Big) + 2.\grave{}$$

$$\sqrt{\Big(\Big((6.646791914659577\grave{}*\hat{}32 - 2.6285971414961507\grave{}*\hat{}31}$$

$$\theta)^2 \left(-4\pi\theta + \theta^2 + 2\pi \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49 - 1.7124327770294835\text{`}*\text{^}49\,\theta + 1.50288049195799\text{`}*\text{^}48\,\theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Bigg(4.\text{`}\ (2.435611652890208\text{`}*\text{^}15 + 8.53228731259923\text{`}*\text{^}14\,\theta) \left(-4\pi\theta + \theta^2 + 2\pi \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\text{^}49 - 1.7124327770294835\text{`}*\text{^}49\,\theta + 1.50288049195799\text{`}*\text{^}48\,\theta^2\big) \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)^2\Bigg) +$$

$$\Bigg(1.0514388565984603\text{`}*\text{^}32 \left(-4\pi\theta + \theta^2 + 2\pi \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\pi^2 \mathrm{Sin}[\beta]^2 - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2 \sqrt{(4\pi-\theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Bigg(\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3 \mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2$$

$$\Bigg(-\Bigg(2.\text{`}\ (6.646791914659577\text{`}*\text{^}32 - 2.6285971414961507\text{`}*\text{^}31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\Big)+$$

$$2.\text{`}\sqrt{\Bigg(\Bigg((6.646791914659577\text{`*^}32-2.6285971414961507\text{`*^}31\,\theta)^2\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)^2\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)-$$

$$\Bigg(4.\text{`}\,(2.435611652890208\text{`*^}15+8.53228731259923\text{`*^}14\,\theta)\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`*^}49-1.7124327770294835\text{`*^}49\,\theta+1.50288049195799\text{`*^}48\,\theta^2\big)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4\Big)\Bigg)\Bigg)+$$

$$\left(1.3651659700158768`*^{\wedge}16 \sqrt{\left(\left(1.` \left(-4 \pi \theta + \theta^2 + 2 \pi \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta] + 4 \pi^2 \operatorname{Sin}[\beta]^2 - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{4 \pi - \theta} - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{\theta}\right)^8\right) \Big/ \left(16 \pi^2 \theta - 12 \pi \theta^2 + 2 \theta^3 - 16 \pi^3 \operatorname{Sin}[\beta]^2 + 8 \pi^2 \theta \operatorname{Sin}[\beta]^2\right)^8 - \left(1.5403824585317376`*^{\wedge}16 \left(-4 \pi \theta + \theta^2 + 2 \pi \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta] + 4 \pi^2 \operatorname{Sin}[\beta]^2 - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{4 \pi - \theta} - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{\theta}\right)^6 \left(-\left(2.` (6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31 \theta) \left(-4 \pi \theta + \theta^2 + 2 \pi \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta] + 4 \pi^2 \operatorname{Sin}[\beta]^2 - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{4 \pi - \theta} - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{\theta}\right)^2\right) \Big/ \left(\left(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49 \theta + 1.50288049195799`*^{\wedge}48 \theta^2\right) \left(16 \pi^2 \theta - 12 \pi \theta^2 + 2 \theta^3 - 16 \pi^3 \operatorname{Sin}[\beta]^2 + 8 \pi^2 \theta \operatorname{Sin}[\beta]^2\right)^2\right) + 2.` \sqrt{\left(\left((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31 \theta)^2 \left(-4 \pi \theta + \theta^2 + 2 \pi \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta] + 4 \pi^2 \operatorname{Sin}[\beta]^2 - \frac{2 \pi^2 \sqrt{(4 \pi - \theta) \theta} \operatorname{Sin}[\beta]^3}{4 \pi - \theta} - \right.\right.\right.}}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\char94 49 - 1.7124327770294835\grave{}*\char94 49\,\theta + 1.50288049195799\grave{}*\char94 48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) -$$

$$\Bigg(4.\grave{}\,(2.435611652890208\grave{}*\char94 15 + 8.53228731259923\grave{}*\char94 14\,\theta)\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\grave{}*\char94 49 - 1.7124327770294835\grave{}*\char94 49\,\theta + 1.50288049195799\grave{}*\char94 48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6 -$$

$$\Bigg(3.706452695441867\grave{}*\char94 33\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^4$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\char94 32 - 2.6285971414961507\grave{}*\char94 31\,\theta)\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} -$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\,\text{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^2}\Big/$$

$$\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^4 -$$

$$\Bigg(6.643796131636294\text{`*^}49\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.\text{`}\,(6.646791914659577\text{`*^}32 - 2.6285971414961507\text{`*^}31\,\theta)\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.\text{`}\,\sqrt{\Bigg(\Bigg((6.646791914659577\text{`*^}32 - 2.6285971414961507\text{`*^}31\,\theta)^2\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/}$$

$$\Big(\big(2.652268423469232\text{`*^}49 - 1.7124327770294835\text{`*^}49\,\theta + 1.50288049195799\text{`*^}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big) -$$

$$\Big(4.\text{`}\ (2.435611652890208\text{`}{*}\text{\textasciicircum}15 +$$

$$8.53228731259923\text{`}{*}\text{\textasciicircum}14\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232\text{`}{*}\text{\textasciicircum}49 -$$

$$1.7124327770294835\text{`}{*}\text{\textasciicircum}49\,\theta +$$

$$1.50288049195799\text{`}{*}\text{\textasciicircum}48\,\theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^3\Big)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2 +$$

$$7.179399748133736\text{`}{*}\text{\textasciicircum}65\ \Big(-\Big(2.\text{`}\ (6.646791914659577\text{`}{*}\text{\textasciicircum}32 -$$

$$2.6285971414961507\text{`}{*}\text{\textasciicircum}31\,\theta)$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{4\,\pi - \theta} -$$

$$\frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta]^3}{\theta}\Big)^2\Big)\Big/$$

$$\Big(\big(2.652268423469232\text{`}{*}\text{\textasciicircum}49 - 1.7124327770294835\text{`}{*}\text{\textasciicircum}49$$

$$\theta + 1.50288049195799\text{`}{*}\text{\textasciicircum}48\,\theta^2\big)\ \big(16\,\pi^2\,\theta -$$

$$12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.\text{`}\ \sqrt{\Big(\Big(\Big((6.646791914659577\text{`}{*}\text{\textasciicircum}32 -}$$

$$2.6285971414961507\text{`}{*}\text{\textasciicircum}31\,\theta)^2$$

$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \text{Sin}[\beta] +$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$
$$\Big(\big(2.652268423469232\grave{}*\hat{}49-$$
$$1.7124327770294835\grave{}*\hat{}49\,\theta+$$
$$1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)-$$
$$\Big(4.\grave{}\,(2.435611652890208\grave{}*\hat{}15+$$
$$8.53228731259923\grave{}*\hat{}14\,\theta)$$
$$\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$
$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$
$$\Big(\big(2.652268423469232\grave{}*\hat{}49-$$
$$1.7124327770294835\grave{}*\hat{}49\,\theta+$$
$$1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+$$
$$\left.\left.\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\right)\right)^4\right)\right)\Big/$$
$$\Big(-\Big(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31$$
$$\theta)\,\Big(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+$$
$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$
$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49$$
$$\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)$$
$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big)+$$

$$2.` \sqrt{\Bigg(\Bigg(\Big((6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta)^2 \Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)^2 \big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta)\Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big) \Big/ \Big(\big(2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2\big)\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)^2\Bigg)} \Big/$$

$$\big(16\pi^2\theta - 12\pi\theta^2 + 2\theta^3 - 16\pi^3\,\mathrm{Sin}[\beta]^2 + 8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^2 -$$

$$\Bigg(1.1068559764181647`*^{-97}\Big(-4\pi\theta + \theta^2 + 2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta} - \frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Big)^2$$

$$\left(1.7124327770294835`*^{\wedge}49-\left(1.3651659700158768`*^{\wedge}16\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{4}\right)\Big/\left(\left(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+2\,\theta^{3}-16\,\pi^{3}\,\mathrm{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\mathrm{Sin}[\beta]^{2}\right)^{4}\right.\right.$$

$$\left(-\left(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{2}\right)\Big/\right.$$

$$\left(\left(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^{2}\right)\left(16\,\pi^{2}\,\theta-12\,\pi\,\theta^{2}+2\,\theta^{3}-16\,\pi^{3}\,\mathrm{Sin}[\beta]^{2}+8\,\pi^{2}\,\theta\,\mathrm{Sin}[\beta]^{2}\right)^{2}\right)+2.`\,\sqrt{\left(\left((6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)^{2}\left(-4\,\pi\,\theta+\theta^{2}+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\,\pi^{2}\,\mathrm{Sin}[\beta]^{2}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{4\,\pi-\theta}-\frac{2\,\pi^{2}\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^{3}}{\theta}\right)^{4}\right)\Big/\right.}$$

$$\left(\left(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+\right.\right.$$

$$1.50288049195799`*^48\,\theta^2\Big)^2 \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big) - \Bigg(4.`\,(2.435611652890208`*^{15} + 8.53228731259923`*^{14}\,\theta) \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg) \Bigg/ \Bigg(\Big((2.652268423469232`*^{49} - 1.7124327770294835`*^{49}\,\theta + 1.50288049195799`*^{48}\,\theta^2) \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^4\Big)\Big)^2\Bigg) +$$

$$\Bigg(1.0514388565984603`*^{32} \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg) \Bigg/$$

$$\Bigg(\left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)^2$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{32} - 2.6285971414961507`*^{31}\,\theta) \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg) \Bigg/$$

$$\Big(\big(\texttt{2.652268423469232`*^49} - \texttt{1.7124327770294835`*^49}\ \theta + \texttt{1.50288049195799`*^48}\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + \texttt{2.`}$$

$$\sqrt{\Bigg(\Bigg(\Big((\texttt{6.646791914659577`*^32} - \texttt{2.6285971414961507`*^31}\ \theta)^2\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/}$$

$$\Big(\big(\texttt{2.652268423469232`*^49} - \texttt{1.7124327770294835`*^49}\ \theta + \texttt{1.50288049195799`*^48}\ \theta^2\big)^2\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(\texttt{4.`}\ (\texttt{2.435611652890208`*^15} + \texttt{8.53228731259923`*^14}\ \theta)\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{\theta}\Big)^4\Big)\Big/$$

$$\Big(\big(\texttt{2.652268423469232`*^49} - \texttt{1.7124327770294835`*^49}\ \theta + \texttt{1.50288049195799`*^48}\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Bigg)\Bigg)\Bigg) +$$

$$\Bigg(\texttt{1.3651659700158768`*^16}\ \sqrt{\Bigg(\Bigg(\Big(\texttt{1.`}\ \Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\ \mathrm{Sin}[\beta]^3}{4\,\pi - \theta} -}$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^8\right)\Big/$$

$$\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^8-$$

$$\left(1.5403824585317376`*^16\,\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right.\right.$$

$$\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^6$$

$$\left(-\left(2.`\,(6.646791914659577`*^32-\right.\right.$$

$$2.6285971414961507`*^31\,\theta)$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\left(\left(2.652268423469232`*^49-\right.\right.$$

$$1.7124327770294835`*^49\,\theta+$$

$$\left.1.50288049195799`*^48\,\theta^2\right)\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+\right.$$

$$\left.\left.2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)^2\right)+$$

$$2.`\,\sqrt{\left(\left((6.646791914659577`*^32-\right.\right.}$$

$$2.6285971414961507`*^31\,\theta)^2$$

$$\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+\right.$$

$$4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\left(\left(2.652268423469232`*^49-\right.\right.$$

$$1.7124327770294835`*^49\,\theta+$$

$$1.50288049195799\grave{}*\hat{}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.\grave{}\,(2.435611652890208\grave{}*\hat{}15+8.53228731259923\grave{}*\hat{}14\,\theta)\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232\grave{}*\hat{}49-1.7124327770294835\grave{}*\hat{}49\,\theta+1.50288049195799\grave{}*\hat{}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^4\Big)\Big)\Big)\Big/$$

$$\big(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^6-\Bigg(3.706452695441867\grave{}*\hat{}33$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4$$

$$\Bigg(-\Bigg(2.\grave{}\,(6.646791914659577\grave{}*\hat{}32-2.6285971414961507\grave{}*\hat{}31\,\theta)$$

$$\Bigg(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-$$

$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 -$$
$$1.7124327770294835`*^{\wedge}49\,\theta +$$
$$1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) +$$

$$2.`\,\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 -}$$
$$2.6285971414961507`*^{\wedge}31\,\theta)^2$$
$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 -$$
$$1.7124327770294835`*^{\wedge}49\,\theta +$$
$$1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) -$$

$$\Big(4.`\,(2.435611652890208`*^{\wedge}15 +$$
$$8.53228731259923`*^{\wedge}14\,\theta)$$
$$\Big(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] +$$
$$4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} -$$
$$\left.\left.\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\right)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 -$$
$$1.7124327770294835`*^{\wedge}49\,\theta +$$
$$1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$
$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^2\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\Big)^4 - \Bigg(6.643796131636294\text{`}*\wedge 49\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2$$

$$\Bigg(-\Bigg(2.\text{`}\,(6.646791914659577\text{`}*\wedge 32 - 2.6285971414961507\text{`}*\wedge 31\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\big(2.652268423469232\text{`}*\wedge 49 - 1.7124327770294835\text{`}*\wedge 49\,\theta + 1.50288049195799\text{`}*\wedge 48\,\theta^2\big)\,\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\text{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\big)^2\Big) +$$

$$2.\text{`}\,\sqrt{\Bigg(\Bigg((6.646791914659577\text{`}*\wedge 32 - 2.6285971414961507\text{`}*\wedge 31\,\theta)^2\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta] + 4\,\pi^2\,\text{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/}$$

$$\Big(\big(2.652268423469232\text{`}*\wedge 49 - 1.7124327770294835\text{`}*\wedge 49\,\theta +$$

$$1.50288049195799`*^{\wedge}48\,\theta^2\Big)^2\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big) -$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^4\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^4\Big)\Big)\Big)^3\Big)\Big/$$

$$\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2 + 7.179399748133736`*^{\wedge}65$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)\,\Bigg(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\Bigg)^2\Bigg)\Big/$$

$$\Big(\Big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\,\theta + 1.50288049195799`*^{\wedge}48\,\theta^2\Big)\,\Big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\Big)^2\Big) +$$

$$2.`\,\sqrt{\Big(\Big(\Big((6.646791914659577`*^{\wedge}32 -}$$

$$2.6285971414961507`*^{\wedge}31\,\theta)^2 \left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)^2\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)-$$

$$\Bigg(4.`\,(2.435611652890208`*^{\wedge}15+8.53228731259923`*^{\wedge}14\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49-1.7124327770294835`*^{\wedge}49\,\theta+1.50288049195799`*^{\wedge}48\,\theta^2\big)\,\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\mathrm{Sin}[\beta]^2+8\pi^2\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\Big)\Big)^4\Big)\Big)\Big/$$

$$\Bigg(-\Bigg(2.`\,(6.646791914659577`*^{\wedge}32-2.6285971414961507`*^{\wedge}31\,\theta)\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]+4\pi^2\,\mathrm{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^2\Bigg)\Bigg/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Big) + 2.`\sqrt{\Bigg(\bigg(\Big((6.646791914659577`*^{\wedge}32 - 2.6285971414961507`*^{\wedge}31\,\theta)^2}$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)^2$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big) - \Big(4.`\ (2.435611652890208`*^{\wedge}15 + 8.53228731259923`*^{\wedge}14\,\theta)$$

$$\left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi-\theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right)^4\Big)\Big/$$

$$\Big(\big(2.652268423469232`*^{\wedge}49 - 1.7124327770294835`*^{\wedge}49\ \theta + 1.50288049195799`*^{\wedge}48\ \theta^2\big)\ \big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 +$$

$$2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^4\Big)\bigg)^2\Bigg)^2\Bigg)\Big/$$

$$\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)^2\Bigg)\Bigg)\Bigg)\Bigg)\Big/$$

$$\Big(\big(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\big)$$

```
(-12.566370614359172` θ √(-4.487190804107819`*^15
        θ +
       3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2) +
  1.` θ^2 √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2) +
  6.283185307179586` √(12.566370614359172` θ - 1.` θ^2)
    Sin[
     β]
    √(-4.487190804107819`*^15
        θ +
       3.57079298535128`*^14
        θ^2 +
       1.40969256654408`*^16
        Sin[
          β]^2))), {θ, -π / 2, π / 2}]
```

Power::infy : Infinite expression $\frac{1}{0.+0.\,i}$ encountered. ≫

∞::indet : Indeterminate expression (0. + 0. i) ComplexInfinity encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.+0.\,i}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.^4}$ encountered. ≫

General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫

$$\beta := \text{ArcSin}\left[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\right]$$

$$r := \left(-4\,\pi\,\theta + \theta^2 + 2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta] + 4\,\pi^2\,\mathrm{Sin}[\beta]^2 - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{4\,\pi - \theta} - \frac{2\,\pi^2\,\sqrt{(4\,\pi - \theta)\,\theta}\,\mathrm{Sin}[\beta]^3}{\theta}\right) \Big/ \left(16\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 2\,\theta^3 - 16\,\pi^3\,\mathrm{Sin}[\beta]^2 + 8\,\pi^2\,\theta\,\mathrm{Sin}[\beta]^2\right)$$

$$\beta := \mathrm{ArcSin}\left[\frac{\sqrt{(4\,\pi - \theta)\,\theta}}{2\,\pi}\right]$$

$$\mathrm{D}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

$$\begin{aligned}
\Bigg(&-\Bigg(8\pi\theta\left(16\pi^2 - 4\pi(4\pi-\theta) - 20\pi\theta + 4(4\pi-\theta)\theta + 4\theta^2\right)\\
&\quad\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2\Bigg)\Big/\\
&\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^3 +\\
&\Bigg(2\theta^2\left(16\pi^2 - 4\pi(4\pi-\theta) - 20\pi\theta + 4(4\pi-\theta)\theta + 4\theta^2\right)\\
&\quad\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2\Bigg)\Big/\\
&\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^3 +\\
&\Bigg(8\pi\theta\left(-4\pi + 2(4\pi-\theta) - \frac{(4\pi-\theta)^2}{4\pi} + \frac{\theta^2}{4\pi}\right)\\
&\quad\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)\Bigg)\Big/\\
&\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2 -\\
&\Bigg(2\theta^2\left(-4\pi + 2(4\pi-\theta) - \frac{(4\pi-\theta)^2}{4\pi} + \frac{\theta^2}{4\pi}\right)\\
&\quad\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)\Bigg)\Big/\\
&\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2 +\\
&\frac{4\pi\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2} -\\
&\frac{2\theta\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2}\Bigg)\Big/\\
&\Bigg(4\pi\sqrt{\left(\frac{4\pi\theta\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2} - \right.}\\
&\quad\overline{\left.\frac{\theta^2\left(-4\pi\theta + 2(4\pi-\theta)\theta - \frac{(4\pi-\theta)^2\theta}{4\pi} + \theta^2 - \frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta - 4\pi(4\pi-\theta)\theta - 12\pi\theta^2 + 2(4\pi-\theta)\theta^2 + 2\theta^3\right)^2}\right)}\Bigg)
\end{aligned}$$

$$\text{RevolutionPlot3D}\Bigg[\Bigg(-\Bigg(8\pi\theta\left(16\pi^2-4\pi(4\pi-\theta)-20\pi\theta+4(4\pi-\theta)\theta+4\theta^2\right)\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2\Bigg)\Big/$$
$$\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^3+$$
$$\Bigg(2\theta^2\left(16\pi^2-4\pi(4\pi-\theta)-20\pi\theta+4(4\pi-\theta)\theta+4\theta^2\right)\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2\Bigg)\Big/$$
$$\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^3+$$
$$\Bigg(8\pi\theta\left(-4\pi+2(4\pi-\theta)-\frac{(4\pi-\theta)^2}{4\pi}+\frac{\theta^2}{4\pi}\right)\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)\Bigg)\Big/$$
$$\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2-$$
$$\Bigg(2\theta^2\left(-4\pi+2(4\pi-\theta)-\frac{(4\pi-\theta)^2}{4\pi}+\frac{\theta^2}{4\pi}\right)\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)\Bigg)\Big/$$
$$\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2+$$
$$\frac{4\pi\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2}-$$
$$\frac{2\theta\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2}\Bigg)\Big/$$
$$\Bigg(4\pi\sqrt{\left(\frac{4\pi\theta\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2}-\frac{\theta^2\left(-4\pi\theta+2(4\pi-\theta)\theta-\frac{(4\pi-\theta)^2\theta}{4\pi}+\theta^2-\frac{(4\pi-\theta)\theta^2}{4\pi}\right)^2}{\left(16\pi^2\theta-4\pi(4\pi-\theta)\theta-12\pi\theta^2+2(4\pi-\theta)\theta^2+2\theta^3\right)^2}\right)}\Bigg),\ \{\theta,-2\pi,2\pi\}\Bigg]$$

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

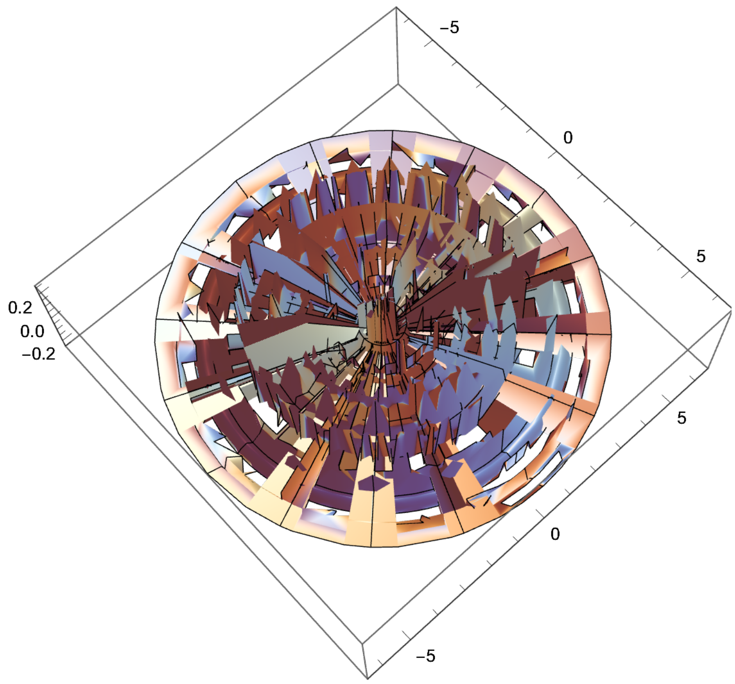
General::stop : Further output of Power::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression 0. ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫



$$
\begin{aligned}
&\texttt{Solve}\Bigg[\\
&\Bigg(-\Bigg(8\,\pi\,\theta\,\left(16\,\pi^2-4\,\pi\,(4\,\pi-\theta)-20\,\pi\,\theta+4\,(4\,\pi-\theta)\,\theta+4\,\theta^2\right)\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2\Bigg)\Big/\\
&\quad\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^3+\\
&\quad\Bigg(2\,\theta^2\,\left(16\,\pi^2-4\,\pi\,(4\,\pi-\theta)-20\,\pi\,\theta+4\,(4\,\pi-\theta)\,\theta+4\,\theta^2\right)\\
&\qquad\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2\Bigg)\Big/\\
&\quad\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^3+\\
&\quad\Bigg(8\,\pi\,\theta\,\left(-4\,\pi+2\,(4\,\pi-\theta)-\frac{(4\,\pi-\theta)^2}{4\,\pi}+\frac{\theta^2}{4\,\pi}\right)\\
&\qquad\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)\Bigg)\Big/\\
&\quad\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2-\\
&\quad\Bigg(2\,\theta^2\,\left(-4\,\pi+2\,(4\,\pi-\theta)-\frac{(4\,\pi-\theta)^2}{4\,\pi}+\frac{\theta^2}{4\,\pi}\right)\\
&\qquad\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)\Bigg)\Big/\\
&\quad\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2+\\
&\quad\frac{4\,\pi\,\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2}{\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2}-\\
&\quad\frac{2\,\theta\,\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2}{\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2}\Bigg)\Big/\\
&\Bigg(4\,\pi\,\sqrt{\left(\frac{4\,\pi\,\theta\,\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2}{\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2}-\frac{\theta^2\,\left(-4\,\pi\,\theta+2\,(4\,\pi-\theta)\,\theta-\frac{(4\,\pi-\theta)^2\,\theta}{4\,\pi}+\theta^2-\frac{(4\,\pi-\theta)\,\theta^2}{4\,\pi}\right)^2}{\left(16\,\pi^2\,\theta-4\,\pi\,(4\,\pi-\theta)\,\theta-12\,\pi\,\theta^2+2\,(4\,\pi-\theta)\,\theta^2+2\,\theta^3\right)^2}\right)}\Bigg)==\\
&\qquad\frac{4\,\pi\,\mathrm{r}^2-2\,\mathrm{r}^2\,\theta}{4\,\pi\,\sqrt{4\,\pi\,\mathrm{r}^2\,\theta-\mathrm{r}^2\,\theta^2}},\ \mathrm{r}\Bigg]
\end{aligned}
$$

Divide::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

Divide::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

Divide::infy : Infinite expression $\frac{1}{0}$ encountered. ≫

General::stop : Further output of Divide::infy will be suppressed during this calculation. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

∞::indet : Indeterminate expression ComplexInfinity + ComplexInfinity encountered. ≫

General::stop : Further output of ∞::indet will be suppressed during this calculation. ≫

{ { } }

$$\frac{4\pi}{3} + \Bigg(2^{1/3}\Big(-1296\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3} -$$

$$324\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\mathrm{Sin}[\beta]^2-453\,\pi^2\,\mathrm{Sin}[\beta]^4+36\,\pi^2\,\mathrm{Sin}[\beta]^6+$$

$$5\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} -$$

$$78\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} +$$

$$9\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} +$$

$$\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$

$$35\,\pi^2\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$

$$243\,\pi^2\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$

$$9\,\pi^2\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} -$$

$$4\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$

$$42\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3} +$$

$$5\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3} -$$

$$88\,\pi^2\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3} -$$

$$36\,\pi^2\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3} -$$

$$15\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$6\,\sqrt{3}\,\pi^2\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\Big)\Big)\Big)\Big/$$

$$\Big(27\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\mathrm{Sin}[\beta]^4-76\,984\,149\,600\,\pi^3\,\mathrm{Sin}[\beta]^6+$$

$$791\,034\,575\,760\,\pi^3\,\mathrm{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\mathrm{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\mathrm{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\mathrm{Sin}[\beta]^{14}-$$

$$9\,183\,300\,480\,\pi^3\,\mathrm{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{14}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$

$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\mathrm{Sin}[\beta]^2$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+1\,412\,976\,960$$

$$\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+361\,323\,192\,960$$

$$\pi^3\,\mathrm{Sin}[\beta]^8\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+10\,033\,606\,080$$

$$\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$

$$\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$
\begin{aligned}
&979776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+\\
&112534272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-\\
&3868575552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+\\
&52016027904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-\\
&241951624128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+\\
&12788596224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+\\
&1122403392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-\\
&69984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+\\
&19455552\,\pi^3\,\text{Sin}[\beta]^2\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-1082722464\\
&\quad\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+\\
&23329866240\,\pi^3\,\text{Sin}[\beta]^6\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-217196393760\\
&\quad\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+\\
&725922896832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+\right.\\
&\qquad\left.3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+79877708064\,\pi^3\,\text{Sin}[\beta]^{12}\\
&\quad\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+1632586752\\
&\quad\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+\\
&909792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}
\end{aligned}
$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$32\,062\,189\,824\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$127\,925\,643\,168\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$8\,060\,897\,088\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$51\,018\,336\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$\sqrt{}\Bigg(\Bigg(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600$$

$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$

$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+69\,984$$

$$\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2\Bigg(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{1/3}+1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-69\,984$$
$$\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Bigg)^2+$$
$$4\ \Bigg(-1296\ \pi^2\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$
$$324\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\Bigg(-\pi^2+50\ \pi^2\ \text{Sin}[\beta]^2-453\ \pi^2\ \text{Sin}[\beta]^4+36\ \pi^2\ \text{Sin}[\beta]^6+$$
$$5\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$78\ \sqrt{3}\ \pi^2\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\ \sqrt{3}\ \pi^2$$
$$\text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\ \Bigg(-1+18\ \text{Sin}[\beta]^2+$$
$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{1/3}-35\ \pi^2\ \text{Sin}[\beta]^2$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$243\ \pi^2\ \text{Sin}[\beta]^4\ \Bigg(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{1/3}+9\ \pi^2\ \text{Sin}[\beta]^6$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\ \sqrt{3}\ \pi^2\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Bigg(-1+18\ \text{Sin}[$$
$$\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{1/3}+5\ \pi^2$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\ \pi^2\ \text{Sin}[\beta]^2\ \Bigg(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{2/3}-36\ \pi^2\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Bigg(-1+18\ \text{Sin}[\beta]^2+$$
$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{2/3}-6\ \sqrt{3}\ \pi^2$$

$$\mathrm{Sin}[\beta]^2\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+\right.$$

$$\left.\left.\left.\left.\left.3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)^3\right)\right)^{1/3}\right)-$$

$$\left(128\,304\,\pi^3-46\,049\,472\,\pi^3\ \mathrm{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\ \mathrm{Sin}[\beta]^4-76\,984\,149\,600\right.$$

π^3

$\mathrm{Sin}[\beta]^6+791\,034\,575\,760$

π^3

$\mathrm{Sin}[\beta]^8-2\,463\,947\,543\,232$

π^3

$\mathrm{Sin}[\beta]^{10}-4\,120\,487\,403\,984$

π^3

$\mathrm{Sin}[\beta]^{12}-430\,339\,664\,160$

π^3

$\mathrm{Sin}[\beta]^{14}-9\,183\,300\,480$

π^3

$\mathrm{Sin}[\beta]^{16}-1\,924\,560$

$\sqrt{3}$

π^3

$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +240\,395\,040$

$\sqrt{3}$

π^3

$\mathrm{Sin}[\beta]^2$

$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -8\,641\,939\,248$

$\sqrt{3}$

π^3

$\mathrm{Sin}[\beta]^4$

$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +116\,076\,162\,240$

$\sqrt{3}$

π^3

$\mathrm{Sin}[\beta]^6$

$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -464\,847\,899\,760$

$\sqrt{3}$

π^3

$\mathrm{Sin}[\beta]^8$

$\sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -696\,655\,378\,080$

$\sqrt{3}$

π^3

$\mathrm{Sin}[\beta]^{10}$

$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 43\,748\,223\,120$

$\sqrt{3}$

π^3

$\text{Sin}[\beta]^{12}$

$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 306\,110\,016$

$\sqrt{3}$

π^3

$\text{Sin}[\beta]^{14}$

$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$

$69\,984\,\pi^3 \left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$

$22\,394\,880$

π^3

$\text{Sin}[\beta]^2$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$

$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$

$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$

$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$

$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2$

$\sqrt{\text{Sin}[\beta]^2 \left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$

$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$
$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}$
$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$
$69\,984\,\pi^3\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$
$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$
$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$
$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$
$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600}$$
$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+1\,412\,976\,960\,\pi^3\,\mathrm{Sin}[\beta]^4$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008\,\pi^3\,\mathrm{Sin}[\beta]^{16}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\sqrt{3}\,\pi^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-217\,196\,393\,760\,\pi^3\,\mathrm{Sin}[\beta]^8$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+79\,877\,708\,064\,\pi^3\,\mathrm{Sin}[\beta]^{12}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$51\,018\,336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Big)^2+$$

$$4\ \Big(-1296\ \pi^2\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\ \pi^2\ \text{Sin}[\beta]^2-453\ \pi^2\ \text{Sin}[\beta]^4+36\ \pi^2\ \text{Sin}[\beta]^6+$$

$$5\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$78\ \sqrt{3}\ \pi^2\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\ \sqrt{3}\ \pi^2$$

$$\text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\ \Big(-1+18\ \text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-35\ \pi^2\ \text{Sin}[\beta]^2$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$243\ \pi^2\ \text{Sin}[\beta]^4\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+9\ \pi^2\ \text{Sin}[\beta]^6$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$4\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$42\ \sqrt{3}\ \pi^2\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$5\ \pi^2\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$88\ \pi^2\ \text{Sin}[\beta]^2\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-36\ \pi^2\ \text{Sin}[\beta]^4$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$15\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$6\ \sqrt{3}\ \pi^2\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big(-1+18\ \text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big/$$

$$\left(27\times 2^{1/3}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right)$$

$$\text{Solve}\Big[\frac{1}{2\,\pi}\Bigg(\sqrt{\Bigg(4\,\pi\,r^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.}$$

$$\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\left.\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-$$

$$r^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.\right.\right.$$

$$\left.\left.\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\,\pi^3\right.$$

$$\left.\left.\left.\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\Bigg)\Bigg)==$$

$$r\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\right]\Big]$$

$$\beta:=\frac{\pi}{3}$$

$$\text{Solve}\Big[$$

$$\frac{4\,\pi}{3}+\left(2^{1/3}\left(-1296\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-\right.\right.$$

$$324\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$

$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$9\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2$$

$$\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+243$$

$$\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$9\,\pi^2\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$42\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$5\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$88\,\pi^2\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$36\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$15\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$6\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left.\left.\left.\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)\right)\Big/$$

$$\left(27\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right.$$

$$\left(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6+\right.$$

$$791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$

$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-$$

$$9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+1\,412\,976\,960$$

$$\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+\right.$$

$$\left.3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$

$$\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-1\,082\,722\,464$$

$$\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-217\,196\,393\,760\,\pi^3\,\mathrm{Sin}[\beta]^8$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\,\left(-1+18\,\text{Sin}[\beta]^2+\right.$$
$$\left.3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+1\,632\,586\,752$$
$$\pi^3\,\text{Sin}[\beta]^{14}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\left(\left(\left(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600\right.\right.\right.}$$
$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{14}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +69\,984$$
$$\pi^3\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \mathrm{Sin}[\beta]^2\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\ \pi^3\ \mathrm{Sin}[\beta]^4\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\ \pi^3\ \mathrm{Sin}[\beta]^6\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\ \pi^3\ \mathrm{Sin}[\beta]^8\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\ \pi^3\ \mathrm{Sin}[\beta]^{14}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008\ \pi^3\ \mathrm{Sin}[\beta]^{16}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\ \sqrt{3}\ \pi^3\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^2\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^4\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^6\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\mathrm{Sin}[\beta]^8\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\mathrm{Sin}[\beta]^{14}\,\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\,\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\right.$$
$$\left.\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\right)^2+4\left(-1296\,\pi^2\right.$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$
$$324\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\left(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+\right.$$
$$5\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-78\sqrt{3}\,\pi^2$$
$$\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$243\,\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+9\,\pi^2\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+\right.$$
$$\left.3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+42\sqrt{3}\,\pi^2$$

$$\mathrm{Sin}[\beta]^2 \sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} \left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+5\,\pi^2$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\,\pi^2\,\mathrm{Sin}[\beta]^2 \left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\right.$$
$$\left.\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-36\,\pi^2\,\mathrm{Sin}[\beta]^4$$
$$\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\sqrt{3}\,\pi^2\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} \left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-6\sqrt{3}\,\pi^2$$
$$\mathrm{Sin}[\beta]^2 \sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)} \left(-1+18\,\mathrm{Sin}[\beta]^2+\right.$$
$$\left.\left.\left.\left.\left.\left.3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\right)\right)^3\right)\right)^{1/3}\right)-$$

$$\left(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\mathrm{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\mathrm{Sin}[\beta]^4-76\,984\,149\,600\right.$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^6+791\,034\,575\,760$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^8-2\,463\,947\,543\,232$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{10}-4\,120\,487\,403\,984$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{12}-430\,339\,664\,160$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3$$
$$\mathrm{Sin}[\beta]^{16}-1\,924\,560$$
$$\sqrt{3}\,\pi^3$$
$$\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+240\,395\,040$$
$$\sqrt{3}\,\pi^3$$
$$\mathrm{Sin}[\beta]^2$$
$$\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4$$
$$\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6$$
$$\sqrt{\mathrm{Sin}[\beta]^2 \left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-$$

$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^8\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^{14}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ +$$
$$69\,984\ \pi^3\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \mathrm{Sin}[\beta]^2\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\ \pi^3\ \mathrm{Sin}[\beta]^4\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\ \pi^3\ \mathrm{Sin}[\beta]^6\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\ \pi^3\ \mathrm{Sin}[\beta]^8\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\ \pi^3\ \mathrm{Sin}[\beta]^{10}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\ \pi^3\ \mathrm{Sin}[\beta]^{12}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\ \pi^3\ \mathrm{Sin}[\beta]^{14}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\ \pi^3\ \mathrm{Sin}[\beta]^{16}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\ \sqrt{3}\ \pi^3\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^2\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\ \left(-1+18\ \mathrm{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\ \sqrt{3}\ \pi^3\ \mathrm{Sin}[\beta]^4\ \sqrt{\mathrm{Sin}[\beta]^2\ \left(-1+11\ \mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\Big(\Big(}128\,304\ \pi^3-46\,049\,472\ \pi^3\ \text{Sin}[\beta]^2+3\,084\,719\,760\ \pi^3\ \text{Sin}[\beta]^4-76\,984\,149\,600$$
$$\pi^3\ \text{Sin}[\beta]^6+791\,034\,575\,760\ \pi^3\ \text{Sin}[\beta]^8-2\,463\,947\,543\,232\ \pi^3\ \text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\ \pi^3\ \text{Sin}[\beta]^{12}-430\,339\,664\,160\ \pi^3\ \text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\ \text{Sin}[\beta]^{16}-1\,924\,560\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$69\,984\ \pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \text{Sin}[\beta]^2\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+1\,412\,976\,960\ \pi^3\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$34\,362\,423\,936\,\pi^3\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+361\,323\,192\,960\,\pi^3\,\mathrm{Sin}[\beta]^8\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008\,\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-217\,196\,393\,760\,\pi^3\,\mathrm{Sin}[\beta]^8\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+725\,922\,896\,832\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+79\,877\,708\,064\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+1\,632\,586\,752\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+909\,792\sqrt{3}\,\pi^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-91\,119\,168\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+2\,737\,984\,032\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-32\,062\,189\,824\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+127\,925\,643\,168\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+8\,060\,897\,088\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+51\,018\,336\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}\Bigg)^2+4\left(-1296\,\pi^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{10/3}-324\left(-1+18\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{5/3}\right.$$

$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$
$$5\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,-$$
$$78\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+9\,\sqrt{3}\,\pi^2$$
$$\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,+\pi^2\,\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$243\,\pi^2\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{1/3}+9\,\pi^2\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\,\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$5\,\pi^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\,\pi^2\,\text{Sin}[\beta]^2\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}-36\,\pi^2\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\,\sqrt{3}\,\pi^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}-6\,\sqrt{3}\,\pi^2$$
$$\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big(-1+18\,\text{Sin}[\beta]^2+$$
$$3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\,\Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big/$$
$$\left(27\times 2^{1/3}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right)\Big]$$

9.42478

9.424777960769378` / π

3.

Solve[

$$\frac{4\,\pi}{3}+\Big(2^{1/3}\,\Big(-1296\,\pi^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$
$$5\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$78\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$9\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2\,\text{Sin}[$$
$$\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+243$$
$$\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$9\,\pi^2\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$5\,\pi^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-88\,\pi^2$$
$$\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-36$$
$$\pi^2\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$6\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\Big)\Big)\Big)\Big/$$

$$\Big(27\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-$$
$$76\,984\,149\,600\,\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-$$
$$2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-$$
$$430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480\,\pi^3\,\text{Sin}[\beta]^{16}-$$
$$1\,924\,560\sqrt{3}\,\pi^3\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$240\,395\,040\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ +$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ +69\,984\ \pi^3$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-22\,394\,880$$
$$\pi^3\ \text{Sin}[\beta]^2\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\ \pi^3\ \text{Sin}[\beta]^4\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-34\,362\,423\,936\ \pi^3\ \text{Sin}[\beta]^6$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\ \pi^3\ \text{Sin}[\beta]^8\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-1\,382\,528\,881\,152\ \pi^3\ \text{Sin}[\beta]^{10}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\ \pi^3\ \text{Sin}[\beta]^{12}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+11\,224\,033\,920\ \pi^3\ \text{Sin}[\beta]^{14}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008$$
$$\pi^3\ \text{Sin}[\beta]^{16}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-69\,984\,\pi^3$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+19\,455\,552$$

$$\pi^3\,\text{Sin}[\beta]^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\,\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{}\Big(\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600$$
$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$8\,641\,939\,248\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$116\,076\,162\,240\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$464\,847\,899\,760\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$696\,655\,378\,080\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$43\,748\,223\,120\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$306\,110\,016\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{14}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$69\,984\,\pi^3\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8\,\Big(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$

$$1\,382\,528\,881\,152\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$10\,033\,606\,080\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$11\,224\,033\,920\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$153\,055\,008\,\pi^3\,\text{Sin}[\beta]^{16}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$112\,534\,272\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$69\,984\,\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6 \Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} -$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8 \Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10} \Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12} \Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$

$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14} \Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3} +$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} -$$

$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} +$$

$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} -$$

$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} +$$

$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} +$$

$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\left(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\right)^{2/3} +$$

$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}$$

$$\Big(-1 + 18\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2 \left(-1 + 11\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4\right)}\Big)^{2/3}\Big)^2 + 4\,\Big(-1296\,\pi^2$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-$$

$$324\left(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$

$$\Big(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+$$

$$5\sqrt{3}\,\pi^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$78\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$

$$9\sqrt{3}\,\pi^2\,\text{Sin}[\beta]^4\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\Big(-1+$$

$$18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-$$

$$35\,\pi^2\,\text{Sin}[\beta]^2\Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$243\,\pi^2\,\text{Sin}[\beta]^4\Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+$$

$$9\,\pi^2\,\text{Sin}[\beta]^6\Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}-4\sqrt{3}\,\pi^2$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+42\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{1/3}+5\,\pi^2\Big(-1+$$

$$18\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-$$

$$88\,\pi^2\,\text{Sin}[\beta]^2\Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-$$

$$36\,\pi^2\,\text{Sin}[\beta]^4\Big(-1+18\,\text{Sin}[\beta]^2+3\sqrt{3}$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-15\sqrt{3}\,\pi^2$$

$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\sqrt{3}\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^{2/3}-6\sqrt{3}\,\pi^2$$

$$\text{Sin}[\beta]^2\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big(-1+18\,\text{Sin}[\beta]^2+$$

$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Bigg)^{2/3}\Bigg)\Bigg)^3\Bigg)\Bigg)^{1/3}\Bigg) -$$

$$\Big(128\,304\,\pi^3 - 46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2 + 3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4 - 76\,984\,149\,600$$
$$\pi^3\,\text{Sin}[\beta]^6 + 791\,034\,575\,760$$
$$\pi^3\,\text{Sin}[\beta]^8 - 2\,463\,947\,543\,232$$
$$\pi^3\,\text{Sin}[\beta]^{10} -$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12} - 430\,339\,664\,160$$
$$\pi^3\,\text{Sin}[\beta]^{14} - 9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16} -$$
$$1\,924\,560\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$
$$240\,395\,040$$
$$\sqrt{3}\ \pi^3\,\text{Sin}[\beta]^2$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^4$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^6$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^8$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{10}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{12}$$
$$\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} +$$
$$69\,984\,\pi^3$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$22\,394\,880\,\pi^3\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$1\,412\,976\,960\,\pi^3\,\text{Sin}[\beta]^4$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$
$$34\,362\,423\,936\,\pi^3\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} +$$
$$361\,323\,192\,960\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3} -$$

$$1\,382\,528\,881\,152\,\pi^3\,\mathrm{Sin}[\beta]^{10}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\,\pi^3\,\mathrm{Sin}[\beta]^{12}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\,\pi^3\,\mathrm{Sin}[\beta]^{14}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$153\,055\,008\,\pi^3\,\mathrm{Sin}[\beta]^{16}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\,\sqrt{3}\,\pi^3\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^2\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^4\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^6\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^8\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{10}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\mathrm{Sin}[\beta]^{12}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$69\,984\,\pi^3\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$19\,455\,552\,\pi^3\,\mathrm{Sin}[\beta]^2\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$1\,082\,722\,464\,\pi^3\,\mathrm{Sin}[\beta]^4\left(-1+18\,\mathrm{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$23\,329\,866\,240\,\pi^3\,\mathrm{Sin}[\beta]^6$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$91\,119\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^4\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$\sqrt{\Big(\Big(128\,304\,\pi^3-46\,049\,472\,\pi^3\,\text{Sin}[\beta]^2+3\,084\,719\,760\,\pi^3\,\text{Sin}[\beta]^4-76\,984\,149\,600}$$
$$\pi^3\,\text{Sin}[\beta]^6+791\,034\,575\,760\,\pi^3\,\text{Sin}[\beta]^8-2\,463\,947\,543\,232\,\pi^3\,\text{Sin}[\beta]^{10}-$$
$$4\,120\,487\,403\,984\,\pi^3\,\text{Sin}[\beta]^{12}-430\,339\,664\,160\,\pi^3\,\text{Sin}[\beta]^{14}-9\,183\,300\,480$$
$$\pi^3\,\text{Sin}[\beta]^{16}-1\,924\,560\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+$$
$$240\,395\,040\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$

$$8\,641\,939\,248\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ +$$
$$116\,076\,162\,240\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$464\,847\,899\,760\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$696\,655\,378\,080\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$43\,748\,223\,120\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ -$$
$$306\,110\,016\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^{14}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ +69\,984$$
$$\pi^3\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$22\,394\,880\ \pi^3\ \text{Sin}[\beta]^2\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+1\,412\,976\,960\ \pi^3\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$34\,362\,423\,936\ \pi^3\ \text{Sin}[\beta]^6\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$361\,323\,192\,960\ \pi^3\ \text{Sin}[\beta]^8\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$1\,382\,528\,881\,152\ \pi^3\ \text{Sin}[\beta]^{10}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$10\,033\,606\,080\ \pi^3\ \text{Sin}[\beta]^{12}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$11\,224\,033\,920\ \pi^3\ \text{Sin}[\beta]^{14}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+153\,055\,008\ \pi^3\ \text{Sin}[\beta]^{16}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$979\,776\ \sqrt{3}\ \pi^3\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$112\,534\,272\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$3\,868\,575\,552\ \sqrt{3}\ \pi^3\ \text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$52\,016\,027\,904\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^6\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$

$$241\,951\,624\,128\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^8\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$12\,788\,596\,224\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{10}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$

$$1\,122\,403\,392\,\sqrt{3}\,\pi^3\,\text{Sin}[\beta]^{12}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-69\,984$$

$$\pi^3\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$19\,455\,552\,\pi^3\,\text{Sin}[\beta]^2\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-1\,082\,722\,464\,\pi^3\,\text{Sin}[\beta]^4$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$23\,329\,866\,240\,\pi^3\,\text{Sin}[\beta]^6\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$217\,196\,393\,760\,\pi^3\,\text{Sin}[\beta]^8\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$725\,922\,896\,832\,\pi^3\,\text{Sin}[\beta]^{10}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$79\,877\,708\,064\,\pi^3\,\text{Sin}[\beta]^{12}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$1\,632\,586\,752\,\pi^3\,\text{Sin}[\beta]^{14}\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\right.$$

$$\left.\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$

$$909\,792\,\sqrt{3}\,\pi^3\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$

$$\left(-1+18\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{\text{Sin}[\beta]^2\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$

$$91\,119\,168\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$2\,737\,984\,032\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$32\,062\,189\,824\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^6\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$127\,925\,643\,168\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^8\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$8\,060\,897\,088\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{10}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}+$$
$$51\,018\,336\ \sqrt{3}\ \pi^3\,\text{Sin}[\beta]^{12}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left.\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}\right)^2+$$
$$4\,\left(-1296\,\pi^2\,\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{10/3}-\right.$$
$$324\,\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}$$
$$\left(-\pi^2+50\,\pi^2\,\text{Sin}[\beta]^2-453\,\pi^2\,\text{Sin}[\beta]^4+36\,\pi^2\,\text{Sin}[\beta]^6+\right.$$
$$5\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-$$
$$78\ \sqrt{3}\ \pi^2\,\text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\ \sqrt{3}\ \pi^2$$
$$\text{Sin}[\beta]^4\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+\pi^2\,\left(-1+18\,\text{Sin}[\beta]^2+\right.$$
$$\left.3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-35\,\pi^2\,\text{Sin}[\beta]^2$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$243\,\pi^2\,\text{Sin}[\beta]^4\,\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\right.$$
$$\left.\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+9\,\pi^2\,\text{Sin}[\beta]^6$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}-$$
$$4\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}$$
$$\left(-1+18\,\text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{1/3}+$$
$$42\ \sqrt{3}\ \pi^2\,\text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \left(-1+18\,\text{Sin}[\right.$$

$$\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big)^{1/3}+5\ \pi^2$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$88\ \pi^2\ \text{Sin}[\beta]^2\ \Big(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}$$
$$\sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big)^{2/3}-36\ \pi^2\ \text{Sin}[\beta]^4$$
$$\left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{2/3}-$$
$$15\ \sqrt{3}\ \pi^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big(-1+18\ \text{Sin}[\beta]^2+$$
$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big)^{2/3}-6\ \sqrt{3}\ \pi^2$$
$$\text{Sin}[\beta]^2\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big(-1+18\ \text{Sin}[\beta]^2+$$
$$3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\ \Big)^{2/3}\Big)\Big)^3\Big)\Big)^{1/3}\Big/$$
$$\left(27\times 2^{1/3}\ \left(-1+18\ \text{Sin}[\beta]^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}\right)==3$$
$$\pi,$$
$$\beta]$$

A very large output was generated. Showing a sample of it.

$$\text{N}\Bigg[\frac{4\pi}{3}+\frac{2^{1/3}\ \left(-1296\ \pi^2\ \left(-1+\ll 1\gg+3\ \sqrt{3}\ \sqrt{\ll 1\gg^2\ \ll 1\gg}\right)^{10/3}-324\ \ll 1\gg^{\ll 1\gg}\ \left(-\pi^2+\ll 25\gg\right)\right)}{27\ \left(-1+\ll 1\gg+3\ \sqrt{3}\ \sqrt{\ll 1\gg\ \ll 1\gg}\right)^{5/3}\ \left(\ll 71\gg+\sqrt{\ll 1\gg^2+4\ \ll 1\gg}\right)^{1/3}}-$$
$$\frac{\left(128\,304\ \pi^3-46\,049\,472\ \pi^3\ \ll 1\gg^2+\ll 67\gg+\ll 1\gg+\sqrt{(\ll 1\gg)^2+4\ (\ll 1\gg-\ll 1\gg)^3}\right)^{1/3}}{27\times 2^{1/3}\ \left(-1+18\ \ll 1\gg^2+3\ \sqrt{3}\ \sqrt{\text{Sin}[\beta]^2\ \left(-1+11\ \ll 1\gg^2+\text{Sin}[\beta]^4\right)}\right)^{5/3}}==3\ \pi,\ \beta\Bigg]$$

show less | show more | show all | set size limit...

β := π / 3

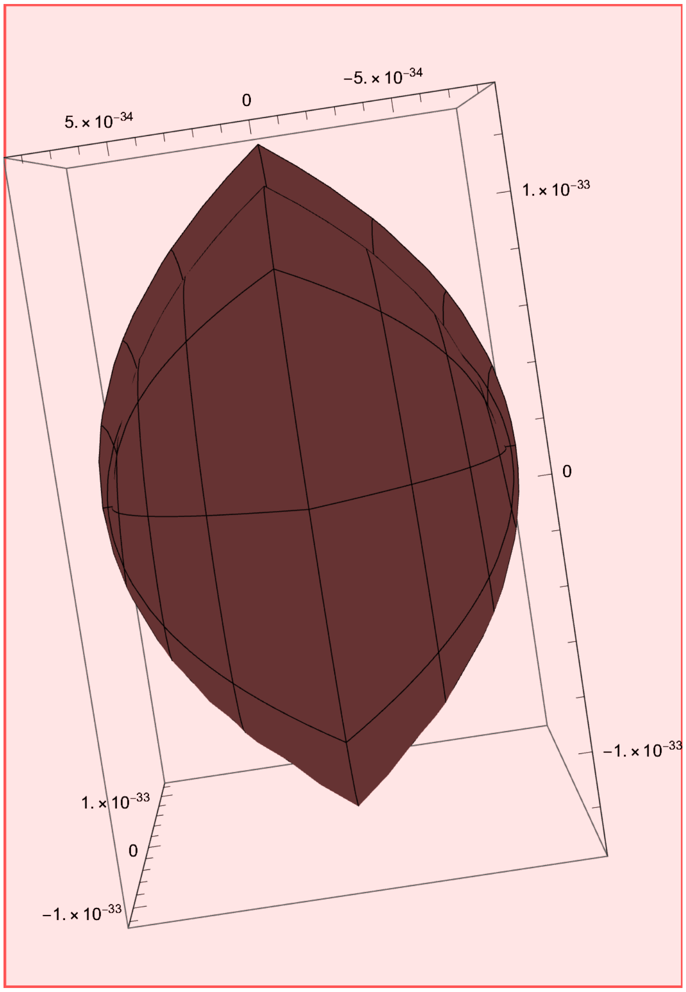
θ := 3 π

$$3.911230604289641`*^{\wedge}-52\ \left(8.987551787368176`*^{\wedge}16+\frac{8.470568000686103`*^{\wedge}17}{4\ \pi-\theta}\right)\ (4\ \pi-\theta)$$

4.41738×10^{-34}

θ:=

$$\text{SphericalPlot3D}\left[\frac{h\ \left(c^2+\left(\frac{c\ \sqrt{2\ \left(\pi+\sqrt{\pi^2-\pi^2\ \text{Sin}[\beta]^2}\right)}}{\sqrt{4\ \pi-\theta}}\right)^2\right)}{2\ \left(\frac{c\ \sqrt{2\ \left(\pi+\sqrt{\pi^2-\pi^2\ \text{Sin}[\beta]^2}\right)}}{\sqrt{4\ \pi-\theta}}\right)^2},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -2\ \pi,\ 2\ \pi\}\right]$$



This shows us that the diagram of illusory contour is present within visualizaiton of the energy of a wavelength of light, η of light.

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == 1, v\right]$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == 0, v\right]$$

{{}}

$\theta := 2\pi$

```
N[(√(3.5481432270250993`*^18 -
      1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2)) /
  (√(39.47841760435743` - 12.566370614359172` θ + θ^2))]
```

Indeterminate

```
N[2.99792458`*^8]
```

2.99792×10^{8}

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == 1,\ v\right]$$

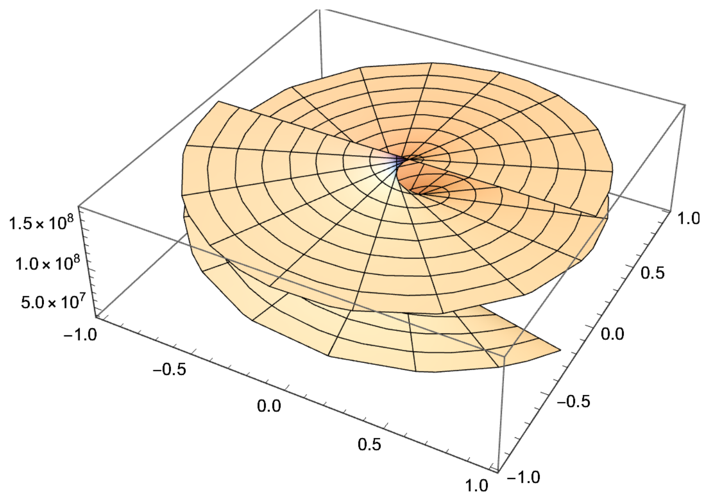
$$\left\{\left\{v \to -\frac{1.\ \sqrt{3.54814\times 10^{18} - 1.12941\times 10^{18}\ r^2\ \theta + 8.98755\times 10^{16}\ r^2\ \theta^2}}{\sqrt{39.4784 - 12.5664\ r^2\ \theta + r^2\ \theta^2}}\right\},\right.$$

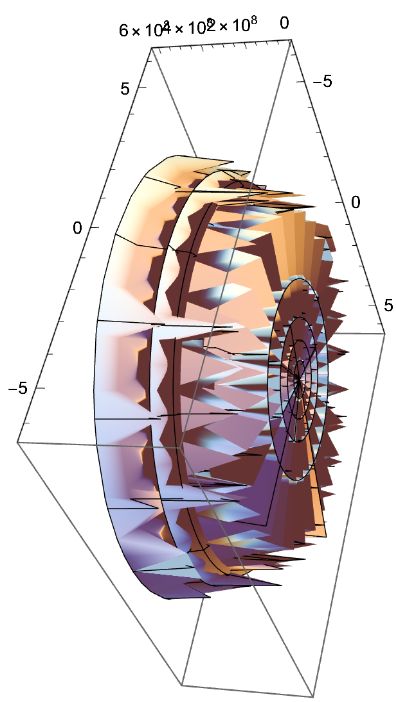
$$\left.\left\{v \to \frac{\sqrt{3.54814\times 10^{18} - 1.12941\times 10^{18}\ r^2\ \theta + 8.98755\times 10^{16}\ r^2\ \theta^2}}{\sqrt{39.4784 - 12.5664\ r^2\ \theta + r^2\ \theta^2}}\right\}\right\}$$

RevolutionPlot3D[

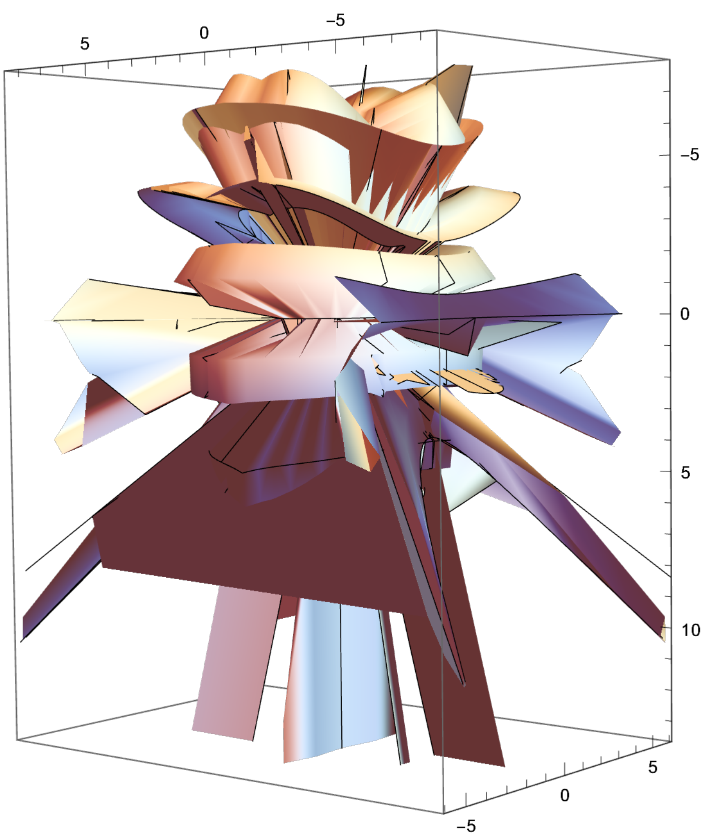
$$\left(\sqrt{\left(3.5481432270250993\grave{}*\wedge 18 - 1.1294090667581471\grave{}*\wedge 18 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta + 8.987551787368176\grave{}*\wedge 16\, r^2\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\; r^2\,\theta + r^2\,\theta^2}\right)$$

, {r, -1, 1}, {θ, -2 π, 2 π}]

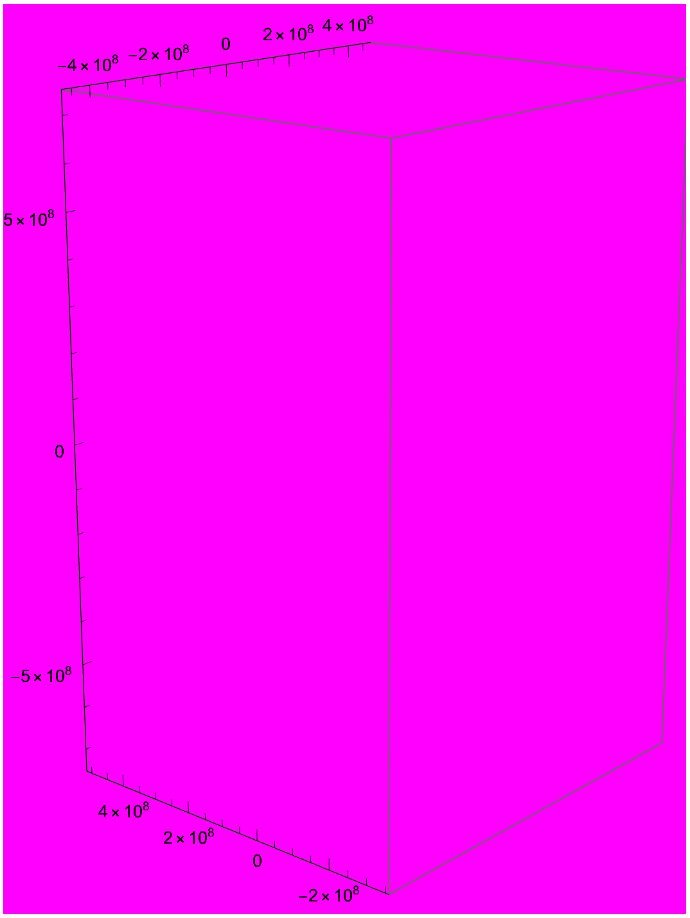




```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 π √((4 π - θ) θ) / ((4 π - θ) θ))^2 θ +
     8.987551787368176`*^16 (2 π √((4 π - θ) θ) / ((4 π - θ) θ))^2 θ^2)) / (√(39.47841760435743` -
     12.566370614359172` (2 π √((4 π - 2 (π + √(π^2 - π^2 Sin[β]^2))) θ) / ((4 π - θ) 2 (π + √(π^2 - π^2 Sin[β]^2))))^2 θ +
     (2 π √((4 π - 2 (π + √(π^2 - π^2 Sin[β]^2))) θ) / ((4 π - θ) θ))^2
     (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)), {θ, -2 π, 2 π}, {β, -π, π}]
```

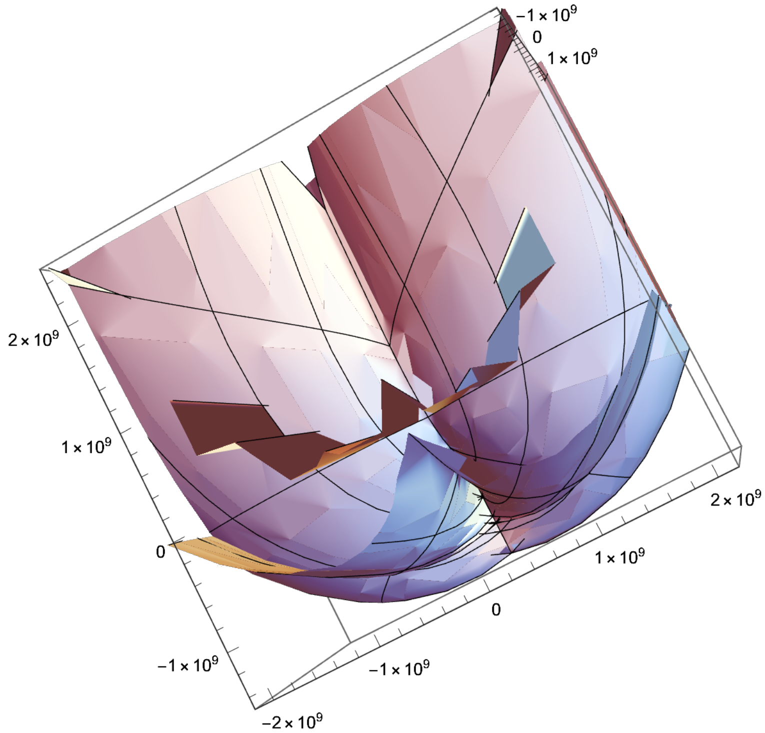


```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 ((2 π √((4 π - θ) θ))/((4 π - θ) θ))^2 θ +
      8.987551787368176`*^16 ((2 π √((4 π - θ) 2 (π + √(π^2 - π^2 Sin[β]^2))))/((4 π - θ) θ))^2 θ^2))/
  (√(39.47841760435743` - 12.566370614359172`
       ((2 π √((4 π - 2 (π + √(π^2 - π^2 Sin[β]^2))) θ))/((4 π - θ) 2 (π + √(π^2 - π^2 Sin[β]^2))))^2 θ +
      ((2 π √((4 π - 2 (π + √(π^2 - π^2 Sin[β]^2))) θ))/((4 π - θ) θ))^2 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)),
 {θ, -2 π, 2 π}, {β, -π, π}, PlotStyle → Opacity[.25]]
```



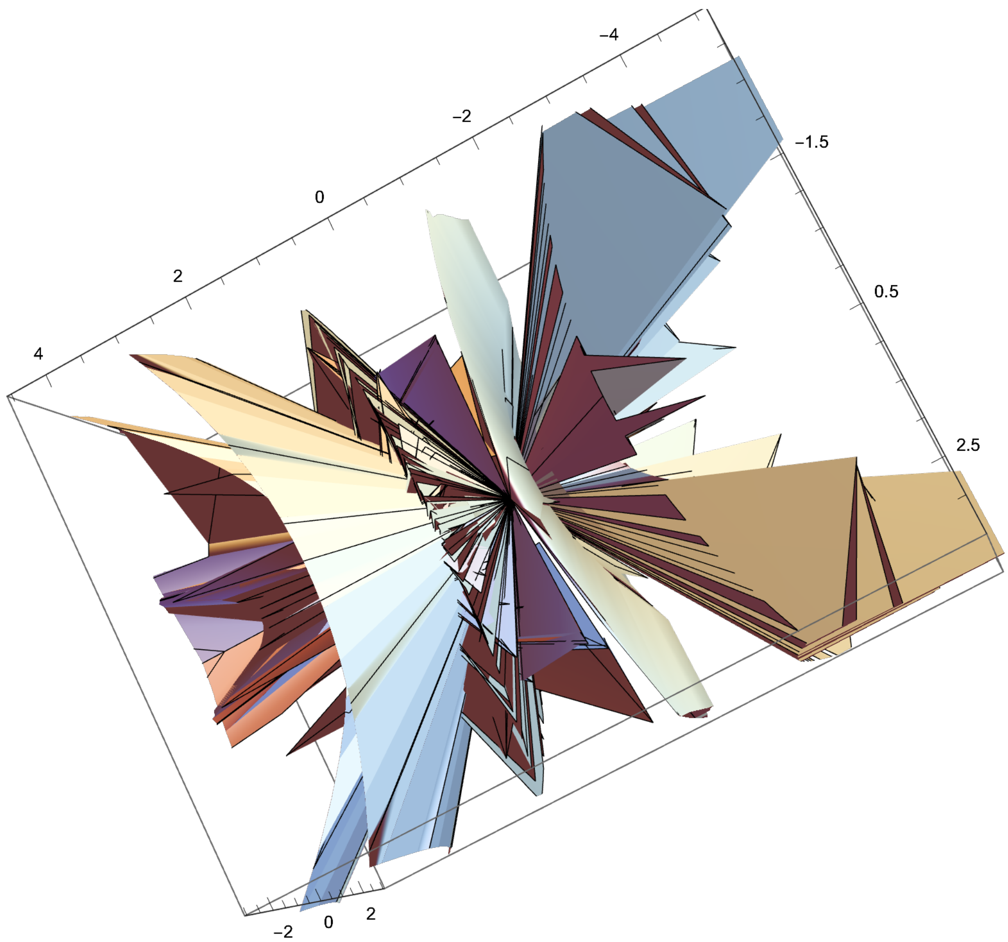
−4 × 10^8
−2 × 10^8
0
2 × 10^8
4 × 10^8
5 × 10^8
0
−5 × 10^8
4 × 10^8
2 × 10^8
0
−2 × 10^8

$$\text{SphericalPlot3D}\Big[\left(\sqrt{\left(3.5481432270250993\text{`*^}18-1.1294090667581471\text{`*^}18\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\text{`*^}16\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{(4\,\pi-\theta)\,\theta}\right)^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\text{`}-12.566370614359172\text{`}\left(\frac{2\,\pi\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)^2\theta+\left(\frac{2\,\pi\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)}\right),\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi,\pi\}\Big]$$


−1 × 10^9
0
1 × 10^9
2 × 10^9
1 × 10^9
0
−1 × 10^9
−2 × 10^9
−1 × 10^9
0
1 × 10^9
2 × 10^9

SphericalPlot3D[

$$\left(\sqrt{\left(3.5481432270250993`*^{\wedge}18 - 1.1294090667581471`*^{\wedge}18 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta + 8.987551787368176`*^{\wedge}16 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta^2\right)}\right) \Big/ \left(\sqrt{\left(39.47841760435743` - 12.566370614359172` \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \theta + \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 \left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2\right)}\right),\ \{\theta, -2\,\pi, 2\,\pi\},\ \{\beta, -\pi, \pi\}\Big]$$



$$\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

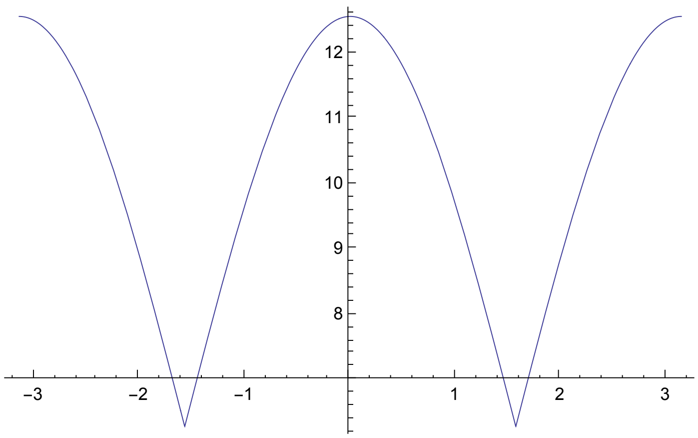
$$\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}$$

```
c := 2.99792458 * (10^8)
```

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r,v\right]$$

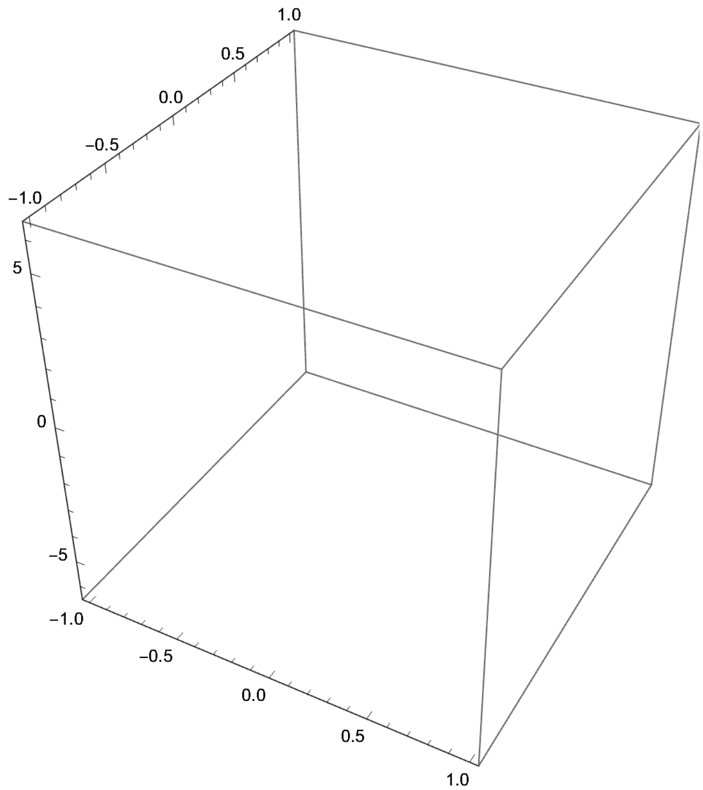
$$\left\{\left\{v\to-\frac{1.\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2}}{\sqrt{39.4784-12.5664\theta+\theta^2}}\right\},\left\{v\to\frac{\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2}}{\sqrt{39.4784-12.5664\theta+\theta^2}}\right\}\right\}$$

$$\text{Plot}\left[2\left(\pi+\sqrt{\pi^2-\frac{1}{4}\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right),\{\beta,-\pi,\pi\}\right]$$



$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{ContourPlot3D}\left[\frac{4\,\pi\,r_1^2+\sqrt{\frac{r^2\,(4\,\pi-\theta)\,\theta\,\left(-4\,\pi^2+4\,\pi\,\theta-\theta^2\right)\,r_1^2}{\pi^2}+16\,\pi^2\,r_1^4}}{2\,r_1^2},\right.$$
$$\left.\{r,-1,1\},\{r_1,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



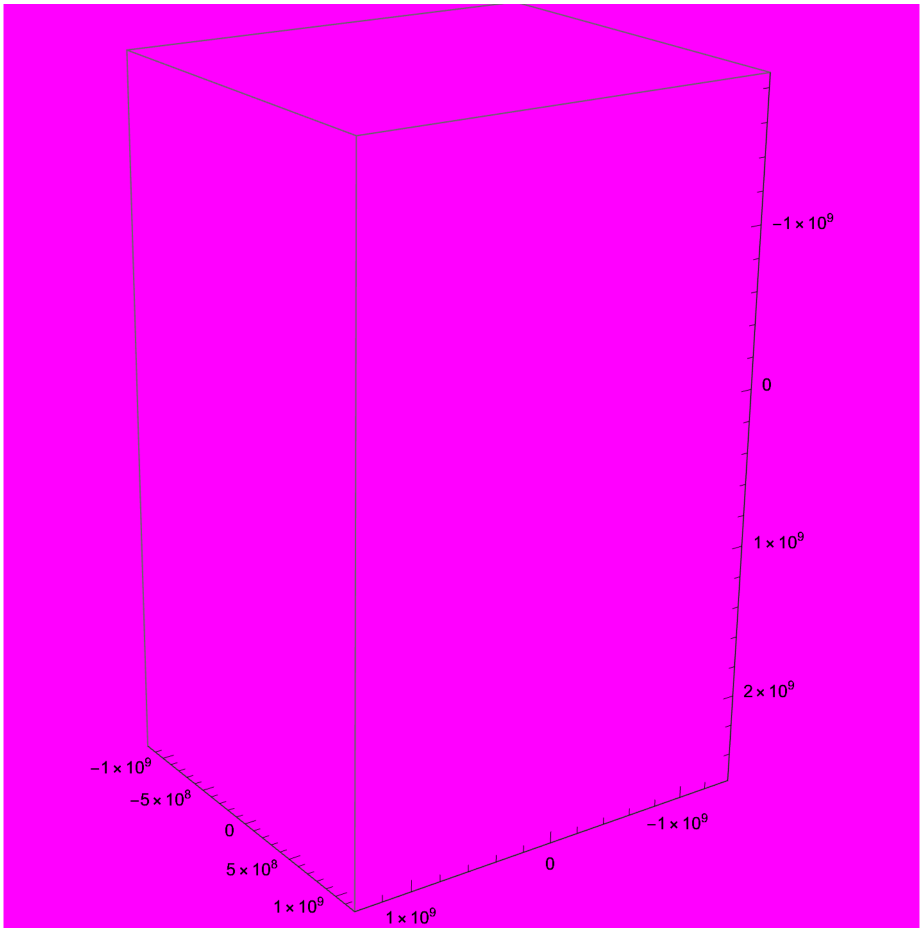
$$r=\frac{\frac{2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\,\sqrt{4\,\pi-\theta_1}\,\sqrt{\theta_1}}{2\,\pi}$$

SphericalPlot3D[

$$\left(\sqrt{\left(3.5481432270250993`*^18 - 1.1294090667581471`*^18 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 2 \left(\pi + \sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right) + 8.987551787368176`*^16 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 (\theta)^2\right)}\right) \Big/$$

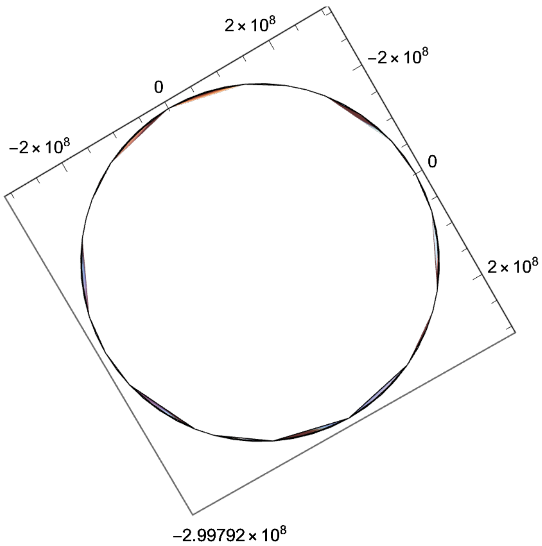
$$\left(\sqrt{\left(39.47841760435743` - 12.566370614359172` \left(\frac{2\,\pi\,\sqrt{\left(4\,\pi-\ 2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 2 \left(\pi + \sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right) + \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2 (\theta)^2\right)}\right),$$

{θ, -2 π, 2 π}, {β, -π, π}, PlotStyle → Opacity[.75]]



−1 × 10^9
0
1 × 10^9
2 × 10^9
−1 × 10^9
−5 × 10^8
0
5 × 10^8
1 × 10^9
1 × 10^9
0
−1 × 10^9

```
RevolutionPlot3D[
 {(√ (3.5481432270250993`*^18 - 1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16
        r^2 θ^2)) / (√(39.47841760435743` - 12.566370614359172` r^2 θ + r^2 θ^2)),
  - (1.` √ (3.5481432270250993`*^18 - 1.1294090667581471`*^18 r^2 θ +
         8.987551787368176`*^16 r^2 θ^2)) /
     (√(39.47841760435743` - 12.566370614359172` r^2 θ + r^2 θ^2))},
 {r, -1, 1}, {θ, -2 π, 2 π}]
```



The Paradox of Time and Cyclicality by Parker Emmerson

$\theta = 2\pi * \text{time} = 2\pi t$

Please refer to the work entitled Math for Transforming a Circle into a cone if questions are raised of proof.

From this, we can mathematically prove that if time is measured like a clock by the cyclically passing angle, there is by definition no time. That is time = 0, yet time does have contiuous expressions and solutions.

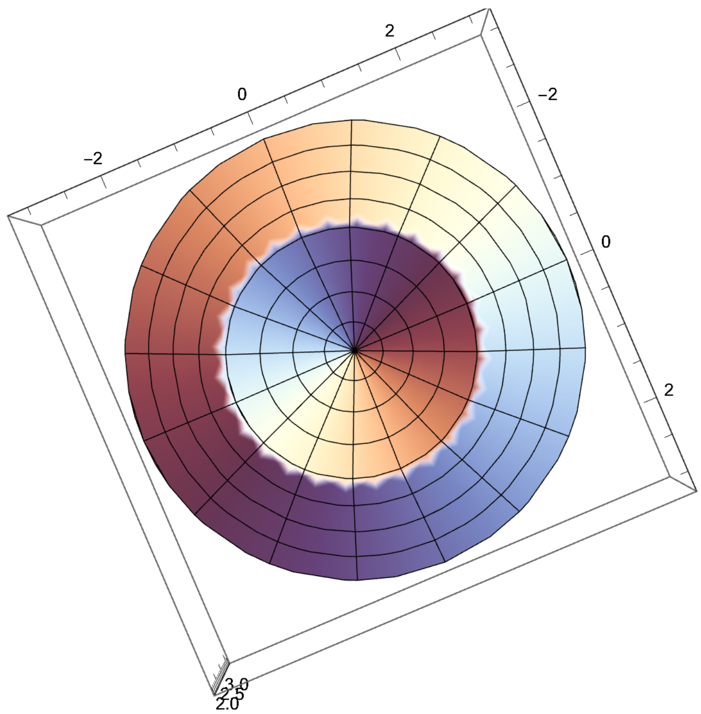
$2\pi r - 2\pi r_1 = \theta r = 2\pi r - 2\pi (r \cos[\beta])$

$$\text{Solve}[\theta\, r == 2\,\pi\, r - 2\,\pi\,(r\,\text{Cos}[\beta]),\ \beta]$$

$$\left\{\left\{\beta \to -\text{ArcCos}\left[\frac{2\,\pi-\theta}{2\,\pi}\right]\right\},\ \left\{\beta \to \text{ArcCos}\left[\frac{2\,\pi-\theta}{2\,\pi}\right]\right\}\right\}$$

$$\left\{\left\{\beta \to -\text{ArcCos}\left[\frac{2\,\pi-\theta}{2\,\pi}\right]\right\},\ \left\{\beta \to \text{ArcCos}\left[\frac{2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right]\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\text{ArcCos}\left[\frac{2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right],\ \{\beta,\ -\pi,\ \pi\}\right]$$



$$\text{Solve}\left[-\text{ArcCos}\left[\frac{2\,\pi-\theta}{2\,\pi}\right] == \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ \theta\right]$$

$$\{\{\theta \to 0\},\ \{\}\}$$

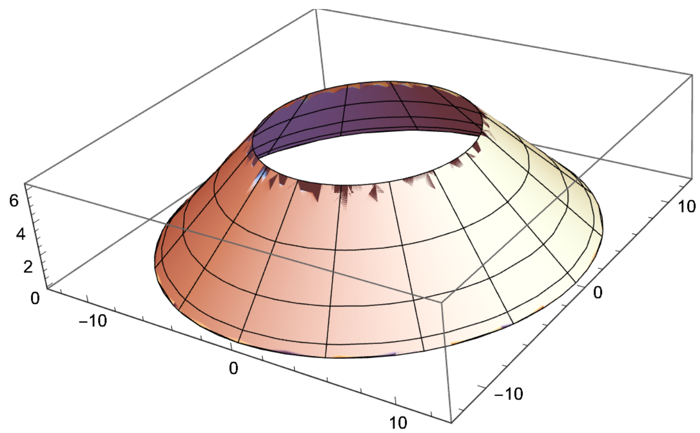
$$\text{Solve}\left[\text{ArcCos}\left[\frac{2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{2\,\pi}\right] == \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right],\ \theta\right]$$

$$\left\{\left\{\theta \to 2\left(\pi-\sqrt{\pi^2-\pi^2\left(1-\frac{\left(2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}{4\,\pi^2}\right)}\right)\right\},\right.$$

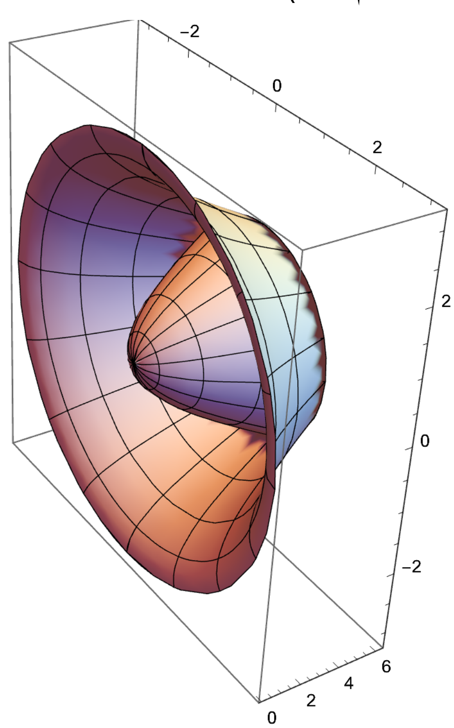
$$\left.\left\{\theta \to 2\left(\pi+\sqrt{\pi^2-\pi^2\left(1-\frac{\left(2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}{4\,\pi^2}\right)}\right)\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left\{2\left(\pi+\sqrt{\pi^2-\pi^2\left(1-\frac{\left(2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}{4\,\pi^2}\right)}\right),\right.\right.$$

$$\left.\left.2\left(\pi-\sqrt{\pi^2-\pi^2\left(1-\frac{\left(2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}{4\,\pi^2}\right)}\right)\right\},\ \{\beta,\ -\pi,\ \pi\}\right]$$



$$\text{RevolutionPlot3D}\left[2\left(\pi-\sqrt{\pi^2-\pi^2\left(1-\frac{\left(2\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}{4\,\pi^2}\right)}\right),\ \{\beta,\ -\pi,\ \pi\}\right]$$



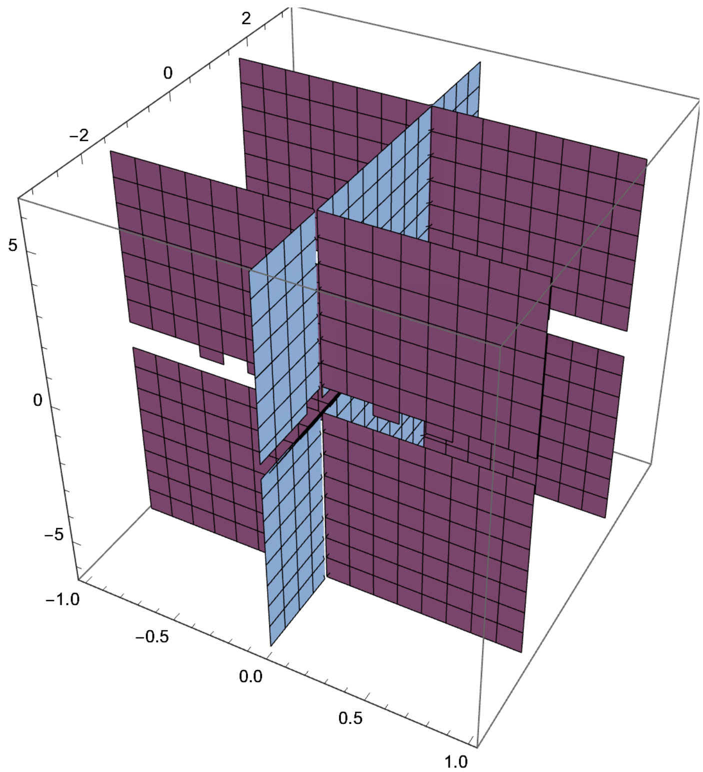
$$\text{Solve}\left[\text{ArcCos}\left[\frac{2\pi - 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right)}{2\pi}\right] == \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right], \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\ \theta}}{2\pi}\right]\right\}\right\}$$

D[((r Sin[β]) / (θ / (2 π))), θ, β] = D[v, v] = 1

$$-\frac{2\pi\, r\, \text{Cos}[\beta]}{\theta^2} = 1$$

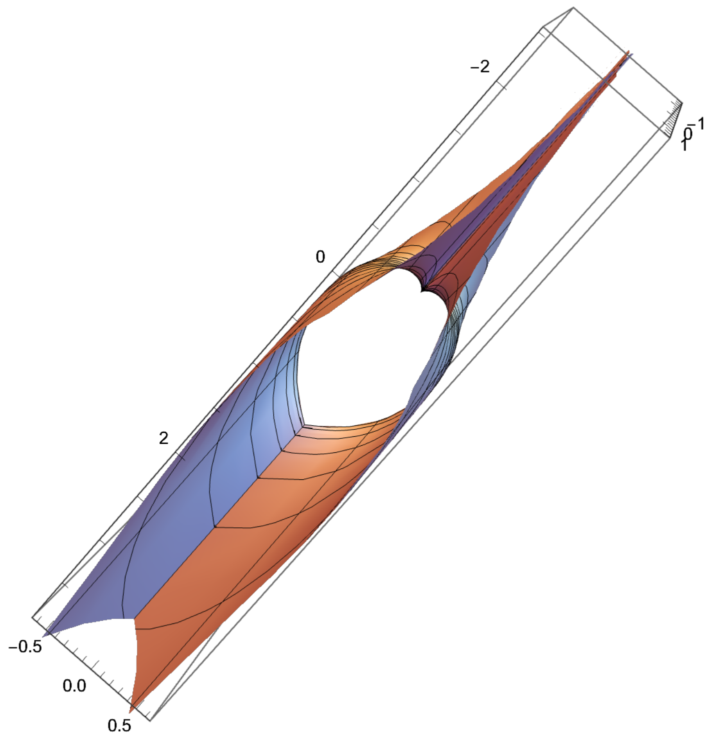
$$\text{ContourPlot3D}\left[-\frac{2\pi\, r\, \text{Cos}[\beta]}{\theta^2}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[-\frac{2\pi\, r\, \text{Cos}[\beta]}{\theta^2} == 1, r\right]$$

$$\left\{\left\{r \to -\frac{\theta^2\, \text{Sec}[\beta]}{2\pi}\right\}\right\}$$

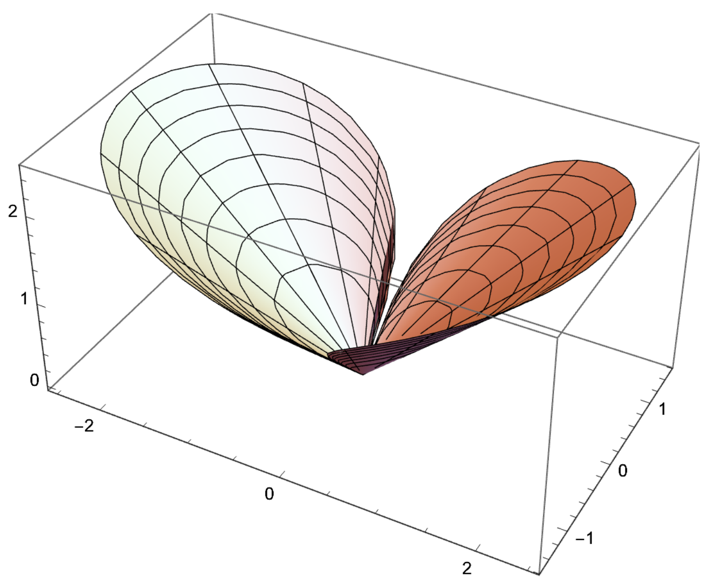
$$\text{SphericalPlot3D}\left[-\frac{\theta^2\,\text{Sec}[\beta]}{2\,\pi}, \{\theta, -\pi, \pi\}, \{\beta, -.5\,\pi, .5\,\pi\}\right]$$



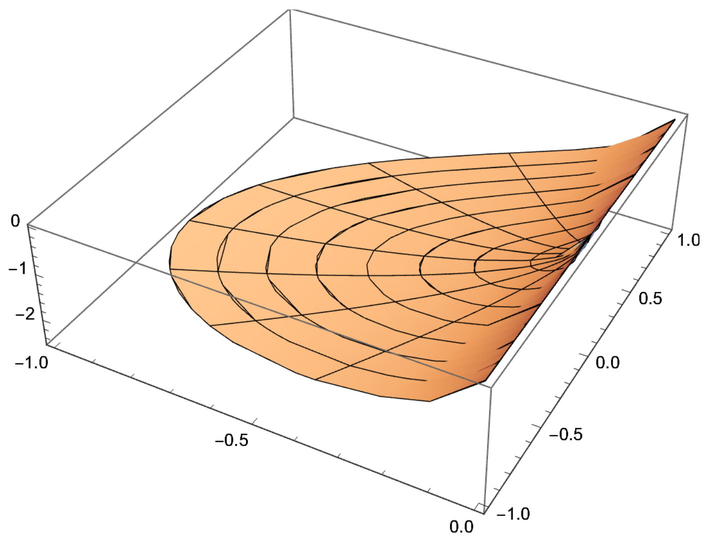
$$\text{Solve}\left[-\frac{2\,\pi\,r\,\text{Cos}[\beta]}{\theta^2} == 1, \theta\right]$$

$$\left\{\left\{\theta \to -i\,\sqrt{2\,\pi}\,\sqrt{r}\,\sqrt{\text{Cos}[\beta]}\right\}, \left\{\theta \to i\,\sqrt{2\,\pi}\,\sqrt{r}\,\sqrt{\text{Cos}[\beta]}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\left\{i\,\sqrt{2\,\pi}\,\sqrt{r}\,\sqrt{\text{Cos}[\beta]}, -i\,\sqrt{2\,\pi}\,\sqrt{r}\,\sqrt{\text{Cos}[\beta]}\right\}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



$$\texttt{RevolutionPlot3D}\left[i \sqrt{2\pi}\ \sqrt{r}\ \sqrt{\texttt{Cos}[\beta]}\ , \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



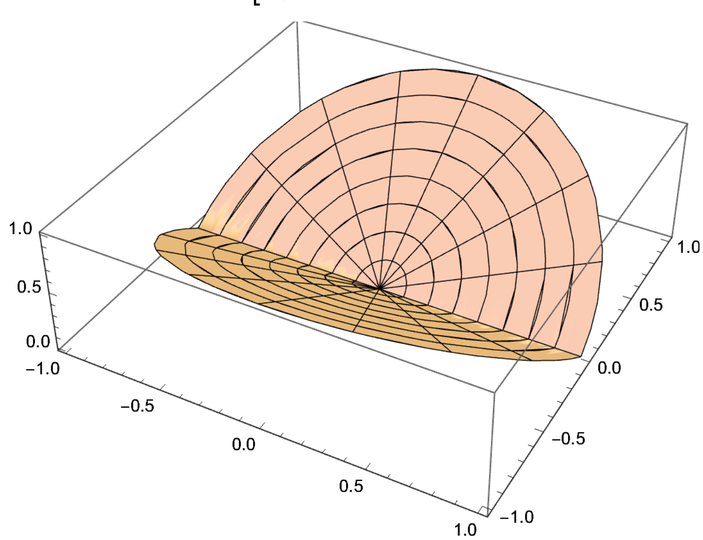
$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\texttt{Sin}[\beta]^2}\right)$$

$$2\,\pi\,r - 2\,\pi\,r_1 = \theta\,r = 2\,\pi\,r - 2\,\pi\,(r\,\texttt{Cos}[\beta]) = 2\,\pi\,r - 2\,\pi\,\sqrt{r\,\hat{}\,2 - \eta\,\hat{}\,2}$$

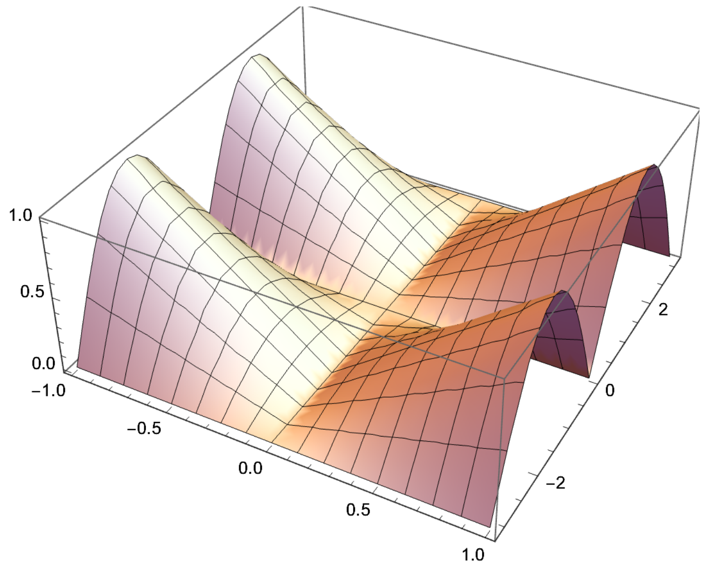
$$\texttt{Solve}\left[2\,\pi\,r - 2\,\pi\,(r\,\texttt{Cos}[\beta]) == 2\,\pi\,r - 2\,\pi\,\sqrt{r\,\hat{}\,2 - \eta\,\hat{}\,2}\,, \eta\right]$$

$$\left\{\left\{\eta \to -\sqrt{r^2 - r^2\,\texttt{Cos}[\beta]^2}\right\}, \left\{\eta \to \sqrt{r^2 - r^2\,\texttt{Cos}[\beta]^2}\right\}\right\}$$

$$\texttt{RevolutionPlot3D}\left[\sqrt{r^2 - r^2\,\texttt{Cos}[\beta]^2}\,, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{Plot3D}\left[\sqrt{r^2 - r^2 \text{Cos}[\beta]^2}, \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$



$$\text{Solve}\left[\sqrt{r^2 - r^2 \text{Cos}[\beta]^2} == r \text{Cos}[\beta], \beta\right]$$

$$\left\{\left\{\beta \to -\frac{3\pi}{4}\right\}, \left\{\beta \to -\frac{\pi}{4}\right\}, \left\{\beta \to \frac{\pi}{4}\right\}, \left\{\beta \to \frac{3\pi}{4}\right\}\right\}$$

$$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}\left[\frac{3\pi}{4}\right]^2}\right)$$

$$2\left(\pi + \frac{\pi}{\sqrt{2}}\right)$$

$$2\left(\pi + \frac{\pi}{\sqrt{2}}\right) \Big/ (2\pi)$$

$$\frac{\pi + \frac{\pi}{\sqrt{2}}}{\pi} = t$$

$$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}\left[\frac{\pi}{4}\right]^2}\right)$$

$$2\left(\pi + \frac{\pi}{\sqrt{2}}\right)$$

$$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}\left[-\frac{\pi}{4}\right]^2}\right)$$

$$2\left(\pi + \frac{\pi}{\sqrt{2}}\right)$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}\left[-\frac{3\,\pi}{4}\right]^2}\right)$$

$$2\left(\pi+\frac{\pi}{\sqrt{2}}\right)$$

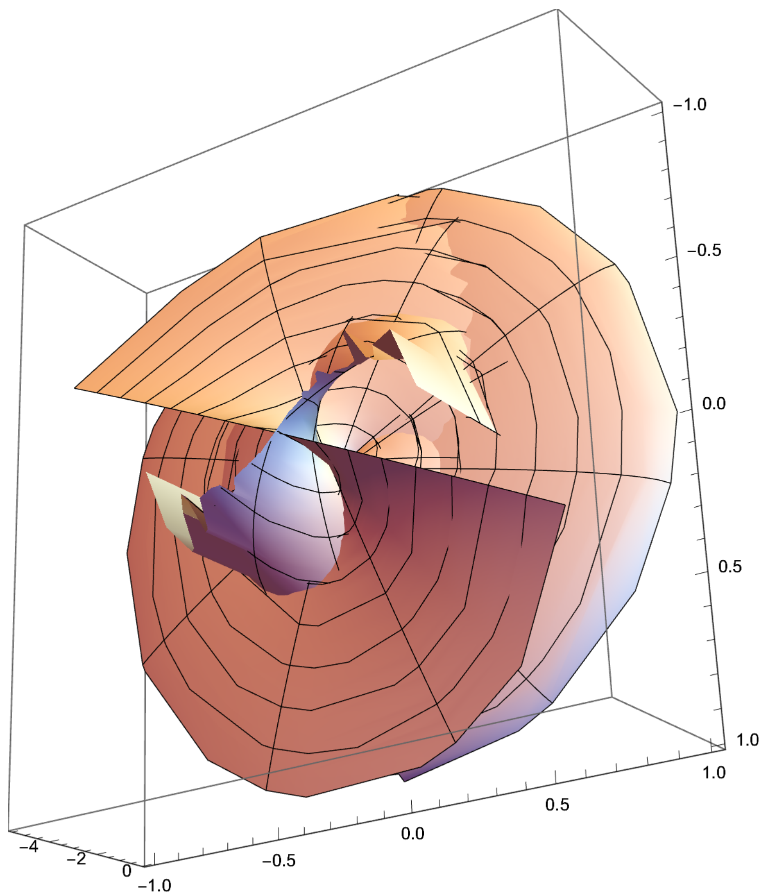
$$\theta=2\left(\pi-\sqrt{\pi^2-\pi^2\,\mathrm{Sin}\left[\frac{3\,\pi}{4}\right]^2}\right)$$

$$2\left(\pi-\frac{\pi}{\sqrt{2}}\right)$$

RevolutionPlot3D[

$$-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2+r^2\theta^4+16\pi^3 r\sqrt{r^2(4\pi-\theta)\theta}-\frac{64\pi^4\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\sqrt{r^2(4\pi-\theta)\theta}}{4\pi-\theta}+8\pi^2 r\theta\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2(4\pi-\theta)\theta}\right)}\right)$$

, {r, -1, 1}, {θ, -4 π, 4 π}]



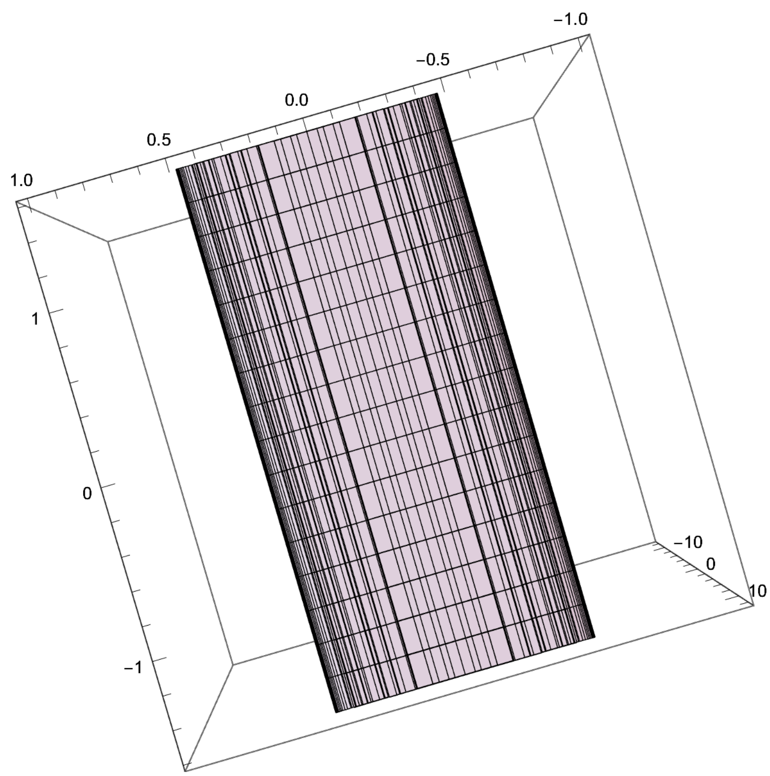
ContourPlot3D[

$$-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4\left(\frac{2\pi\sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\right)^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\theta+4\pi^2\left(\frac{2\pi\sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\right)^2\theta^2+\right.}\right.$$

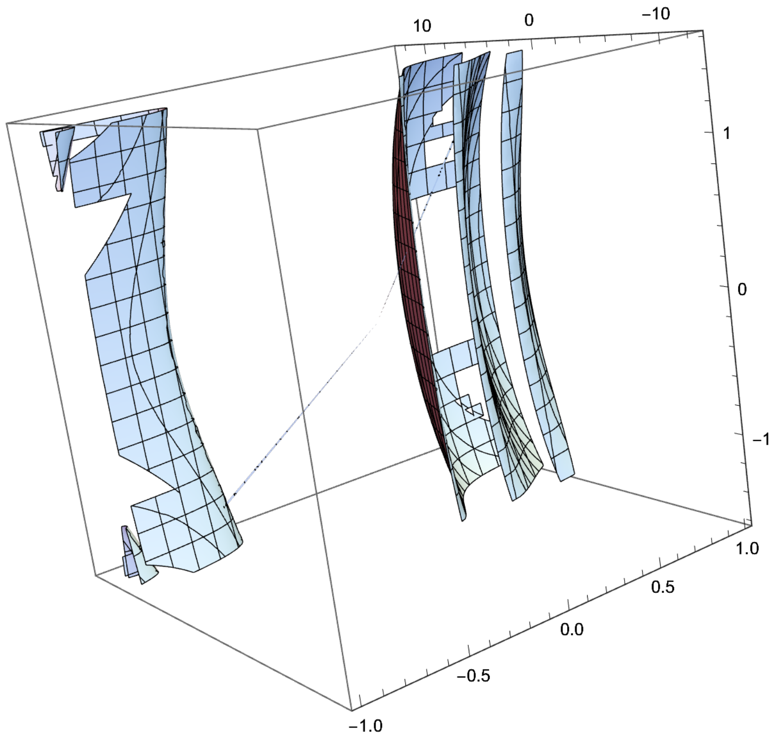
$$r^2\theta^4+16\pi^3 r\sqrt{r^2\ (4\pi-\theta)\ 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}-$$

$$\left.\left.\frac{64\pi^4\ \frac{2\pi\sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\ \sqrt{r^2\ (4\pi-\theta)\ \theta}}{4\pi-\theta}+8\pi^2 r\,\theta\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ \theta}\right)^2(4\pi-\theta)\ \theta}\right)\right),$$

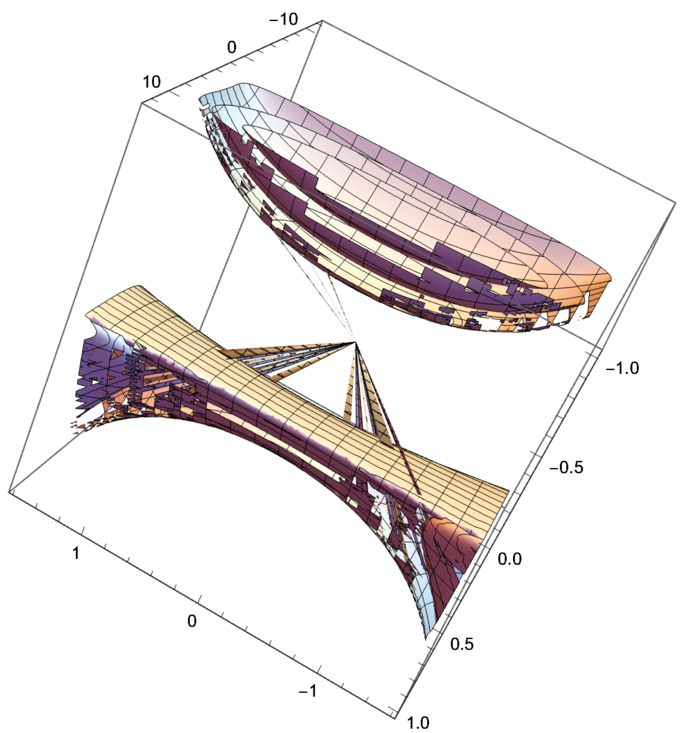
{r, -1, 1}, {θ, -4 π, 4 π}, {β, -π / 2, π / 2}]



```
ContourPlot3D[-1/(4 π^2) (√((64 π^4 (r)^2 - (256 π^5 r^2)/(4 π - θ) + 16 π^3 r^2 θ +
    4 π^2 (r)^2 θ^2 + r^2 θ^4 + 16 π^3 r √(r^2 (4 π - θ) 2 (π + √(π^2 - π^2 Sin[β]^2))) -
    (64 π^4 r √(r^2 (4 π - θ) θ))/(4 π - θ) + 8 π^2 r θ √((r)^2 (4 π - θ) θ)))),
  {r, -1, 1}, {θ, -4 π, 4 π}, {β, -π / 2, π / 2}]
```



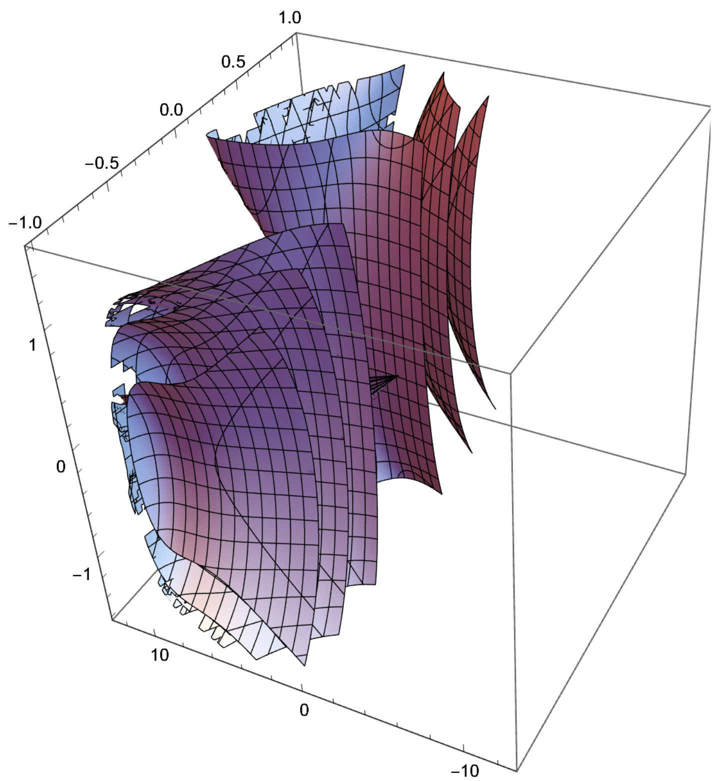
$$\text{ContourPlot3D}\Big[-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4 (r)^2 - \frac{256\pi^5 r^2}{4\pi-\theta} + 16\pi^3 r^2\theta + 4\pi^2 (r)^2\theta^2 + r^2\theta^4 + 16\pi^3 r\sqrt{r^2 (4\pi-\theta)\theta} - \frac{64\pi^4 r\sqrt{r^2 (4\pi-\theta)\theta}}{4\pi-\theta} + 8\pi^2 r\,\theta\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)^2 (4\pi-\theta)\theta}\right)}\right),$$
$$\{r, -1, 1\}, \{\theta, -4\pi, 4\pi\}, \{\beta, -\pi/2, \pi/2\}\Big]$$



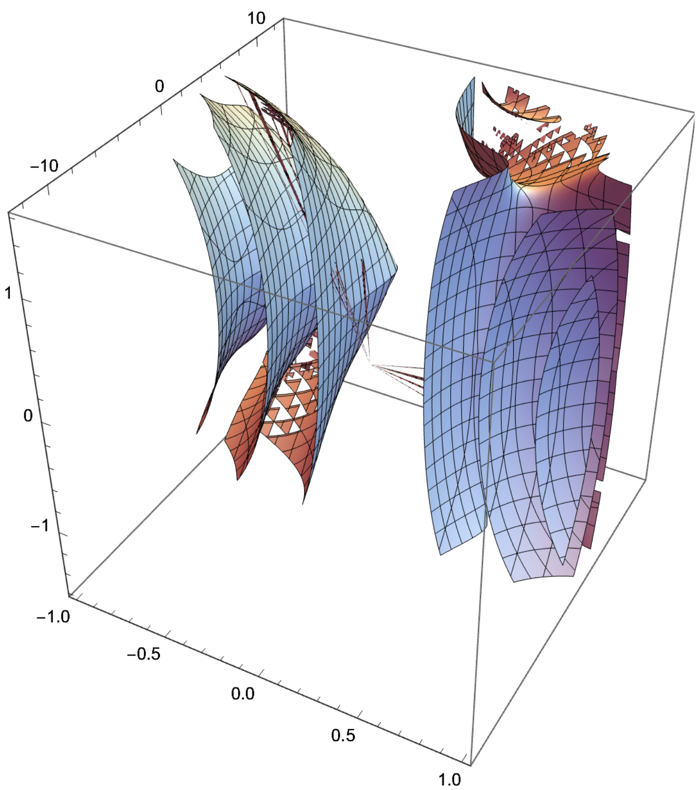
ContourPlot3D[

$$-\frac{1}{4\pi^2}\left(\sqrt{\left(64\pi^4\ (r)^2-\frac{256\pi^5 r^2}{4\pi-\theta}+16\pi^3 r^2\ 2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)+4\pi^2\ (r)^2\,\theta^2+r^2\,\theta^4+16\pi^3\, r\,\sqrt{r^2\ (4\pi-\theta)\ \theta}-\frac{64\pi^4\, r\,\sqrt{r^2\ (4\pi-\theta)\ \theta}}{4\pi-\theta}+8\pi^2\, r\,\theta\,\sqrt{\left(\frac{2\pi\sqrt{(4\pi-\theta)\ \theta}}{(4\pi-\theta)\ 2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\right)^2(4\pi-\theta)\ \theta}\right)}\right),$$

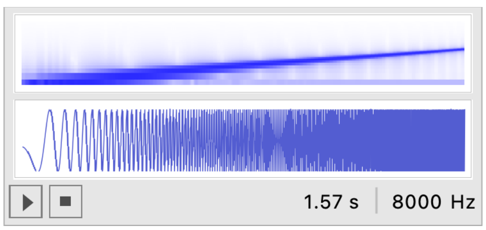
{r, -1, 1}, {θ, -4 π, 4 π}, {β, -π / 2, π / 2}]



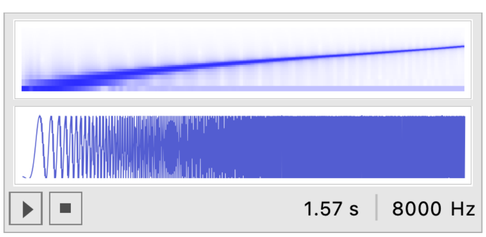
```
ContourPlot3D[
 -1/(4 π^2) (Sqrt[(64 π^4 (r)^2 - (256 π^5 r^2)/(4 π - θ) + 16 π^3 r^2 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 4 π^2 (r)^2 θ^2 +
      r^2 θ^4 + 16 π^3 r Sqrt[r^2 (4 π - θ) θ] - (64 π^4 r Sqrt[r^2 (4 π - θ) θ])/(4 π - θ) +
      8 π^2 r θ Sqrt[((2 π Sqrt[(4 π - 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])) θ])/((4 π - θ) 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])))^2 (4 π - θ) θ])]),
 {r, -1, 1}, {θ, -4 π, 4 π}, {β, -π / 2, π / 2}]
```



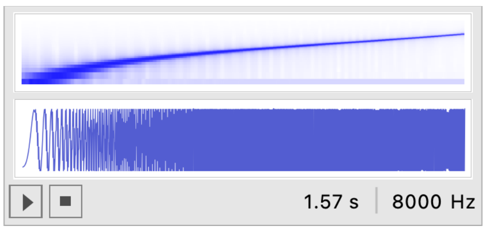
```
Play[Sin[500 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
     2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))] +
  Cos[500 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) + 2/3
      (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3]
          Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))], {β, π / 2, π}]
```



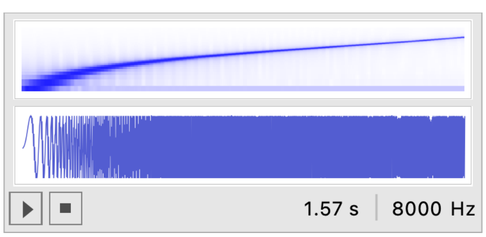

```
Play[Sin[1000 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
     2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))] +
  Cos[1000 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) + 2/3
      (-π^3 + 18 π^3 Sin[β]^2 +
         3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3))], {β, π / 2, π}]
```



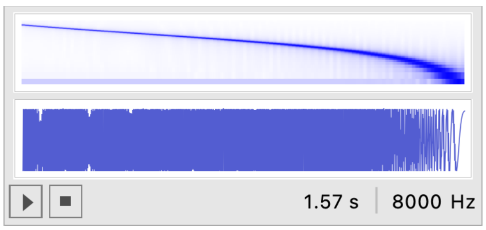
$$\text{Play}\Big[\text{Sin}\Big[1500\Big(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big]+\text{Cos}\Big[1500\Big(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big],\ \{\beta,\pi/2,\pi\}\Big]$$



$$\text{Play}\Big[\text{Sin}\Big[2000\Big(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big]+\text{Cos}\Big[2000\Big(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big],\ \{\beta,\pi/2,\pi\}\Big]$$



$$\text{Play}\Big[\text{Sin}\Big[3000\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.$$
$$\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$
$$\left.\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\Big]+$$
$$\text{Cos}\Big[3000\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.$$
$$\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}$$
$$\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+\right.$$
$$\left.\left.3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\Big],\ \{\beta,-\pi,-\pi/2\}\Big]$$



$$\text{Sound}\Big[\Big\{\text{Play}\Big[\text{Sin}\Big[500\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big]+$$

$$\text{Cos}\Big[500\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big],$$

$$\{\beta,\,\pi/2,\,\pi\}\Big],\,\text{Play}\Big[\text{Sin}\Big[1000\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big]+$$

$$\text{Cos}\Big[1000\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big],$$

$$\{\beta,\,\pi/2,\,\pi\}\Big],\,\text{Play}\Big[\text{Sin}\Big[3000\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big]+$$

$$\text{Cos}\Big[3000\,\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/$$

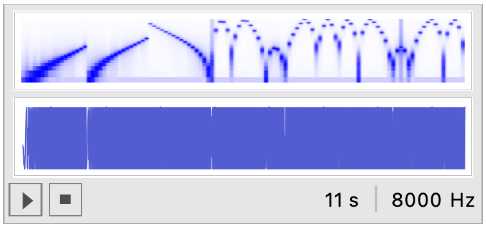
$$\left(6\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+$$

$$\frac{2}{3}\,\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big],$$

$$\{\beta,\,-\pi,\,-\pi/2\}\Big],\,\text{Play}\Big[\text{Sin}\Big[\pi\text{^}8\,\sqrt{3}\,2\,\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big]+$$

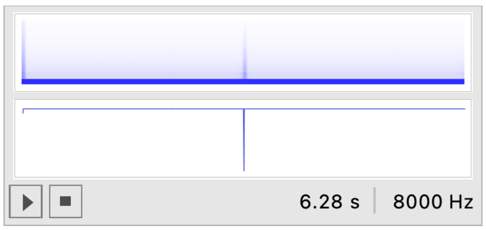
$$\text{Cos}\Big[\pi\text{^}8\,\sqrt{3}\,2\,\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big],\,\{\beta,$$

$$-\pi,\,\pi\}\Big]\Big\}\Big]$$



$$\text{Play}\left[\left(\frac{\sqrt{5}}{\left(1+\sqrt[5]{5^{3/4}\left(\frac{\sqrt{5}-1}{2}\right)^{5/2}-1}\right)}-\frac{\left(\sqrt{5}+1\right)}{2}\right)\right.$$

$$\left.e^{\left((2\pi)/\sqrt{5}\right)}\Big/\text{Sin}\left[\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right],\ \{\beta,-\pi,\pi\}\right]$$



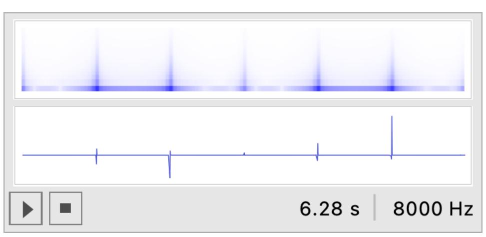
$$\text{Play}\left[\left(\frac{\sqrt{5}}{\left(1+\sqrt[5]{5^{3/4}\left(\frac{\sqrt{5}-1}{2}\right)^{5/2}-1}\right)}-\frac{\left(\sqrt{5}+1\right)}{2}\right)\right.$$

$$e^{\left((2\pi)/\sqrt{5}\right)}\Big/\text{Sin}\left[\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\right.\right.$$

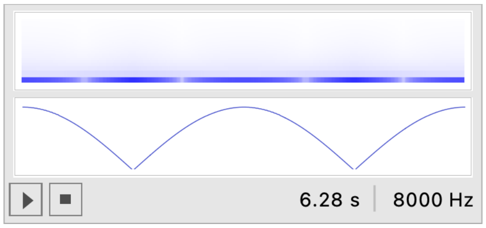
$$\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}$$

$$\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+\right.$$

$$\left.\left.\left.3\sqrt{3}\ \sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right],\ \{\beta,-\pi,\pi\}\right]$$

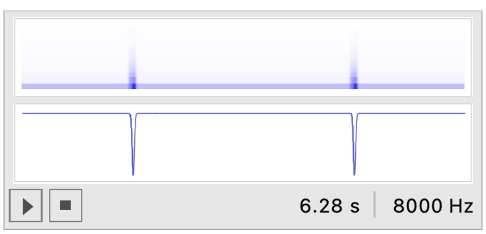


$$\text{Play}\left[\left(\frac{\sqrt{5}}{\left(1+\sqrt[5]{5^{3/4}\left(\frac{\sqrt{5}-1}{2}\right)^{5/2}}-1\right)}-\frac{\left(\sqrt{5}+1\right)}{2}\right) e^{((2\pi)/\sqrt{5})}\, 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ \{\beta,-\pi,\pi\}\right]$$

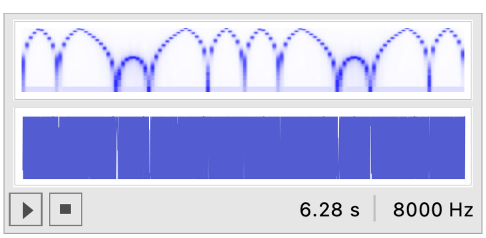


$$\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)$$

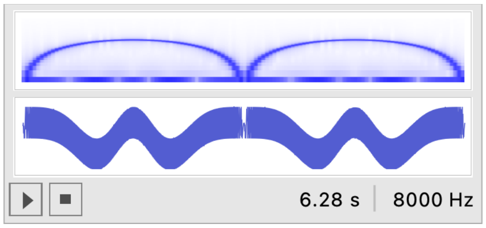
$$\text{Play}\left[\text{Sin}\left[5000\left(\left(\frac{4\pi}{3}+\left(\left(1-i\sqrt{3}\right)\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\right)\Big/\left(12\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-\frac{1}{3}\left(1+i\sqrt{3}\right)\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\Big/(2\pi)\right],\ \{\beta,-\pi,\pi\}\right]$$



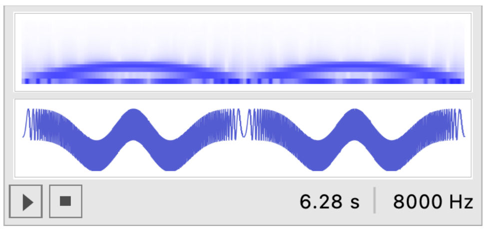
$$\text{Play}\left[\text{Sin}\left[\pi\text{^}8\sqrt{3}\,2\left(\pi-\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right]+\text{Cos}\left[\pi\text{^}8\sqrt{3}\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right],\ \{\beta,-\pi,\pi\}\right]$$



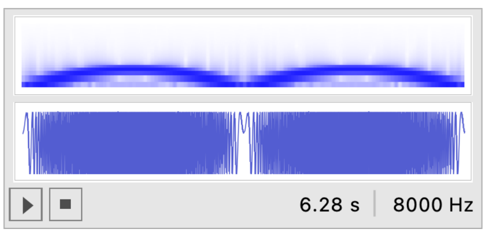
```
Play[Sin[800 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] + Cos[2 (π - Sqrt[π^2 - π^2 Sin[β]^2])], {β, -π, π}]
```



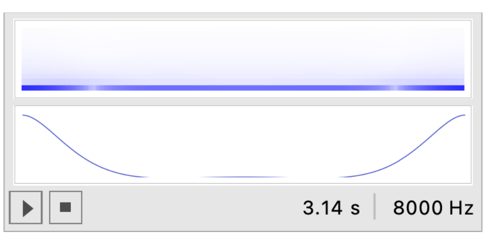

```
Play[Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / (2 π)] +
  Cos[2 (π - Sqrt[π^2 - π^2 Sin[β]^2]) / (2 π)], {β, -π, π}]
```



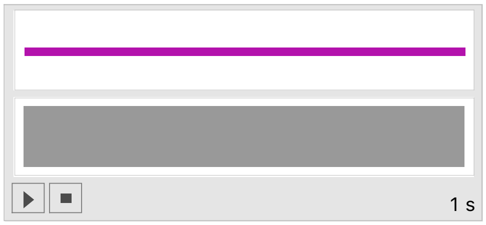

```
Play[Sin[800 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / (2 π)] +
  Cos[800 × 2 (π - Sqrt[π^2 - π^2 Sin[β]^2]) / (2 π)], {β, -π, π}]
```



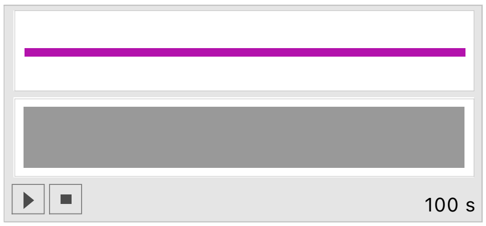

```
Play[ⅈ Sin[2 (π + Sqrt[π^2 - π^2 Sin[β]^2])] +
  Cos[4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/(6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
   2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)], {β, 0, π}]
```



```
Sound[SoundNote["G", 1, "Violin"]]
```




```
Sound[SoundNote["G", 100, "Violin"]]
```

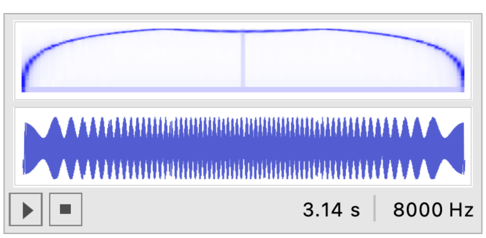



```
Play[(2 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[3000 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
    2 Sin[50 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, -π}]
```

```
Export["sound1.aif", Play[
  (2 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) * Sin[3000 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
     2 Sin[50 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, π}]]
```

```
$Failed
```

```
Play[(2 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[3000 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
    2 Sin[50 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, π}]
```

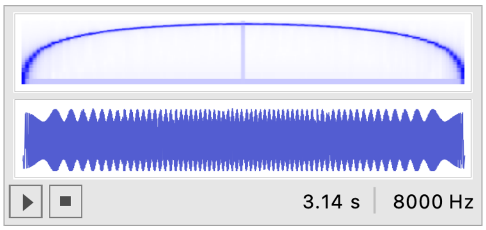



```
EmitSound[Sound[Sin[(2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)^2], {β, 0, π}]]
```

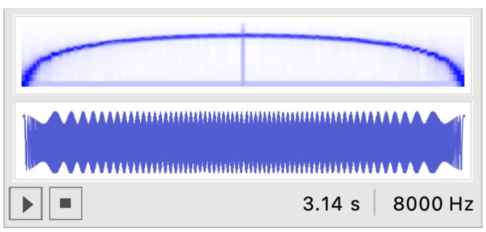
```
Play
```

The Sounds of Pure Time

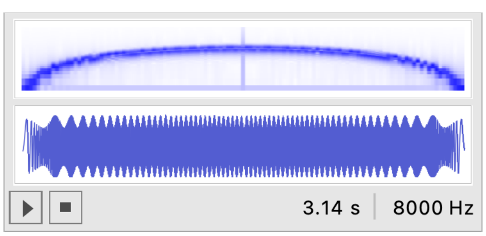
```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[2000 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
    2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, π}]
```



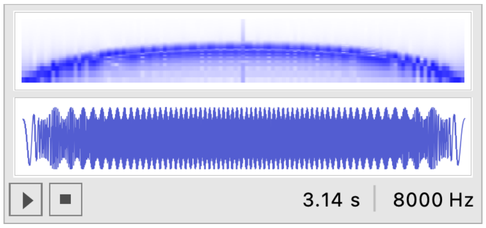

```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[1000 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
    2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, π}]
```



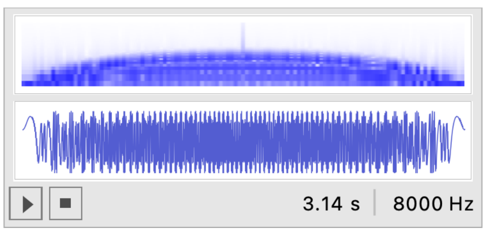

```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[500 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) + 2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β,
  0, π}]
```



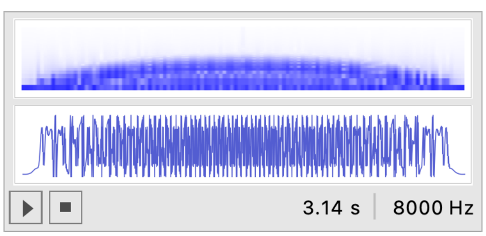
```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[250 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) + 2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β,
  0, π}]
```



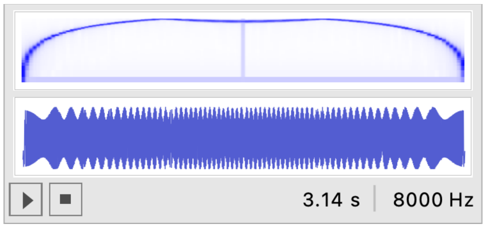

```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[125 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) + 2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β,
  0, π}]
```



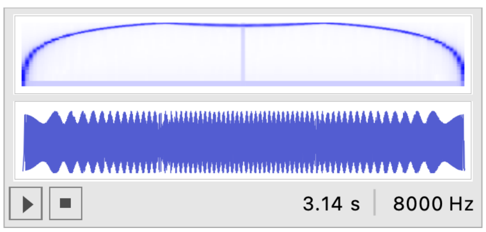

```
Play[(4 + Cos[20 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]) *
  Sin[67.5 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π) +
    2 Sin[40 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) / 2 π)]], {β, 0, π}]
```



$$\texttt{Play}\left[\left(4+\texttt{Cos}\left[20\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)\right]\right)*\right.$$
$$\texttt{Sin}\left[3000\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)+\right.$$
$$\left.\left.2\,\texttt{Sin}\left[50\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)\right]\right],\ \{\beta,\ 0,\ \pi\}\right]$$

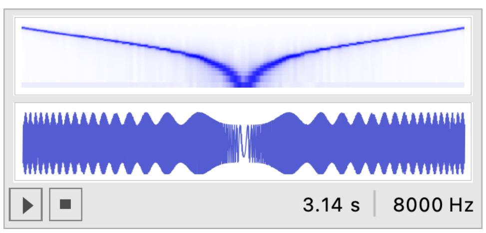


$$\texttt{Play}\left[\left(4+\texttt{Cos}\left[20\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)\right]\right)*\right.$$
$$\texttt{Sin}\left[3000\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)+\right.$$
$$\left.\left.2\,\texttt{Sin}\left[60\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\texttt{Sin}[\beta]^2}\right)\Big/\,2\,\pi\right)\right]\right],\ \{\beta,\ 0,\ \pi\}\right]$$

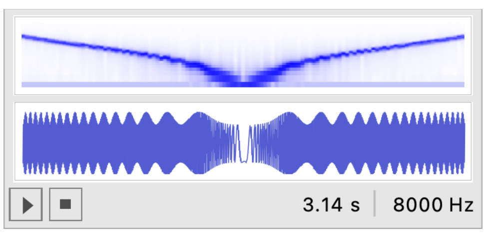


The Sounds of Pure Thought (30-60-90 Velocity Biatch)

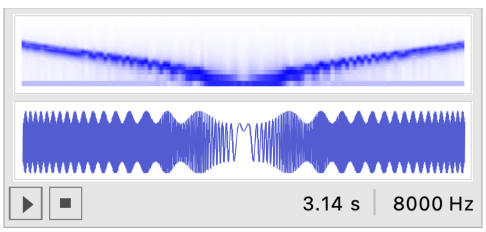
$$
\begin{aligned}
&\text{Play}\Big[\Big(4+\text{Cos}\Big[20\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\\
&\quad 2\,\pi\Big)\Big]\Big)*\text{Sin}\Big[2000\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\,2\\
&\quad\pi\Big)+2\,\text{Sin}\Big[40\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\Big(6\,\Big(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+\\
&\quad\quad 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\Big)^{1/3}\Big)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\\
&\quad 2\,\pi\Big)\Big]\Big],\ \{\beta,\,0,\,\pi\}\Big]
\end{aligned}
$$



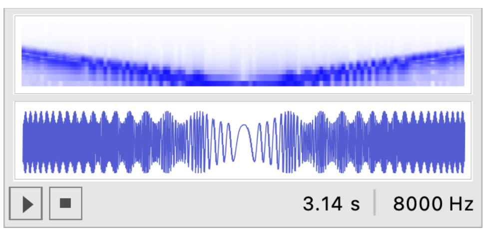
$$
\begin{aligned}
&\texttt{Play}\Big[\Big(4+\texttt{Cos}\Big[20\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\\
&\quad 2\,\pi\Big)\Big]\Big)*\texttt{Sin}\Big[1000\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/\\
&\quad\left(6\left(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\right)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\,2\\
&\quad\pi\Big)+2\,\texttt{Sin}\Big[40\,\Big(\Big(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\texttt{Sin}[\beta]^2\right)\Big/\Big(6\,\Big(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+\\
&\quad 3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\Big)^{1/3}\Big)+\\
&\quad\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\texttt{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\,\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Big)\Big/\\
&\quad 2\,\pi\Big)\Big]\Big],\ \{\beta,\,0,\,\pi\}\Big]
\end{aligned}
$$



```
Play[(4 + Cos[20 ((4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
        (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
       2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) /
     (2 π))]) * Sin[500 ((4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
        (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
       2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) / (2
     π) + 2 Sin[40 ((4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) / (6 (-π^3 + 18 π^3 Sin[β]^2 +
             3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) /
        (2 π))]], {β, 0, π}]
```



$$\text{Play}\left[\left(4+\text{Cos}\left[20\left(\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\Big/2\pi\right)\right]\right)*\text{Sin}\left[250\left(\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\Big/2\pi\right)+2\,\text{Sin}\left[40\left(\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\Big/2\pi\right)\right]\right],\ \{\beta,0,\pi\}\right]$$



$$\text{Play}\left[\left(4+\text{Cos}\left[20\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big/2\pi\right)\right]\right)*\text{Sin}\left[3000\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big/2\pi\right)+2\,\text{Sin}\left[60\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\Big/2\pi\right)\right]\right],\ \{\beta,0,\pi\}\right]$$

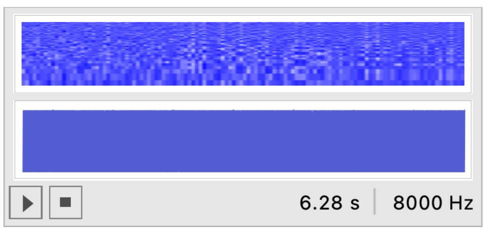
$$\left(\surd\left(\text{3.5481432270250993`*^18}-\text{1.1294090667581471`*^18}\,\theta+\text{8.987551787368176`*^16}\,\theta^2\right)\right)\Big/\left(\sqrt{\text{39.47841760435743`}-\text{12.566370614359172`}\,\theta+\theta^2}\right)=$$

$$\text{v}=\lambda\,((2\pi)/\theta)=\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,((2\pi)/\theta)$$

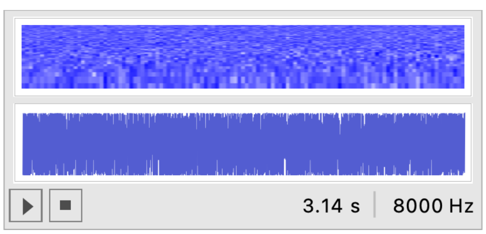
$$\left(\surd\left(\text{3.5481432270250993`*^18}-\text{1.1294090667581471`*^18}\,\theta+\text{8.987551787368176`*^16}\,\theta^2\right)\right)\Big/\left(\sqrt{\text{39.47841760435743`}-\text{12.566370614359172`}\,\theta+\theta^2}\right)\Big/\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}==((2\pi)/\theta)$$

$$t = \left(\left(\left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2\right)\right) \Big/ \left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}\right) \Big/ \left(\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\right)\right)\right)$$

$$\text{Play}\left[\text{Sin}\left[\left(\left(\left(\sqrt{}\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2\right)\right) \Big/ \left(\sqrt{39.47841760435743\grave{} - 12.566370614359172\grave{}\,\theta + \theta^2}\right) \Big/ \left(\frac{2\,\pi\,\sqrt{(4\,\pi - \theta)\,\theta}}{(4\,\pi - \theta)\,\theta}\right)\right)\right)\right], \{\theta, 0, 2\,\pi\}\right]$$



```
Play[(Cos[((((√(3.5481432270250993`*^18 -
        1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2))/
      (√(39.47841760435743` - 12.566370614359172` θ + θ^2))/
     ((2 π √((4 π - θ) θ))/((4 π - θ) θ)))))]) *
  Sin[((((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2))/
      (√(39.47841760435743` - 12.566370614359172` θ + θ^2))/ ((2 π √((4 π - θ) θ))/((4 π - θ) θ))))) +
   2 Sin[((((√(3.5481432270250993`*^18 - 1.1294090667581471`*^18
         θ + 8.987551787368176`*^16 θ^2))/
       (√(39.47841760435743` - 12.566370614359172` θ + θ^2))/
      ((2 π √((4 π - θ) θ))/((4 π - θ) θ)))))]], {θ, 0, π}]
```




```
Sound[{Play[(4 + Cos[20 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]) *
    Sin[2000 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π) + 2 Sin[40 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]],
   {β, 0, π}], Play[(4 + Cos[20 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]) *
    Sin[1000 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π) + 2 Sin[40 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]],
   {β, 0, π}], Play[(4 + Cos[20 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]) *
    Sin[500 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π) + 2 Sin[40 (2 (π + √(π^2 - π^2 Sin[β]^2))/ 2 π)]],
   {β, 0, π}], Play[(4 + Cos[20 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
```

```
3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
(-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/
2 π)]]) * Sin[2000 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3 (-π^3 + 18 π^3
Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/ 2 π) +
2 Sin[40 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3
√(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3 (-π^3 + 18
π^3 Sin[β]^2 + 3 √3
√(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/ 2 π)]]], {β, 0, π}],
Play[(4 + Cos[20 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
(-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/
2 π)]]) * Sin[1000 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3 (-π^3 + 18 π^3
Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/ 2 π) +
2 Sin[40 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3
√(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3 (-π^3 + 18
π^3 Sin[β]^2 + 3 √3
√(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/ 2 π)]]], {β, 0, π}],
Play[(4 + Cos[20 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) + 2/3
(-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3))/
2 π)]]) * Sin[500 (((4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/ (6 (-π^3 + 18 π^3 Sin[β]^2 +
```

$$3\sqrt{3}\ \sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\,)^{1/3}) + \frac{2}{3}\,(-\pi^3 + 18\,\pi^3$$

$$\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\ \sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\,)^{1/3})\Big/\,2\,\pi) +$$

$$2\,\mathrm{Sin}[40\,(((\frac{4\,\pi}{3} - (-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2)\Big/\,(6\,(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}$$

$$\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\,)^{1/3}) + \frac{2}{3}\,(-\pi^3 + 18\,\pi^3$$

$$\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\ \sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\,)^{1/3})\Big/\,2$$

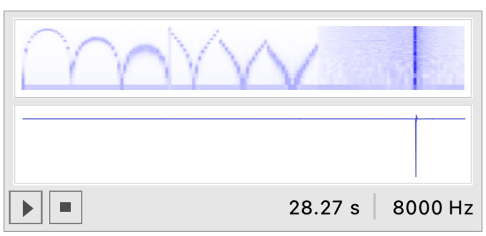
$$\pi)]],\ \{\beta,\ 0,\ \pi\}],\ \mathrm{Play}[(4 + \mathrm{Cos}[20\left(\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2} - \frac{4\,\pi^2}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}\right)])\ *$$

$$\mathrm{Sin}[3000\left(\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2} - \frac{4\,\pi^2}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}\right)] + 2\,\mathrm{Sin}[50\left(\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2} - \frac{4\,\pi^2}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}\right)]],$$

$$\{\theta,\ 0,\ 2\ \pi\}],$$

$$\mathrm{Play}[1\Big/\left(\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2} - \frac{4\,\pi^2}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}\right),$$

$$\{\theta,\ 0,\ \pi\}]\}]$$



$$\mathrm{D}\left[2\,\pi\,\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta - \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi},\ \theta\right]$$

$$\frac{\frac{16\,\pi^3}{(4\,\pi-\theta)^2} - \frac{4\,\pi^2}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}}{2\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta} - \frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}$$

$$\text{Solve}\left[\frac{\frac{16\,\pi^3}{(4\,\pi-\theta)^2}-\frac{4\,\pi^2}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}}{2\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}==\frac{2\,\pi\,\eta}{\theta},\,\eta\right]$$

$$\left\{\left\{\eta\to\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2}-\frac{4\,\pi^2}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}\right\}\right\}$$

$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

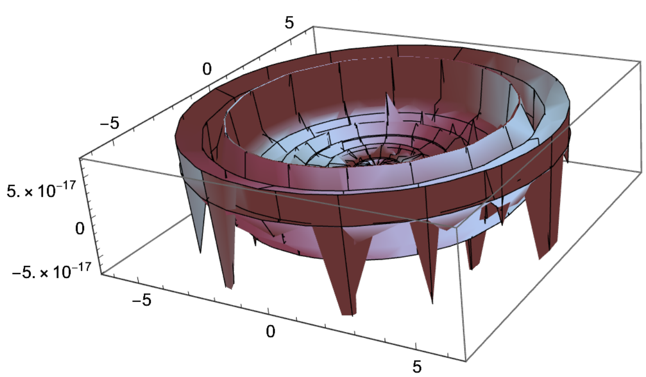
$$\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2}-\frac{4\,\pi^2}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}}=$$

$$\left(\frac{1}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}-\frac{4\,\pi^2\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}}\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right.$$

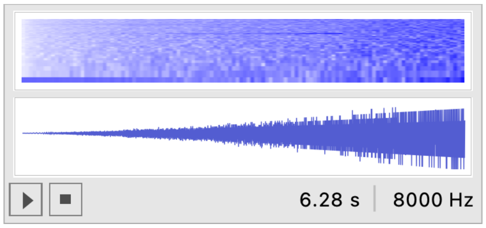
$$\left(\frac{16\,\pi^3}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}-\frac{4\,\pi^2}{4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}-\right.$$

$$\left.\left.\frac{4\,\pi^2\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}\right)\right)$$

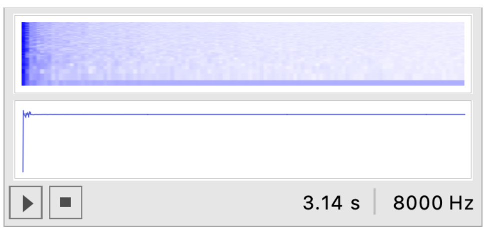
$$\text{RevolutionPlot3D}\left[\frac{\theta\left(\frac{16\,\pi^3}{(4\,\pi-\theta)^2}-\frac{4\,\pi^2}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{(4\,\pi-\theta)^2}\right)}{4\,\pi\,\sqrt{\frac{16\,\pi^3}{4\,\pi-\theta}-\frac{4\,\pi^2\,\theta}{4\,\pi-\theta}}},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



$$\text{Play}\left[\left(4+\text{Cos}\left[20\left(\frac{\theta\left(\frac{16\pi^3}{(4\pi-\theta)^2}-\frac{4\pi^2}{4\pi-\theta}-\frac{4\pi^2\theta}{(4\pi-\theta)^2}\right)}{4\pi\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}\right)\right]\right)*\text{Sin}\left[3000\left(\frac{\theta\left(\frac{16\pi^3}{(4\pi-\theta)^2}-\frac{4\pi^2}{4\pi-\theta}-\frac{4\pi^2\theta}{(4\pi-\theta)^2}\right)}{4\pi\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}\right)+2\,\text{Sin}\left[50\left(\frac{\theta\left(\frac{16\pi^3}{(4\pi-\theta)^2}-\frac{4\pi^2}{4\pi-\theta}-\frac{4\pi^2\theta}{(4\pi-\theta)^2}\right)}{4\pi\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}\right)\right]\right],\ \{\theta,0,2\pi\}\right]$$



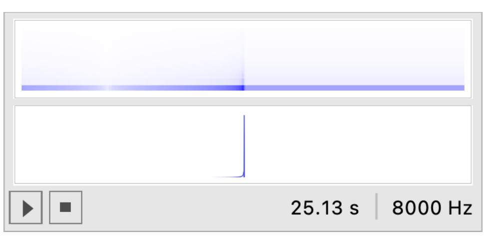
$$\text{Play}\left[1\Big/\left(\frac{\theta\left(\frac{16\pi^3}{(4\pi-\theta)^2}-\frac{4\pi^2}{4\pi-\theta}-\frac{4\pi^2\theta}{(4\pi-\theta)^2}\right)}{4\pi\sqrt{\frac{16\pi^3}{4\pi-\theta}-\frac{4\pi^2\theta}{4\pi-\theta}}}\right),\ \{\theta,0,\pi\}\right]$$



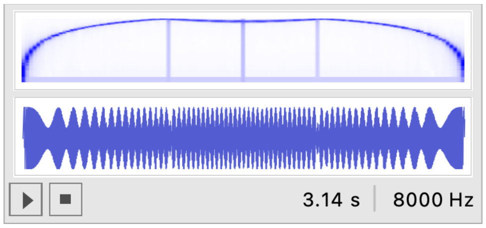
$$\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta$$

$$\text{Plot}\ \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta}$$

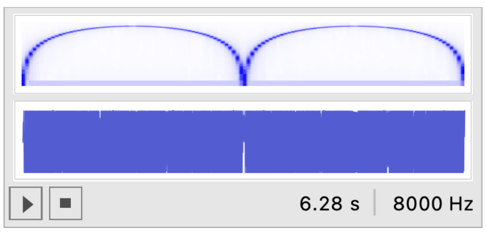
$$\text{Play}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{4\pi-\theta},\ \{\theta,0,8\pi\}\right]$$



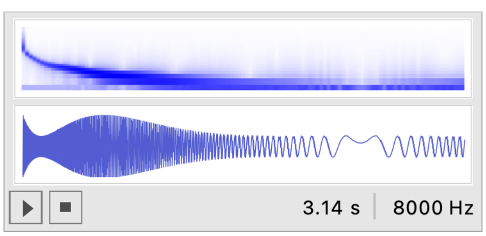
$$\text{Play}\left[\left(2+\text{Cos}\left[20\left(\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)\Big/\,2\,\pi\right)\right]\right)*\right.$$
$$\text{Sin}\left[3000\left(\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)\Big/\,2\,\pi\right)+\right.$$
$$\left.\left.2\,\text{Sin}\left[50\left(\left(\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right)\Big/\,2\,\pi\right)\right]\right],\ \{\beta,\,0,\,\pi\}\right]$$



$$\text{Play}\left[\text{Sin}\left[3000\,\text{ArcCos}\left[\frac{1}{2}\,e^{-2\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\left(1+e^{4\,i\,\pi\,\sqrt{1-\text{Sin}[\beta]^2}}\right)\right]\right],\ \{\beta,\,-\pi,\,\pi\}\right]$$



$$\text{Play}\left[\left(2+\text{Cos}\left[20\left(\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\Big/\,2\,\pi\right)\right]\right)*\right.$$
$$\text{Sin}\left[3000\left(\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\Big/\,2\,\pi\right)+\right.$$
$$\left.\left.2\,\text{Sin}\left[50\left(\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]\Big/\,2\,\pi\right)\right]\right],\ \{\theta,\,0,\,\pi\}\right]$$



$$\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}=\!=r$$

$$\text{Solve}\left[\frac{\sqrt{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\sqrt{1-\frac{v^2}{(c)^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\sqrt{4\pi\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\theta}}{2\pi}==\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta},v\right]$$

```
c := 2.99792458 * (10^8)
```

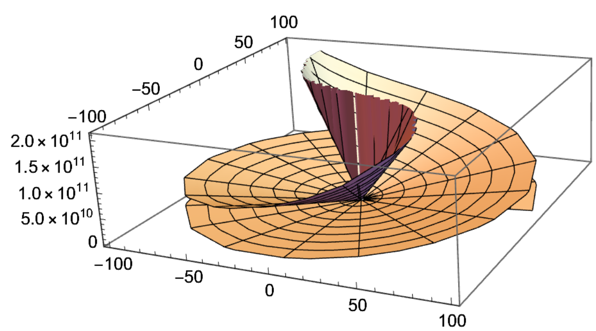
$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{v^2}{(c)^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==r,v\right]$$

$$\left\{\left\{v\to-\frac{1.\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2}}{\sqrt{39.4784-12.5664\theta+\theta^2}}\right\},\left\{v\to\frac{\sqrt{3.54814\times10^{18}-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2}}{\sqrt{39.4784-12.5664\theta+\theta^2}}\right\}\right\}$$

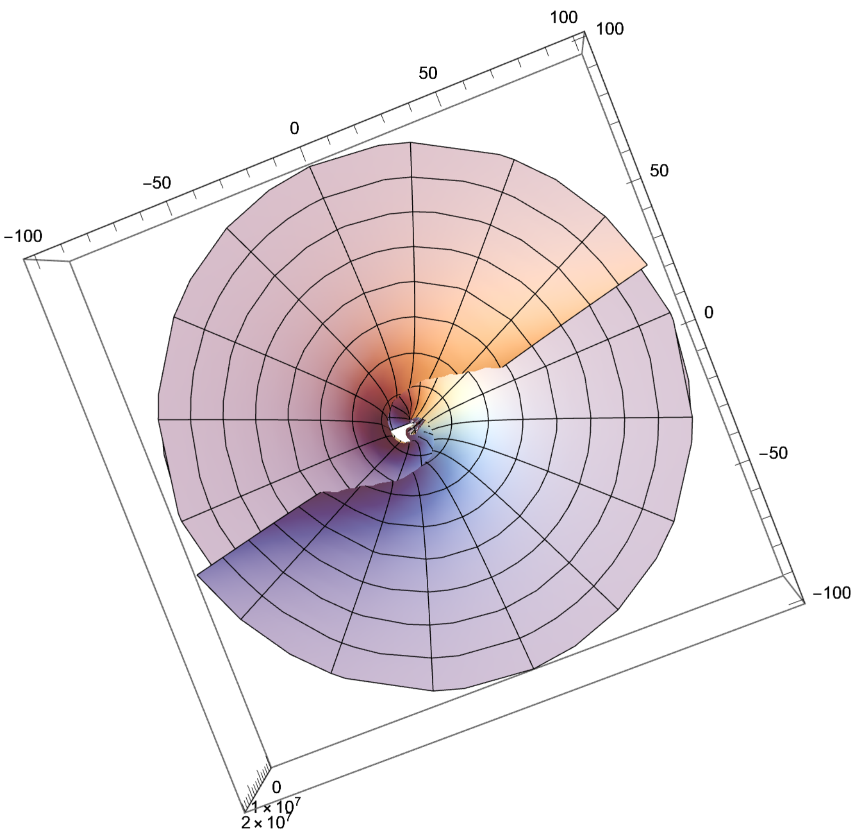
$$\text{Solve}\left[\frac{\sqrt{\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\sqrt{1-\frac{v^2}{(c)^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\sqrt{4\pi\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}-\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\theta}}{2\pi}==r,v\right]$$

$$\left\{\left\{v\to-\frac{1.\sqrt{-1.45179\times10^{33}+1.45179\times10^{33}r^2}}{\sqrt{-1.61534\times10^{16}+1.61534\times10^{16}r^2}}\right\},\left\{v\to\frac{\sqrt{-1.45179\times10^{33}+1.45179\times10^{33}r^2}}{\sqrt{-1.61534\times10^{16}+1.61534\times10^{16}r^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{-1.4517917706931478\text{`}*\text{^}33+1.4517917706931478\text{`}*\text{^}33\,(r)^2}}{\sqrt{-1.615336195039913\text{`}*\text{^}16+1.6153361950399128\text{`}*\text{^}16\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2}},\{r,-100,100\},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\frac{\sqrt{-1.4517917706931478`{*}\verb|^|33 + 1.4517917706931478`{*}\verb|^|33 \left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2}}{\sqrt{-1.615336195039913`{*}\verb|^|16 + 1.6153361950399128`{*}\verb|^|16\, r^2}},\ \{r, -100, 100\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{v^2}{(c)^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{v^2}{(c)^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta},\ v\right]$$

{}

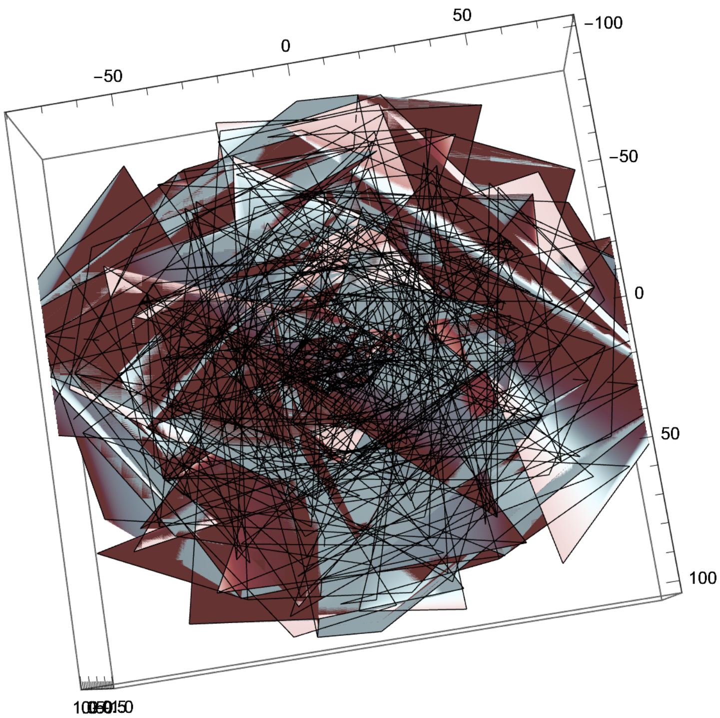
$$0 = 2\,\pi\,r - 2\,\pi\,\sqrt{(r\verb|^|2-\eta\verb|^|2)} - \theta\,r$$

$$\text{Solve}\left[\frac{\sqrt{r\,\sqrt{1-\frac{\left(2\,\pi\,r-2\,\pi\,\sqrt{(r\verb|^|2-\eta\verb|^|2)}-\theta\,r\right)^2}{(c)^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{\left(2\,\pi\,r-2\,\pi\,\sqrt{(r\verb|^|2-\eta\verb|^|2)}-\theta\,r\right)^2}{(c)^2}}}}\ \sqrt{4\,\pi\,r - r\,\theta}}{2\,\pi} == \eta,\ \eta\right]$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{\left(2\pi r-2\pi\sqrt{(r\text{^}2-\eta\text{^}2)}-\theta r\right)^2}{(c)^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{\left(2\pi r-2\pi\sqrt{(r\text{^}2-\eta\text{^}2)}-\theta r\right)^2}{(c)^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}==\eta,\eta\right]$$

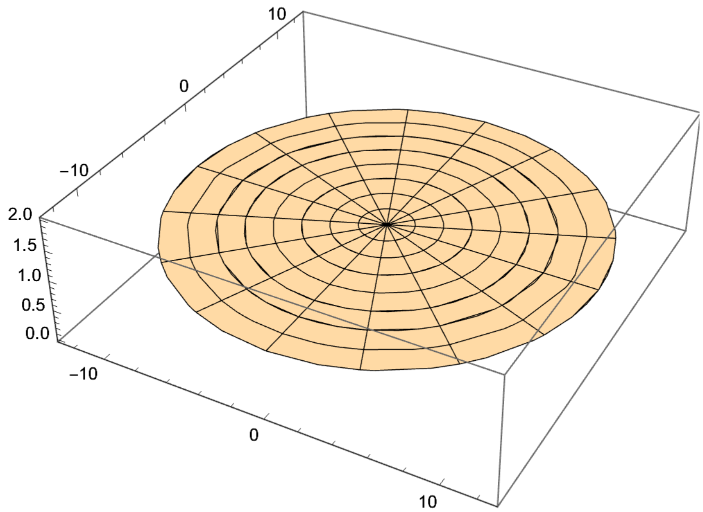
$$\left\{\left\{\eta\to-0.159155\,r\,\sqrt{12.5664-1.\,\theta}\,\sqrt{\theta}\right\},\left\{\eta\to0.159155\,r\,\sqrt{12.5664-1.\,\theta}\,\sqrt{\theta}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[0.15915494309189535\text{`}\,r\,\sqrt{12.566370614359172\text{`}-1.\text{`}\,\theta}\,\sqrt{\theta},\right.$$
$$\left.\{r,-100,100\},\{\theta,-80\,000\,000\,\pi,80\,000\,000\,\pi\}\right]$$



```
RevolutionPlot3D[
```

$$0.15915494309189535` \frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\sqrt{12.566370614359172`-1.`\,\theta}\,\sqrt{\theta},\ \{\theta, -4\pi, 4\pi\}]$$



$$\text{Solve}\left[(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)-r^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2}}{2\,\pi}\right)\text{^}3-\right.$$

$$\left.(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\text{^}3==(4/3)\,\pi\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\text{^}3-(4/3)\,\pi\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)\text{^}3,\,\theta\right]$$

$$\Big\{\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,1\Big]\Big\},$$

$$\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,2\Big]\Big\},$$

$$\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,3\Big]\Big\},$$

$$\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,4\Big]\Big\},$$

$$\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,5\Big]\Big\},$$

$$\Big\{\theta\to\text{Root}\Big[256\,\pi^6\,r+64\,\pi^6\,r\,\text{Sin}[\beta]^6-256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}+\left(-768\,\pi^5\,r+384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1+\left(960\,\pi^4\,r-192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2+\left(-704\,\pi^3\,r+32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3+288\,\pi^2\,r\,\#1^4-60\,\pi\,r\,\#1^5+5\,r\,\#1^6\,\&,\,6\Big]\Big\}\Big\}$$

$$\text{RevolutionPlot3D}\Big[\Big\{\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,1\Big],$$

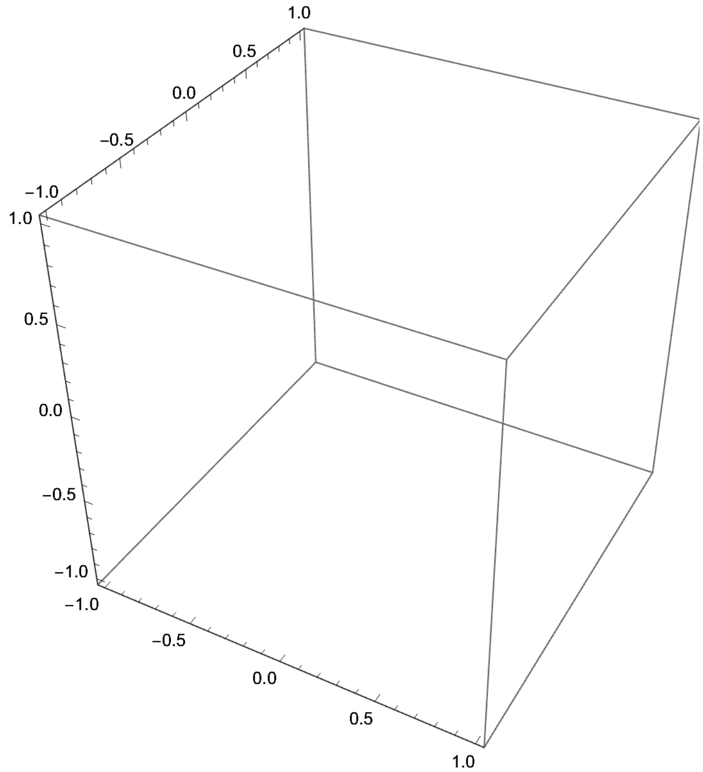
$$\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,2\Big],$$

$$\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,3\Big],$$

$$\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,4\Big],$$

$$\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,5\Big],$$

$$\text{Root}\Big[256\,\pi^6\,r + 64\,\pi^6\,r\,\text{Sin}[\beta]^6 - 256\,\pi^6\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2} + \left(-768\,\pi^5\,r + 384\,\pi^5\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1 + \left(960\,\pi^4\,r - 192\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^2 + \left(-704\,\pi^3\,r + 32\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{r^2\,\text{Sin}[\beta]^2}\right)\#1^3 + 288\,\pi^2\,r\,\#1^4 - 60\,\pi\,r\,\#1^5 + 5\,r\,\#1^6\,\&,\,6\Big]\Big\},\,\{r,\,-100,\,100\},\,\{\beta,\,-2\,\pi,\,2\,\pi\}\Big]$$




```
Solve[(4 / 3) π (r₁) ^3 - (4 / 3) π (η) ^3 == (4 / 3) π (η) ^3 - (4 / 3) π (r₁) ^3, η]
```

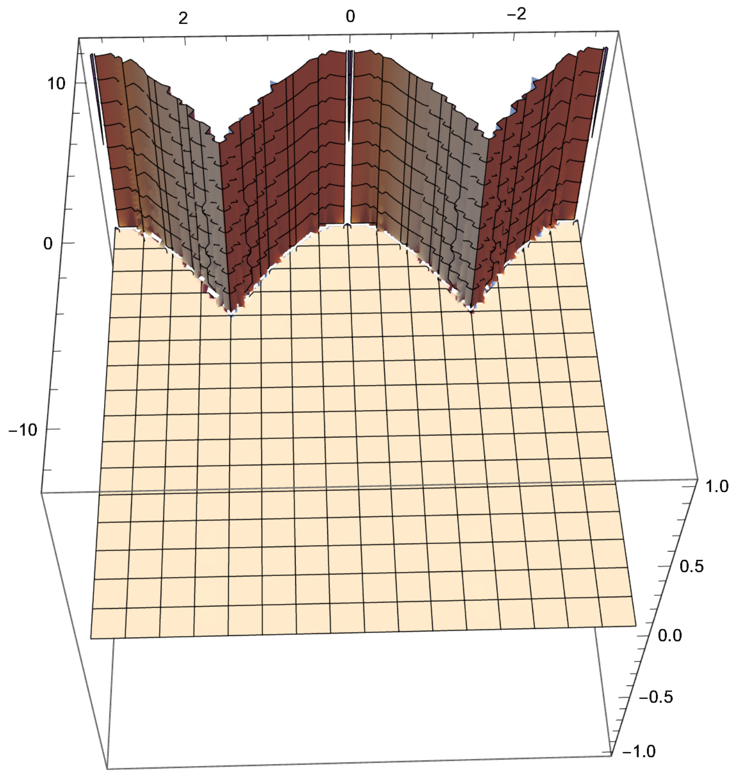
$$\{\{\eta \to r_1\}, \{\eta \to -(-1)^{1/3} r_1\}, \{\eta \to (-1)^{2/3} r_1\}\}$$

$$\theta\, r = \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right] r - \text{ArcSin}\left[\frac{\sqrt{(4\pi - \theta)\,\theta}}{2\pi}\right] b$$

$$\text{Solve}\left[\theta\, r == 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) r - 2\left(\pi + \sqrt{\pi^2 - \pi^2 \text{Sin}[\beta]^2}\right) b,\ r\right]$$

$$\left\{\left\{r \to \frac{2\, b \left(\pi + \pi \sqrt{1 - \text{Sin}[\beta]^2}\right)}{2\pi - \theta + 2\pi \sqrt{1 - \text{Sin}[\beta]^2}}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{2\,b\left(\pi+\pi\sqrt{1-\text{Sin}[\beta]^2}\right)}{2\,\pi-\theta+2\,\pi\sqrt{1-\text{Sin}[\beta]^2}},\ \{b,-1,1\},\ \{\theta,-4\,\pi,4\,\pi\},\ \{\beta,-\pi,\pi\}\right]$$



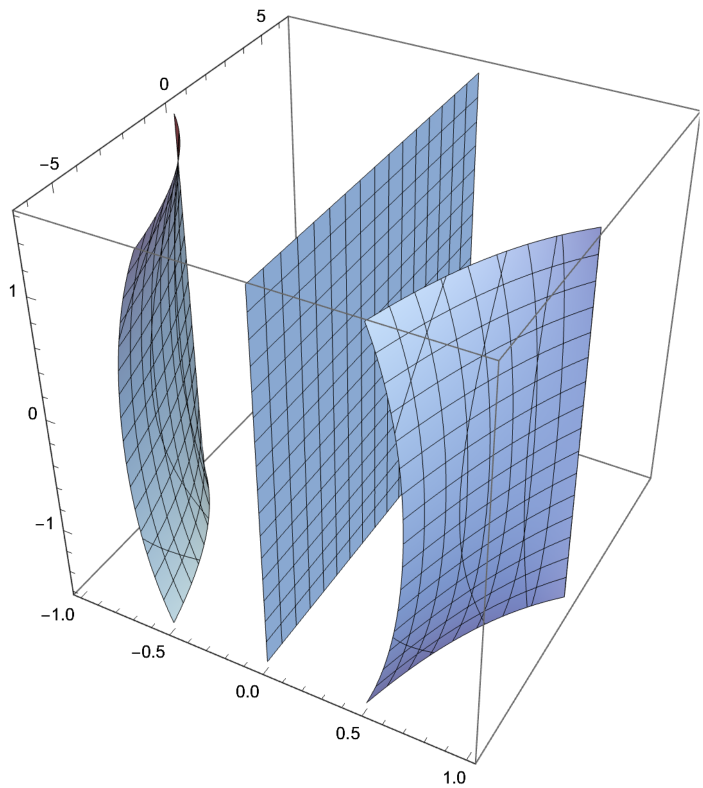
$$\text{Solve}\left[\theta\,r == 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)r-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)b,\ \beta\right]$$

$$\left\{\left\{\beta\to-\text{ArcSin}\left[\frac{\sqrt{r}\,\sqrt{\theta}\,\sqrt{-4\,b\,\pi+4\,\pi\,r-r\,\theta}}{\pi\,\sqrt{4\,b^2-8\,b\,r+4\,r^2}}\right]\right\},\ \left\{\beta\to\text{ArcSin}\left[\frac{\sqrt{r}\,\sqrt{\theta}\,\sqrt{-4\,b\,\pi+4\,\pi\,r-r\,\theta}}{\pi\,\sqrt{4\,b^2-8\,b\,r+4\,r^2}}\right]\right\}\right\}$$

$$\text{Solve}\left[\theta\,r == 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)r-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)b,\ b\right]$$

$$\left\{\left\{b\to\frac{2\,\pi\,r-r\,\theta+2\,\pi\,r\,\sqrt{1-\text{Sin}[\beta]^2}}{2\left(\pi+\pi\,\sqrt{1-\text{Sin}[\beta]^2}\right)}\right\}\right\}$$

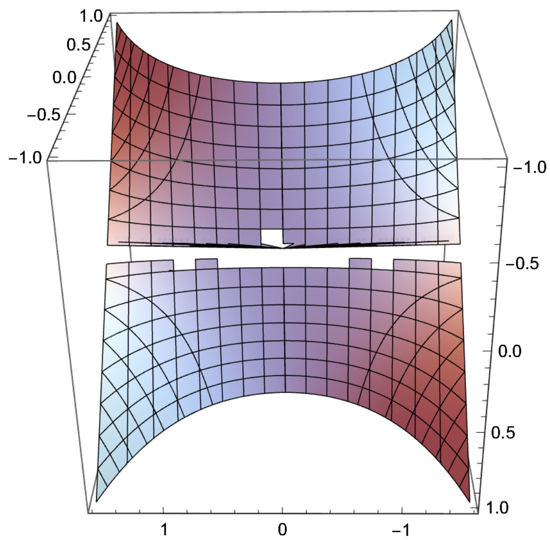
$$\text{ContourPlot3D}\left[\frac{2\,\pi\,r - r\,\theta + 2\,\pi\,r\,\sqrt{1 - \text{Sin}[\beta]^2}}{2\left(\pi + \pi\,\sqrt{1 - \text{Sin}[\beta]^2}\right)},\right.$$
$$\left.\{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\text{Solve}\left[\theta\,r == 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)r - 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)b, \theta\right]$$

$$\left\{\left\{\theta \to -\frac{2\left(b\,\pi - \pi\,r + b\,\pi\,\sqrt{1 - \text{Sin}[\beta]^2} - \pi\,r\,\sqrt{1 - \text{Sin}[\beta]^2}\right)}{r}\right\}\right\}$$

$$\text{ContourPlot3D}\left[\frac{2\left(b\,\pi - \pi\,r + b\,\pi\,\sqrt{1-\text{Sin}[\beta]^2} - \pi\,r\,\sqrt{1-\text{Sin}[\beta]^2}\right)}{r},\right.$$
$$\left.\{b, -1, 1\}, \{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}\right]$$



$$\theta = \frac{4\,\pi}{3} - \left(-4\,\pi^2 + 12\,\pi^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\,\pi^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\beta \to \text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta + 4\,\pi\,\theta^2 - \theta^3}}{2\,\pi\,\sqrt{-4\,\pi + \theta}}\right]$$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == c\,(\theta\,/\,(2\,\pi))$$

$$\theta \to \frac{4\,\pi\,r^2}{c^2 + r^2} = \frac{4\,\pi\left(r\,\sqrt{1-((u\wedge 2)\,/\,(c\wedge 2))}\right)^2}{c^2 + \left(r\,\sqrt{1-((u\wedge 2)\,/\,(c\wedge 2))}\right)^2}$$

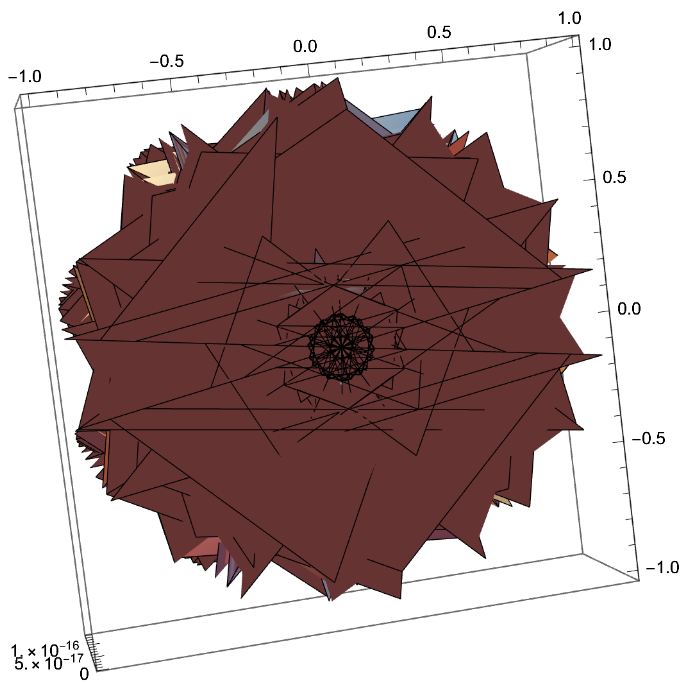
$$\text{Solve}\left[\frac{4\,\pi\left(r\,\sqrt{1-((u\wedge 2)\,/\,(c\wedge 2))}\right)^2}{c^2 + \left(r\,\sqrt{1-((u\wedge 2)\,/\,(c\wedge 2))}\right)^2} == \theta, u\right]$$

{}

```
u := (√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))
```

$$r \to \frac{\sqrt{-c^2 - c^2 \sqrt{1 - \text{Sin}[\beta]^2}}}{\sqrt{-1 + \sqrt{1 - \text{Sin}[\beta]^2}}}$$

$$\text{RevolutionPlot3D}\left[\frac{4\pi\left(r\sqrt{1 - ((u\wedge 2)/(c\wedge 2))}\right)^2}{c^2 + \left(r\sqrt{1 - ((u\wedge 2)/(c\wedge 2))}\right)^2}, \{r, -1, 1\}, \{u, -c, c\}\right]$$



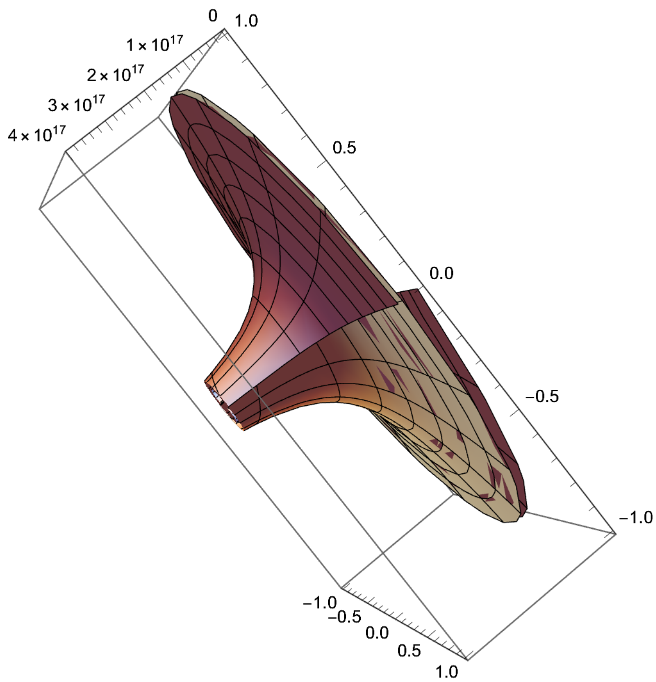

```
c := (2.99792458 * 10^8)
```

```
c := (2.99792458 * 10^8)
h := (6.62606896 * (10^-34))
```

$$\text{Solve}\left[\frac{4\pi\left(r\sqrt{1 - ((u\wedge 2)/(c\wedge 2))}\right)^2}{c^2 + \left(r\sqrt{1 - ((u\wedge 2)/(c\wedge 2))}\right)^2} == \theta, u\right]$$

$$\left\{\left\{u \to -\frac{\sqrt{-4 c^2 \pi r^2 + c^4 \theta + c^2 r^2 \theta}}{\sqrt{-4 \pi r^2 + r^2 \theta}}\right\}, \left\{u \to \frac{\sqrt{-4 c^2 \pi r^2 + c^4 \theta + c^2 r^2 \theta}}{\sqrt{-4 \pi r^2 + r^2 \theta}}\right\}\right\}$$

RevolutionPlot3D$\left[\frac{\sqrt{-4\,c^2\,\pi\,r^2+c^4\,\theta+c^2\,r^2\,\theta}}{\sqrt{-4\,\pi\,r^2+r^2\,\theta}}, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$



(1 - v^2 / c^2) (-1 / 2)

$$v = \left(\sqrt{\left(3.5481432270250993\text{`*^}18\,\eta^2 - 1.1294090667581471\text{`*^}18\,r^2\,\theta + 8.987551787368176\text{`*^}16\,r^2\,\theta^2\right)}\right) \Big/ \left(\sqrt{39.47841760435743\text{`}\,\eta^2 - 12.566370614359172\text{`}\,r^2\,\theta + r^2\,\theta^2}\right) =$$

$\lambda\,\nu = r\,\nu$ = and / or $= \eta\,\nu = (1 / (\theta / (2\,\pi)))$

$$v = \left(\sqrt{\left(-1.1294090667581471\text{`*^}18\,\theta + 8.987551787368176\text{`*^}16\,\theta^2 + 3.5481432270250993\text{`*^}18\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2}\right) = \eta\,\nu = \eta\,(1 / (\theta / (2\,\pi)))$$

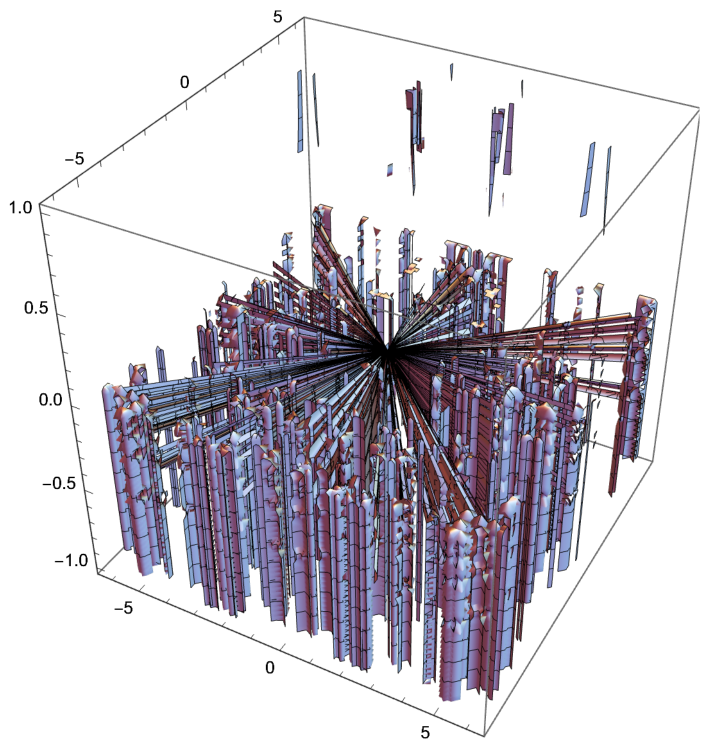
$$\mathrm{Solve}\left[\left(\sqrt{\left(-1.1294090667581471\text{`*^}18\,\theta + 8.987551787368176\text{`*^}16\,\theta^2 + 3.5481432270250993\text{`*^}18\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\text{`}\,\theta + \theta^2 + 39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2}\right) == \eta\,(1 / (\nu)), \nu\right]$$

$$\left\{\left\{\nu \to \frac{9.35498\times10^{-9}\,\eta\,\sqrt{-4.48719\times10^{15}\,\theta + 3.57079\times10^{14}\,\theta^2 + 1.40969\times10^{16}\,\mathrm{Sin}[\beta]^2}}{\sqrt{-3.5294\times10^{16}\,\theta + 2.80861\times10^{15}\,\theta^2 + 1.10879\times10^{17}\,\mathrm{Sin}[\beta]^2}}\right\}\right\}$$

```
Solve[
 h ((9.354975928917123`*^-9 η √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14 θ^2 +
          1.40969256654408`*^16 Sin[β]^2)) /
     (√(-3.5294033336192096`*^16 θ + 2.808609933552555`*^15 θ^2 +
          1.1087947584453435`*^17 Sin[β]^2))) == (z c^2) / √((u^2 / c^2) - 1), z]
```

$$\left\{\left\{z \to \left(6.89695 \times 10^{-59} \sqrt{-1. + 1.11265 \times 10^{-17}\, u^2}\; \eta \sqrt{-4.48719 \times 10^{15}\, \theta + 3.57079 \times 10^{14}\, \theta^2 + 1.40969 \times 10^{16}\, \mathrm{Sin}[\beta]^2}\right) \middle/ \left(\sqrt{-3.5294 \times 10^{16}\, \theta + 2.80861 \times 10^{15}\, \theta^2 + 1.10879 \times 10^{17}\, \mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

```
ContourPlot3D[(6.896951262132264`*^-59
    √(-1.` + 1.1126500560536185`*^-17 ((√(-1.1294090667581471`*^18 θ +
                8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
            (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)
    η √(-4.487190804107819`*^15 θ + 3.57079298535128`*^14 θ^2 +
        1.40969256654408`*^16 Sin[β]^2)) /
  (√(-3.5294033336192096`*^16 θ + 2.808609933552555`*^15 θ^2 +
      1.1087947584453435`*^17 Sin[β]^2)),
 {β, -2 π, 2 π}, {θ, -2 π, 2 π}, {η, -1,
  1}]
```




```
(6.896951262132264`*^-59
    √(-1.` + 1.1126500560536185`*^-17 u^2) η √(-4.487190804107819`*^15 θ +
        3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16 Sin[β]^2)) /
  (√(-3.5294033336192096`*^16 θ + 2.808609933552555`*^15 θ^2 +
      1.1087947584453435`*^17 Sin[β]^2))
```

$$E = h\left(\left(9.354975928917123`*^{-9}\,\eta\,\sqrt{\left(-4.487190804107819`*^{15}\,\theta + 3.57079298535128`*^{14}\,\theta^2 + 1.40969256654408`*^{16}\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{\left(-3.5294033336192096`*^{16}\,\theta + 2.808609933552555`*^{15}\,\theta^2 + 1.1087947584453435`*^{17}\,\text{Sin}[\beta]^2\right)}\right)\right)$$

$$E = m\,c\,\hat{}\,2$$

$$c := (2.99792458 * 10\,\hat{}\,8)$$

$$h := 6.626068 * 10\,\hat{}\,{-34}$$

Tachyon

$$E\,\hat{}\,2 = (p\,\hat{}\,2)\,c\,\hat{}\,2 + m\,\hat{}\,2\,c\,\hat{}\,4$$

$$E = (z\,c\,\hat{}\,2) \Big/ \sqrt{(u\,\hat{}\,2 / c\,\hat{}\,2) - 1}$$

$$z := i\,m$$

$$z := i\,m$$

$$2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right)$$

$$(z\,c\,\hat{}\,2) \Big/ \sqrt{(u\,\hat{}\,2 / c\,\hat{}\,2) - 1} == h\,\nu$$

$$(z\,c\,\hat{}\,2) \Big/ \sqrt{(u\,\hat{}\,2 / c\,\hat{}\,2) - 1} == h\,\nu =$$

$$h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}} \Big/ r\right) =$$

$$(z\,c\,\hat{}\,2) \Big/ \sqrt{\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\,\hat{}\,2 \Big/ c\,\hat{}\,2\right) - 1}$$

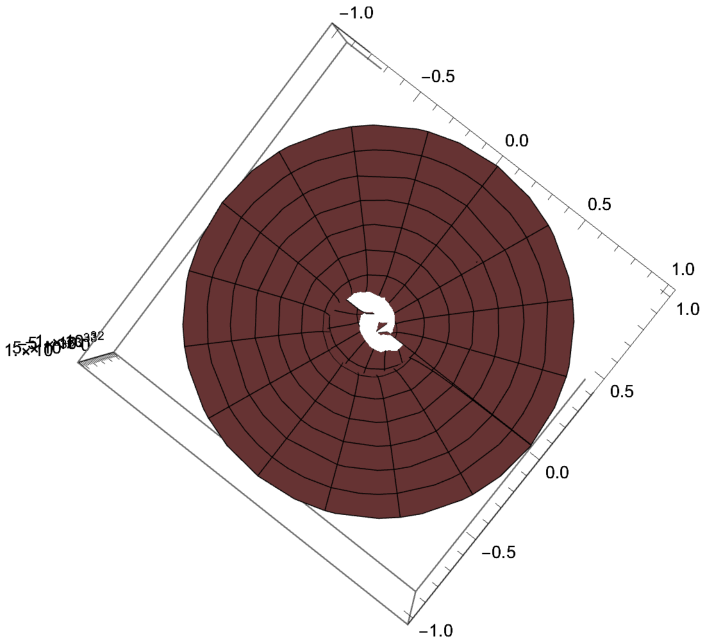
$$h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}} \Big/ r\right) =$$

$$\text{Solve}\left[(z\,c\,\hat{}\,2) \Big/ \sqrt{\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}}\,\hat{}\,2 \Big/ c\,\hat{}\,2\right) - 1} == h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2 + r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2 + r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi - \theta)\,\theta}}{-4\,\pi\,r^2 + r^2\,\theta}} \Big/ r\right),\ z\right]$$

$$\left\{\left\{z \to \frac{h\,\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\;\sqrt{-1 + \frac{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta} + \frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta} - \frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}{c^2}}}{c^2\,r}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{h\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\sqrt{-1+\frac{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}{c^2}}}{c^2 r},\right.$$

$$\left.\{r,-1,1\},\{\theta,-2\pi,2\pi\}\right]$$

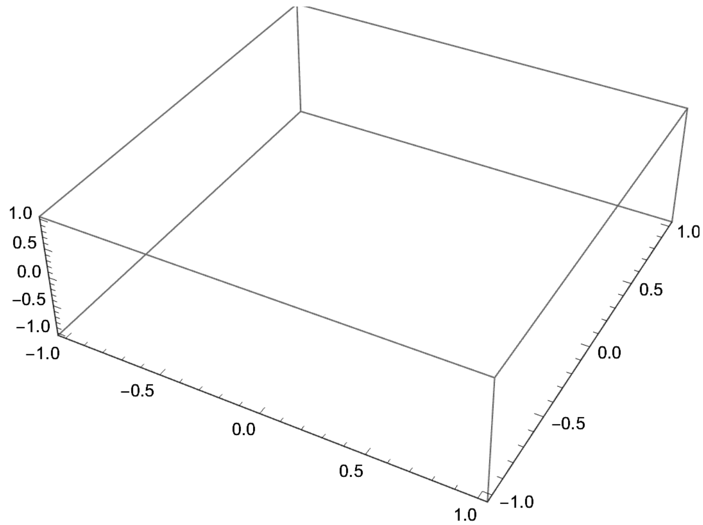


$$\text{Solve}\left[\frac{h\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\sqrt{-1+\frac{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}{c^2}}}{c^2 r}==\mathbb{i}\,m,m\right]$$

$$\left\{\left\{m\to-\frac{\mathbb{i}\,h\sqrt{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}\sqrt{-1+\frac{-\frac{4c^2\pi r^2}{-4\pi r^2+r^2\theta}+\frac{c^2r^2\theta}{-4\pi r^2+r^2\theta}-\frac{\sqrt{c^6r^2(4\pi-\theta)\theta}}{-4\pi r^2+r^2\theta}}{c^2}}}{c^2 r}\right\}\right\}$$

$$\text{RevolutionPlot3D}\Bigg[-\frac{i\,h\,\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\;\sqrt{-1+\frac{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}{c^2}}}{c^2\,r},$$

$$\{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\Bigg]$$



$$h\,\nu = m\,(c\,\hat{}\,2) = h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big/\,r\right) =$$

$$(z\,c\,\hat{}\,2)\Big/\sqrt{\left(\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\right)\hat{}\,2\Big/\,c\,\hat{}\,2\right)-1}$$

$$\text{Solve}\left[h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big/ r\right) ==\right.$$

$$\left.(z\,c\,^\wedge 2)\Big/\sqrt{\left(\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\right)^\wedge 2\Big/ c\,^\wedge 2\right)-1},\ r\right]$$

$$\text{Solve}\left[\frac{6.62607\times10^{-34}\sqrt{-\frac{1.12941\times10^{18}\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{8.98755\times10^{16}\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{2.6944\times10^{25}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}}{r} ==\right.$$

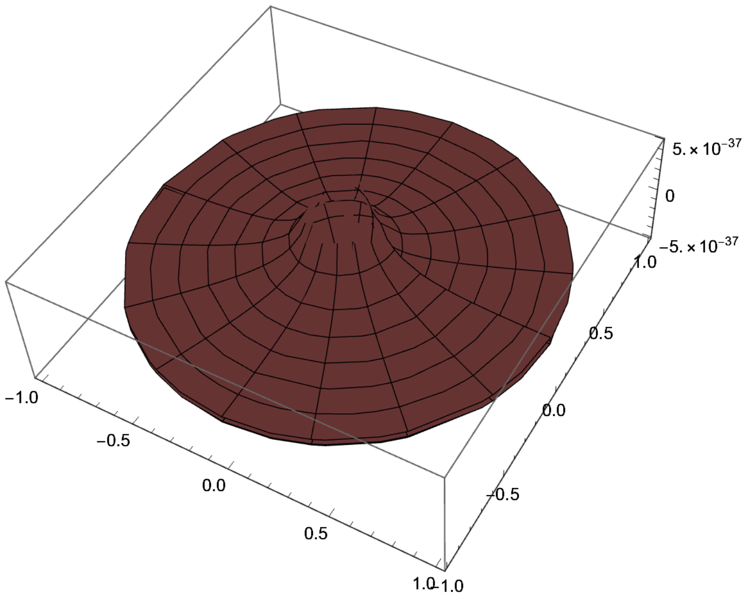
$$\frac{6.62607\times10^{-34}\,\mathbb{i}\,\sqrt{-\frac{1.12941\times10^{18}\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{8.98755\times10^{16}\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{2.6944\times10^{25}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}}{r\,\sqrt{-1+1.11265\times10^{-17}\left(-\frac{1.12941\times10^{18}\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{8.98755\times10^{16}\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{2.6944\times10^{25}\,\sqrt{r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}\right)}},$$

$$\left.\{r,\,-1,\,1\},\,\{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$

z

$$m := h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big/ r\right)\Big/ (c\,^\wedge 2)$$

$$\text{RevolutionPlot3D}\left[h\left(\sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}\Big/\,r\right)\Big/\,(c\,\hat{}\,2),\ \{r,-1,1\},\{\theta,-2\,\pi,2\,\pi\}\right]$$

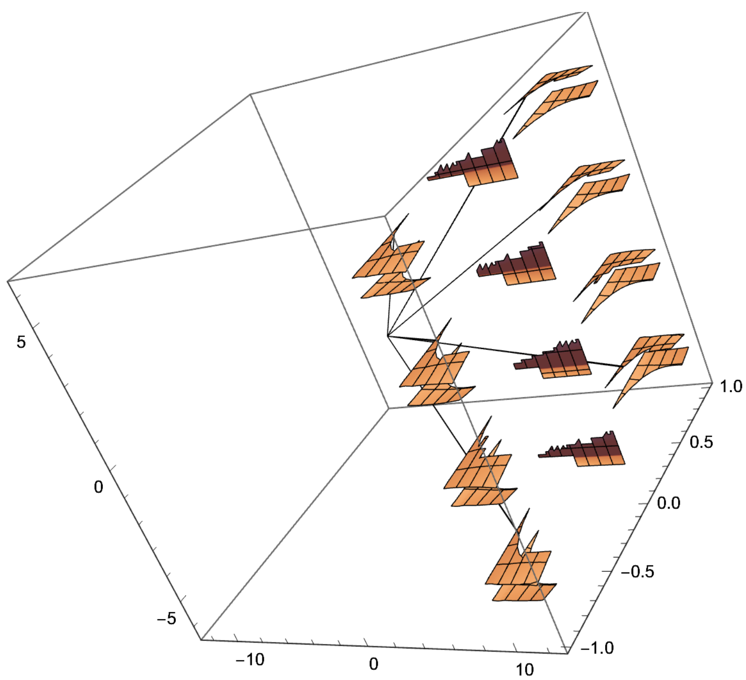



```
h := 6.626068 * 10^-34
```

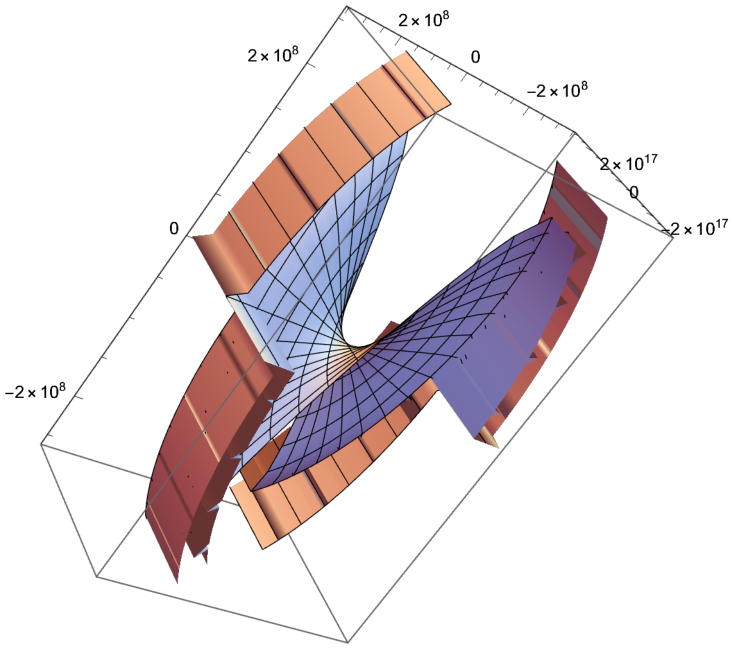
$$v = \lambda\,\nu = \sqrt{-\frac{4\,c^2\,\pi\,r^2}{-4\,\pi\,r^2+r^2\,\theta}+\frac{c^2\,r^2\,\theta}{-4\,\pi\,r^2+r^2\,\theta}-\frac{\sqrt{c^6\,r^2\,(4\,\pi-\theta)\,\theta}}{-4\,\pi\,r^2+r^2\,\theta}}$$

$$(z\,c\,\hat{}\,2)\Big/\sqrt{(u\,\hat{}\,2\,/\,c\,\hat{}\,2)-1}$$

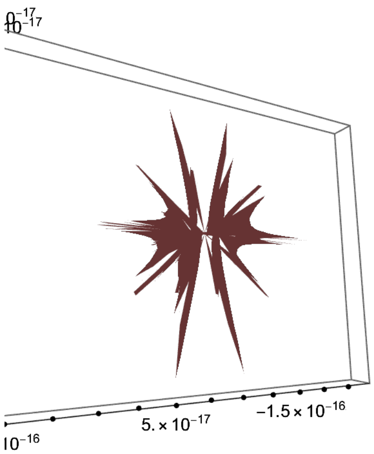
```
ContourPlot3D[(z c^2) / Sqrt[(((Sqrt[(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ + 
      8.987551787368176`*^16 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2)] / 
     (Sqrt[39.47841760435743` - 12.566370614359172` θ + θ^2]))^2 / c^2) - 
  1, {θ, -4 π, 4 π}, {m, -1, 1}, {β, -2 π,
  2
   π}]
```



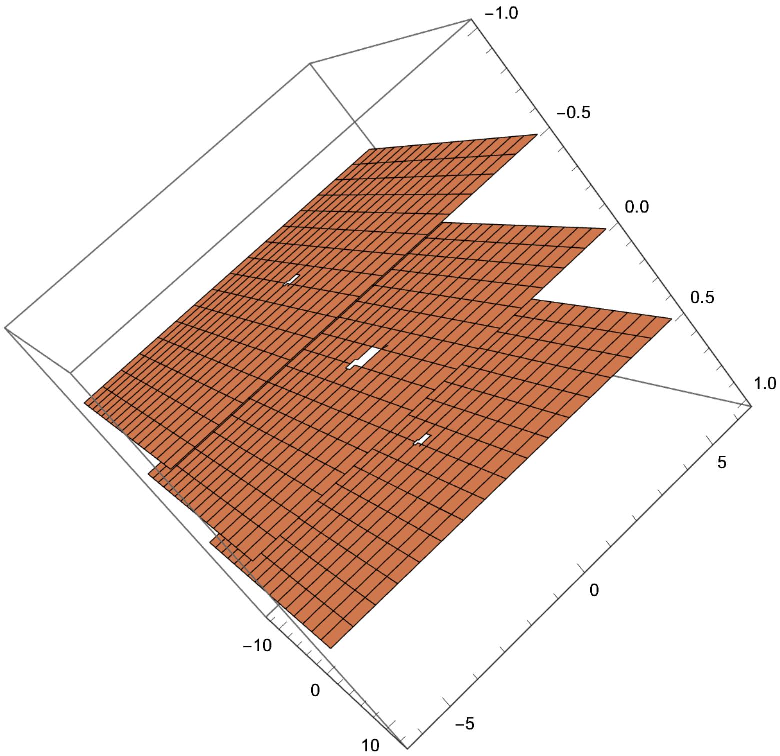
```
RevolutionPlot3D[(z c^2) / Sqrt[(u^2 / c^2) - 1], {u, -4 c, 4 c}, {m, -1, 1}]
```



```
SphericalPlot3D[(9.354975928917123`*^-9 (4 * 10^-9)
    √(-4.487190804107819`*^15 (4 π/3 - (-4 π^2 + 12 π^2 Sin[β]^2) /
          (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
        2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 √3 √(-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6))^(1/3)) +
      3.57079298535128`*^14 θ^2 + 1.40969256654408`*^16
       Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)) /
  (√(-3.5294033336192096`*^16 θ + 2.808609933552555`*^15 θ^2 +
      1.1087947584453435`*^17 Sin[β]^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```



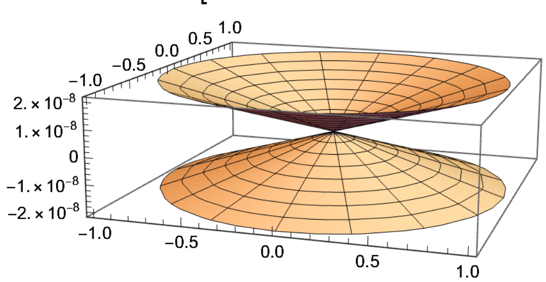
```
ContourPlot3D[
 (9.354975928917123`*^-9 η √ (-4.487190804107819`*^15 θ + 3.57079298535128`*^14 θ^2 +
       1.40969256654408`*^16 Sin[β]^2)) /
  (√ (-3.5294033336192096`*^16 θ + 2.808609933552555`*^15 θ^2 +
       1.1087947584453435`*^17 Sin[β]^2)), {η, -1, 1}, {β, -2 π, 2 π}, {θ, -4 π, 4 π}]
```




```
Solve[(√ (-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) == η (1 / (θ / (2 π))), θ]
```

$\{\{\theta \to 2.09585 \times 10^{-8}\, \eta\}\}$

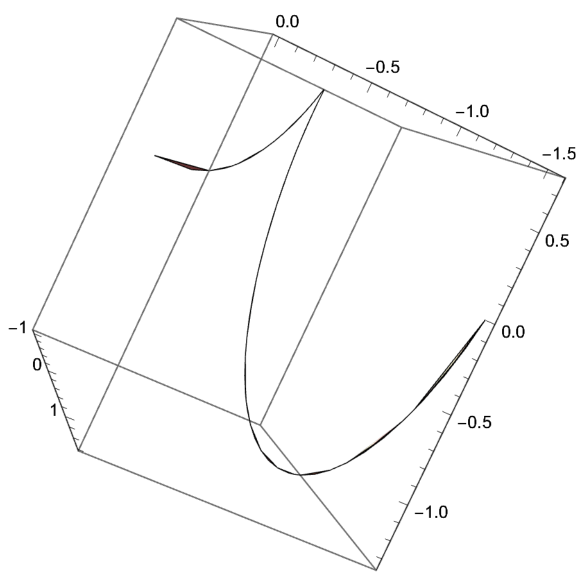
```
RevolutionPlot3D[2.0958450219516816`*^-8 η, {η, -1, 1}]
```



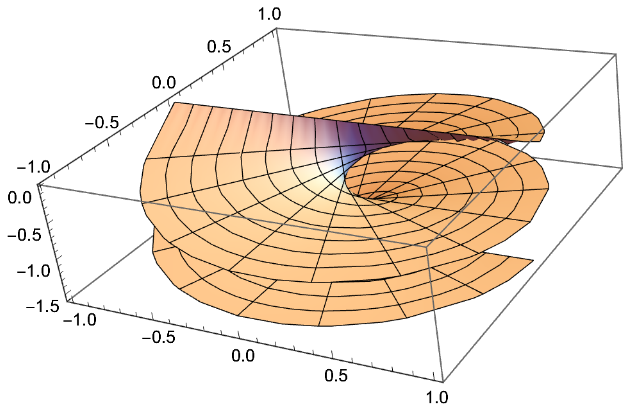
```
Solve[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) == η (1 / (θ / (2 π))), β]
```

$$\left\{\left\{\beta\to -1.\,\text{ArcSin}\left[\left(\sqrt{\theta}\,\sqrt{\left(-1.10318\times 10^{24}\,\eta+5.26365\times 10^{31}\,\theta+8.77883\times 10^{22}\,\eta\,\theta-4.18868\times 10^{30}\,\theta^2\right)}\right)\Big/\left(\sqrt{-3.46574\times 10^{24}\,\eta+1.65363\times 10^{32}\,\theta}\right)\right]\right\},\left\{\beta\to \text{ArcSin}\left[\left(\sqrt{\theta}\,\sqrt{-1.10318\times 10^{24}\,\eta+5.26365\times 10^{31}\,\theta+8.77883\times 10^{22}\,\eta\,\theta-4.18868\times 10^{30}\,\theta^2}\right)\Big/\left(\sqrt{-3.46574\times 10^{24}\,\eta+1.65363\times 10^{32}\,\theta}\right)\right]\right\}\right\}$$

```
RevolutionPlot3D[
 {ArcSin[(√θ √(-1.1031799963798287`*^24 η + 5.263652535493924`*^31 θ +
         8.778827477197447`*^22 η θ - 4.18868159871023`*^30 θ^2)) /
     (√(-3.465742172214084`*^24 η + 1.6536252136556997`*^32 θ))],
  -1.` ArcSin[(√θ √(-1.1031799963798287`*^24 η + 5.263652535493924`*^31 θ +
         8.778827477197447`*^22 η θ - 4.18868159871023`*^30 θ^2)) /
     (√(-3.465742172214084`*^24 η + 1.6536252136556997`*^32 θ))]},
 {η, -1, 1}, {θ, -2 π, 2 π}]
```



```
RevolutionPlot3D[
 -1.` ArcSin[(√θ √(-1.1031799963798287`*^24 η + 5.263652535493924`*^31 θ +
        8.778827477197447`*^22 η θ - 4.18868159871023`*^30 θ^2)) /
    (√(-3.465742172214084`*^24 η + 1.6536252136556997`*^32 θ))],
 {η, -1, 1}, {θ, -2 π, 2 π}]
```




```
v = (√(3.5481432270250993`*^18 η^2 -
        1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
    (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)) =
D[1/(2 π) √(r √(1 - 1/c^2 ((√(-1.1294090667581471`*^18 θ +
                8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
              (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2))
   √(θ / (√(1 - 1/c^2 ((√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
                 3.5481432270250993`*^18 Sin[β]^2)) /
               (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^2)))
   √(4 π r - r θ),
 r,
 θ,
 β]
```

$$-\left(r\sqrt{4\pi r - r\theta}\left(\frac{7.09629\times 10^{18}\,(-12.5664+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}+\right.\right.$$

$$\frac{78.9568\ \left(-1.12941\times 10^{18}+1.79751\times 10^{17}\ \theta\right)\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)^{2}}-$$

$$\Big(157.914\ (-12.5664+2\ \theta)\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \big(-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+$$

$$3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}\big)\Big)\Big/\left(c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)^{3}\right)\Bigg)$$

$$\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}}}}\ \Bigg)\Big/$$

$$\left(16\ \pi\ \left(r\ \sqrt{1-\frac{-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}}\right)^{3/2}\right)+$$

$$\Bigg(r^{2}\ \Bigg(-\frac{7.09629\times 10^{18}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}+$$

$$\frac{78.9568\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \left(-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)^{2}}$$

$$\Bigg)\ \sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}}}}\ \Bigg)\Big/\Bigg(32\ \pi\ \sqrt{4\ \pi\ r-r\ \theta}$$

$$\left(r\ \sqrt{1-\frac{-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}}\right)^{3/2}\Bigg)-$$

$$\Bigg(r\ (4\ \pi-\theta)\ \theta\ \Bigg(-\frac{-1.12941\times 10^{18}+1.79751\times 10^{17}\ \theta}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}+$$

$$\frac{(-12.5664+2\ \theta)\ \left(-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)^{2}}\Bigg)$$

$$\Bigg(-\frac{7.09629\times 10^{18}\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)}+$$

$$\frac{78.9568\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \left(-1.12941\times 10^{18}\ \theta+8.98755\times 10^{16}\ \theta^{2}+3.54814\times 10^{18}\ \mathrm{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\ \theta+\theta^{2}+39.4784\ \mathrm{Sin}[\beta]^{2}\right)^{2}}$$

$$\Bigg)\Bigg)\Bigg/ \Bigg(64\,\pi\,\sqrt{4\,\pi\,r - r\,\theta}\,\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}}}}$$

$$\sqrt{r\,\sqrt{1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}}}$$

$$\left(1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}\right)^2\Bigg) -$$

$$\Bigg(\theta\,\sqrt{4\,\pi\,r - r\,\theta}\,\Bigg(-\frac{-1.12941\times10^{18} + 1.79751\times10^{17}\,\theta}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)} +$$

$$\frac{(-12.5664 + 2\,\theta)\,(-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2)}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)^2}\Bigg)$$

$$\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)} +$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,(-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2)}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)^2}$$

$$\Bigg)\Bigg)\Bigg/ \Bigg(32\,\pi\,\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}}}}$$

$$\sqrt{r\,\sqrt{1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}}}$$

$$\left(1 - \frac{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)}\right)^2\Bigg) +$$

$$\Bigg(r\,\theta\,\sqrt{4\,\pi\,r - r\,\theta}\,\Bigg(-\frac{-1.12941\times10^{18} + 1.79751\times10^{17}\,\theta}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)} +$$

$$\frac{(-12.5664 + 2\,\theta)\,(-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2)}{c^2\,(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2)^2}\Bigg)$$

$$\left(-\frac{7.09629\times 10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\left.\right)\right)\Bigg/\left(64\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\left(r\,\sqrt{1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\right)^{3/2}$$

$$\left.\left(1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\left(r\,(4\,\pi-\theta)\,\left(-\frac{-1.12941\times 10^{18}+1.79751\times 10^{17}\,\theta}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left.\frac{(-12.5664+2\,\theta)\,\left(-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}\right)$$

$$\left(-\frac{7.09629\times 10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\left.\right)\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right)\Bigg/$$

$$\left(32\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}\,\sqrt{r\,\sqrt{1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right.$$

$$\left.\left(1-\frac{-1.12941\times 10^{18}\,\theta+8.98755\times 10^{16}\,\theta^2+3.54814\times 10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\left(\sqrt{4\pi r - r\theta}\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\theta}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left.\frac{(-12.5664+2\theta)\left(-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}\right)$$

$$\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\left.\right)\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\left(16\pi\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right.$$

$$\left.\left(1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\left(r\,(4\pi-\theta)\,\theta\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\left.\right)\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right)\Big/$$

$$\left(32\pi\,(4\pi r-r\theta)^{3/2}\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\left.\left(1-\frac{-1.12941\times10^{18}\theta+8.98755\times10^{16}\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)+$$

$$\left(\Theta\left(-\frac{7.09629\times10^{18}\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}+\frac{78.9568\,\text{Cos}[\beta]\,\text{Sin}[\beta]\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)^2}\right)\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}}}\right)\Big/$$

$$\left(16\pi\sqrt{4\pi r-r\Theta}\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}}}}\left(1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\left(r^2\,(4\pi-\Theta)\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\Theta}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}+\frac{(-12.5664+2\,\Theta)\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)^2}\right)\left(-\frac{7.09629\times10^{18}\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}+\frac{78.9568\,\text{Cos}[\beta]\,\text{Sin}[\beta]\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)^2}\right)\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\left(64\pi\sqrt{4\pi r-r\Theta}\left(r\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}}\right)^{3/2}\left(1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\text{Sin}[\beta]^2}{c^2\left(-12.5664\,\Theta+\Theta^2+39.4784\,\text{Sin}[\beta]^2\right)}\right)\right)-$$

$$\Bigg(r\ \sqrt{4\,\pi\,r-r\,\theta}\ \Bigg(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}+$$

$$\frac{(-12.5664+2\,\theta)\ \left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)^{2}}\Bigg)$$

$$\Bigg(-\frac{7.09629\times10^{18}\,\text{Cos}[\beta]\ \text{Sin}[\beta]}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}+$$

$$\frac{78.9568\,\text{Cos}[\beta]\ \text{Sin}[\beta]\ \left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)^{2}}$$

$$\Bigg)\ \sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}}}}\ \Bigg)\Bigg/$$

$$\Bigg(32\,\pi\ \Bigg(r\ \sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}}\ \Bigg)^{3/2}$$

$$\Bigg(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}\Bigg)\Bigg)+$$

$$\Bigg(r\,\theta\ \Bigg(-\frac{7.09629\times10^{18}\,\text{Cos}[\beta]\ \text{Sin}[\beta]}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}+$$

$$\frac{78.9568\,\text{Cos}[\beta]\ \text{Sin}[\beta]\ \left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}\right)}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)^{2}}$$

$$\Bigg)\Bigg)\Bigg/\ \Bigg(32\,\pi\ \sqrt{4\,\pi\,r-r\,\theta}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}}}}$$

$$\sqrt{r\ \sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}}}$$

$$\Bigg(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^{2}+3.54814\times10^{18}\,\text{Sin}[\beta]^{2}}{c^{2}\ \left(-12.5664\,\theta+\theta^{2}+39.4784\,\text{Sin}[\beta]^{2}\right)}\Bigg)\Bigg)+$$

$$\Bigg(3\,r^2\,\sqrt{4\,\pi\,r-r\,\Theta}\,\Bigg(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\Theta}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\frac{(-12.5664+2\,\Theta)\,\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}\Bigg)$$

$$\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\Bigg)\,\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\Bigg)\Big/$$

$$\Bigg(64\,\pi\,\left(r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\right)^{5/2}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\Bigg)+$$

$$\Bigg(r\,(4\,\pi-\Theta)\,\Bigg(\frac{7.09629\times10^{18}\,(-12.5664+2\,\Theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}+$$

$$\frac{78.9568\,\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\Theta\right)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}-$$

$$\Big(157.914\,(-12.5664+2\,\Theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+$$

$$3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/\left(c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^3\right)\Bigg)$$

$$\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\Bigg)\Big/\Bigg(16\,\pi\,\sqrt{4\,\pi\,r-r\,\Theta}$$

$$\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\Theta+\Theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}\;\Bigg)+$$

$$\Bigg(\sqrt{4\,\pi\,r-r\,\Theta}\;\Bigg(\frac{7.09629\times10^{18}\,(-12.5664+2\,\Theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)^{2}}+$$

$$\frac{78.9568\,\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\Theta\right)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)^{2}}-$$

$$\Big(157.914\,(-12.5664+2\,\Theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+$$

$$3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}\Big)\Big)\Big/\left(c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)^{3}\right)\Bigg)$$

$$\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}}}\;\Bigg)\Big/$$

$$\Bigg(8\,\pi\,\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}\;\Bigg)+$$

$$\Bigg(r^{2}\,(4\,\pi-\Theta)\;\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}+$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}\right)}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)^{2}}$$

$$\Bigg)\;\sqrt{\frac{\Theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}}}\;\Bigg)\Big/$$

$$\Bigg(32\,\pi\,(4\,\pi\,r-r\,\Theta)^{3/2}\;\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\Theta+8.98755\times10^{16}\,\Theta^{2}+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^{2}}{c^{2}\,\left(-12.5664\,\Theta+\Theta^{2}+39.4784\,\mathrm{Sin}[\beta]^{2}\right)}}\;\Bigg)-$$

$$\left(r\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\left.\right)\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\left(8\pi\sqrt{4\pi r-r\theta}\,\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right.$$

$$\left.\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\right)+$$

$$\left((4\pi-\theta)\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right.$$

$$\left(\left(3\theta\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.\right.$$

$$\frac{(-12.5664+2\,\theta)\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\right)\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\left(78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+\right.\right.$$

$$\left.\left.\left.\left.3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/$$

$$\left(4\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{5/2}\right)-$$

$$\left(\theta\left(\frac{7.09629\times10^{18}\,(-12.5664+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}+\right.\right.$$

$$\frac{78.9568\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}-$$

$$\left(157.914\,(-12.5664+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+\right.\right.$$

$$3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^3\right)\Bigg)\Bigg)\Big/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\Big(78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]$$

$$\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\Big)\Big/$$

$$\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)\Big/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\Bigg)\Bigg)\Big/$$

$$\left(8\pi\sqrt{4\pi r-r\theta}\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right)+$$

$$\Bigg(\sqrt{4\pi r-r\theta}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}$$

$$\Bigg(\Bigg(3\,\theta\Bigg(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\frac{(-12.5664+2\,\theta)\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\Bigg)\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\Big(78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+$$

$$3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)\Bigg)\Big/$$

$$\left(4\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{5/2}\right)-$$

$$\Bigg(\theta\Bigg(\frac{7.09629\times10^{18}\,(-12.5664+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}+$$

$$\frac{78.9568\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}-$$

$$\left(157.914\,(-12.5664+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+\right.\right.$$

$$\left.\left.3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^3\right)\Bigg)\Bigg)\Big/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)-$$

$$\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\left(78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right.\right.$$

$$\left.\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Big/$$

$$\left.\left.\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\right)\right)\Big/$$

$$\left(8\,\pi\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\left.\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right)-$$

$$\left(r\sqrt{4\,\pi\,r-r\,\theta}\,\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\left.\right)\left(-\left(\left(\theta\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.\right.\right.\right.$$

$$\left((-12.5664+2\,\theta)\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\right.\right.$$

$$\left.\left.\left.\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Big)\Big/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\Bigg)+$$

$$\frac{1}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\Bigg)\Bigg)\Big/$$

$$\left(32\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\left.\left(r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\right)^{3/2}\right)+$$

$$\Bigg((4\,\pi-\theta)\,\theta\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\left.\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}\right)\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}$$

$$\Bigg(-\Bigg(\Bigg(\theta\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\Big((-12.5664+2\,\theta)\right.$$

$$\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\Big)\Big/$$

$$\left.\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\Bigg)\Big/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\Bigg)+$$

$$\frac{1}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\Bigg)\Bigg)\Big/$$

$$\left(32\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}\,\left(\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right)^{3/2}\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)+$$

$$\left(\theta\,\sqrt{4\,\pi\,r-r\,\theta}\,\left(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}\right)\right)\left(-\left(\left(\theta\,\left(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+\left((-12.5664+2\,\theta)\,\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\left(c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/\left(2\,\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\right)+\frac{1}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right)\Big/$$

$$\left(32\,\pi\,\left(\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\right)^{3/2}\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\,\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)\right)+$$

$$\Bigg(r\,(4\,\pi-\theta)\,\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\Bigg)\Bigg)\Bigg(-\Bigg(\Bigg(\theta\,\Bigg(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\Big((-12.5664+2\,\theta)\,\Big(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}$$

$$\mathrm{Sin}[\beta]^2\Big)\Big)\Big/\Big(c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\Big)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(2\,\Bigg(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\Bigg)^{3/2}\Bigg)\Bigg)+$$

$$\frac{1}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\Bigg)\Bigg)\Bigg/$$

$$\Bigg(32\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}$$

$$\sqrt{r\,\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\Bigg)+$$

$$\Bigg(\sqrt{4\,\pi\,r-r\,\theta}\,\Bigg(-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\frac{78.9568\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)}{c^2\,\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2}$$

$$\Bigg)\Bigg/\Bigg(-\Bigg(\Bigg(\theta\Bigg(-\frac{-1.12941\times10^{18}+1.79751\times10^{17}\,\theta}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\Big(\left(-12.5664+2\,\theta\right)\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\right.$$

$$\left.\mathrm{Sin}[\beta]^2\right)\Big)\Big/\left(c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)\Bigg)\Bigg/$$

$$\left(2\left(1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}\right)^{3/2}\right)\Bigg)+$$

$$\frac{1}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}\Bigg)\Bigg)\Bigg/$$

$$\Bigg(16\,\pi\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}}$$

$$\sqrt{r\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}}$$

$$\sqrt{1-\frac{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)}}\Bigg)$$

c := c

SphericalPlot3D[

$$-\Bigg(r\sqrt{4\,\pi\,r-r\,\theta}\,\Bigg(\frac{7.096286454050199\text{`}*\text{^}18\,(-12.566370614359172\text{`}+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2\right)^2}+$$

$$(78.95683520871486\text{`}$$

$$(-1.1294090667581471\text{`}*\text{^}18+1.7975103574736352\text{`}*\text{^}17\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta])\Big/$$

$$\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\mathrm{Sin}[\beta]^2\right)^2\right)-$$

$$\Big(157.91367041742973\text{`}\,(-12.566370614359172\text{`}+2\,\theta)\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]$$

$$\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+\right.$$

$$\left.3.5481432270250993\text{`}*\text{^}18\,\mathrm{Sin}[\beta]^2\right)\Big)\Big/$$

$$\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^3\right)\Bigg)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+8.987551787368176\text{`}{*}{\wedge}16\,\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\Big(16\,\pi\,\Big(r\sqrt{}\Big(1-\big(-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+8.987551787368176\text{`}{*}{\wedge}16$$
$$\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2\big)\Big/$$
$$\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\Big)\Big)^{3/2}\Big)+$$

$$\Bigg(r^2\left(-\frac{7.096286454050199\text{`}{*}{\wedge}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486\text{`}\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\big(-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+$$
$$8.987551787368176\text{`}{*}{\wedge}16\,\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2\big)\Big)\Big/$$
$$\left.\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+8.987551787368176\text{`}{*}{\wedge}16\,\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\Big(32\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}\,\Big(r\sqrt{}\Big(1-\big(-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+8.987551787368176\text{`}{*}{\wedge}16$$
$$\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2\big)\Big/$$
$$\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\Big)\Big)^{3/2}\Big)-$$

$$\Bigg(r\,(4\,\pi-\theta)\,\theta\left(-\frac{-1.1294090667581471\text{`}{*}{\wedge}18+1.7975103574736352\text{`}{*}{\wedge}17\,\theta}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big((-12.566370614359172\text{`}+2\,\theta)\,\big(-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+$$
$$8.987551787368176\text{`}{*}{\wedge}16\,\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2\big)\Big)\Big/$$
$$\left.\left(c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left(-\frac{7.096286454050199\text{`}{*}{\wedge}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486\text{`}\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\big(-1.1294090667581471\text{`}{*}{\wedge}18\,\theta+$$
$$8.987551787368176\text{`}{*}{\wedge}16\,\theta^2+3.5481432270250993\text{`}{*}{\wedge}18\,\text{Sin}[\beta]^2\big)\Big)\Big/$$

$$\left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)\Bigg) \Bigg/ \left(64 \pi \sqrt{4 \pi r - r \theta} \sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2}{c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\sqrt{}\left(r \sqrt{}\left(1 - \left(-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2\right) \Big/ \left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)\right)\right)\right)$$

$$\left.\left(1 - \left(-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2\right) \Big/ \left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)\right)\right)^2\right) -$$

$$\left(\theta \sqrt{4 \pi r - r \theta} \left(-\frac{-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17 \, \theta}{c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)} + \left((-12.566370614359172` + 2 \theta) \left(-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2\right)\right) \Big/ \left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)^2\right)\right)\right.$$

$$\left.\left(-\frac{7.096286454050199`*^{\wedge}18 \, \mathrm{Cos}[\beta] \, \mathrm{Sin}[\beta]}{c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)} + \left(78.95683520871486` \, \mathrm{Cos}[\beta] \, \mathrm{Sin}[\beta] \left(-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2\right)\right) \Big/ \left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)^2\right)\right)\right) \Big/$$

$$\left(32 \pi \sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2}{c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\sqrt{}\left(r \sqrt{}\left(1 - \left(-1.1294090667581471`*^{\wedge}18 \, \theta + 8.987551787368176`*^{\wedge}16 \, \theta^2 + 3.5481432270250993`*^{\wedge}18 \, \mathrm{Sin}[\beta]^2\right) \Big/ \left(c^2 \left(-12.566370614359172` \, \theta + \theta^2 + 39.47841760435743` \, \mathrm{Sin}[\beta]^2\right)\right)\right)\right)$$

$$\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)^2\right)+$$

$$\left(r\,\theta\,\sqrt{4\,\pi\,r-r\,\theta}\,\left(-\frac{-1.1294090667581471`*^{\wedge}18+1.7975103574736352`*^{\wedge}17\,\theta}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\left((-12.566370614359172`+2\,\theta)\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)\right.$$

$$\left.\left(-\frac{7.096286454050199`*^{\wedge}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\left(78.95683520871486`\,\text{Cos}[\beta]\,\text{Sin}[\beta]\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/$$

$$\left(64\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}}\right.$$

$$\left(r\,\sqrt{}\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)\right)^{3/2}$$

$$\left.\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)^{3/2}\right)-$$

$$\left(r\,(4\,\pi-\theta)\left(-\frac{-1.1294090667581471`*^{\wedge}18+1.7975103574736352`*^{\wedge}17\,\theta}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left((-12.566370614359172`+2\,\theta)\left(-1.1294090667581471`*^{\wedge}18\,\theta+\right.\right.$$

$$8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2)\Big)\Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\left(-\frac{7.096286454050199`*^18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486`\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\Big(-1.1294090667581471`*^18\,\theta+$$

$$8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}}\right)\Bigg/$$

$$\Big(32\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}\,\sqrt{}\Big(r\,\sqrt{}\Big(1-\Big(-1.1294090667581471`*^18\,\theta+$$

$$8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2\Big)\Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\Big)\Big)\Big)$$

$$\Big(1-\Big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+$$

$$3.5481432270250993`*^18\,\text{Sin}[\beta]^2\Big)\Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\Big)^{3/2}\Big)-$$

$$\left(\sqrt{4\,\pi\,r-r\,\theta}\,\left(-\frac{-1.1294090667581471`*^18+1.7975103574736352`*^17\,\theta}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\Big((-12.566370614359172`+2\,\theta)\,\Big(-1.1294090667581471`*^18\,\theta+$$

$$8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left(-\frac{7.096286454050199`*^18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486`\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\Big(-1.1294090667581471`*^18\,\theta+$$

$$8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$
\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}}\right)\Big/
$$

$$
\Big(16\,\pi\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big/\Big(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\Big)\Big)\Big)
$$

$$
\Big(1-\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big/\Big(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\Big)\Big)^{3/2}\Big)-
$$

$$
\Bigg(r\,(4\,\pi-\theta)\,\theta\,\Bigg(-\frac{7.096286454050199`*^{\wedge}18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}+
$$

$$
\Big(78.95683520871486`\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/
$$

$$
\Big(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^2\Big)\Bigg)
$$

$$
\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big/\Big(c^2\Big(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big)\Big)\Bigg)\Big/\Bigg(32\,\pi\,(4\,\pi\,r-r\,\theta)^{3/2}
$$

$$
\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}}
$$

$$
\Bigg(1-\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big/\Big(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\Big)^{3/2}\Bigg)+
$$

$$
\Bigg(\theta\,\Bigg(-\frac{7.096286454050199`*^{\wedge}18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}+
$$

$$
\Big(78.95683520871486`\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/
$$

$$\left(c^2 \left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\sqrt{}\Bigg(r\sqrt{}\Big(1-\big(-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+$$
$$3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\big)\Big/\Big(c^2\big(-12.566370614359172`\ \theta+$$
$$\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\big)\Big)\Big)\Bigg)\Bigg/\Bigg(16\pi\sqrt{4\pi r-r\theta}$$

$$\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}}}}$$

$$\Big(1-\big(-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+$$
$$3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\big)\Big/$$
$$\left(c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)\right)\Big)^{3/2}\Bigg)-$$

$$\Bigg(r^2\,(4\pi-\theta)\,\left(-\frac{-1.1294090667581471`*\hat{}18+1.7975103574736352`*\hat{}17\,\theta}{c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\Big((-12.566370614359172`+2\,\theta)\,\big(-1.1294090667581471`*\hat{}18\,\theta+$$
$$8.987551787368176`*\hat{}16\,\theta^2+3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/$$
$$\left(c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\left(-\frac{7.096286454050199`*\hat{}18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486`\ \mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\big(-1.1294090667581471`*\hat{}18\,\theta+$$
$$8.987551787368176`*\hat{}16\,\theta^2+3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2\big)\Big)\Big/$$
$$\left(c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16\,\theta^2+3.5481432270250993`*\hat{}18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\ \theta+\theta^2+39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}}}}\Bigg)\Bigg/$$

$$\Big(64\pi\sqrt{4\pi r-r\theta}\,\Big(r\sqrt{}\Big(1-\big(-1.1294090667581471`*\hat{}18\,\theta+8.987551787368176`*\hat{}16$$

$$\theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)\Big)^{3/2}$$

$$\Big(1 - \Big(-1.1294090667581471`*^18\ \theta + 8.987551787368176`*^16\ \theta^2 +$$

$$3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)\Big) -$$

$$\left(r\ \sqrt{4\,\pi\, r - r\,\theta}\ \left(-\frac{-1.1294090667581471`*^18 + 1.7975103574736352`*^17\ \theta}{c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)} +\right.\right.$$

$$\Big((-12.566370614359172` + 2\,\theta)\ \Big(-1.1294090667581471`*^18\ \theta +$$

$$8.987551787368176`*^16\ \theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left.\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)^2\Big)\right)$$

$$\left(-\frac{7.096286454050199`*^18\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]}{c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)} +\right.$$

$$\Big(78.95683520871486`\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \Big(-1.1294090667581471`*^18\ \theta +$$

$$8.987551787368176`*^16\ \theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left.\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)^2\Big)\right)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^18\ \theta + 8.987551787368176`*^16\ \theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2}{c^2\ \left(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\right)}}}}\ \right) \Big/$$

$$\Big(32\,\pi\ \Big(r\ \sqrt{}\ \Big(1 - \Big(-1.1294090667581471`*^18\ \theta + 8.987551787368176`*^16$$

$$\theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)\Big)^{3/2}$$

$$\Big(1 - \Big(-1.1294090667581471`*^18\ \theta + 8.987551787368176`*^16\ \theta^2 +$$

$$3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)\Big) +$$

$$\left(r\,\theta\ \left(-\frac{7.096286454050199`*^18\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]}{c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \mathrm{Sin}[\beta]^2\Big)} +\right.\right.$$

$$\Big(78.95683520871486`\ \mathrm{Cos}[\beta]\ \mathrm{Sin}[\beta]\ \Big(-1.1294090667581471`*^18\ \theta +$$

$$8.987551787368176`*^16\ \theta^2 + 3.5481432270250993`*^18\ \mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\Big(c^2\ \Big(-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`$$

$$\left.\left.\left.\mathrm{Sin}[\beta]^2\right)^2\right)\right)\right) \Big/ \Bigg(32\,\pi\,\sqrt{4\,\pi\,r - r\,\theta}$$

$$\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}}$$

$$\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big/ \Big(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\Big)\Big)\Big)$$

$$\Big(1-\Big(-1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big/ \Big(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\Big)\Big)\Bigg) +$$

$$\Bigg(3\,r^2\,\sqrt{4\,\pi\,r - r\,\theta}\,\Bigg(-\frac{-1.1294090667581471`*^18 + 1.7975103574736352`*^17\,\theta}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)} +$$

$$\Big((-12.566370614359172` + 2\,\theta)\,\Big(-1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/ \Big(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^2\Big)\Bigg)$$

$$\Bigg(-\frac{7.096286454050199`*^18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)} +$$

$$\Big(78.95683520871486`\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big/ \Big(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^2\Big)\Bigg)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}}\,\right) \Big/$$

$$\Big(64\,\pi\,\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471`*^18\,\theta + 8.987551787368176`*^16\,\theta^2 + 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big/$$

$$\left(c^2 \left(-12.566370614359172` \,\theta + \theta^2 + 39.47841760435743` \,\text{Sin}[\beta]^2\right)\right)\Big)\Big)^{5/2}$$

$$\sqrt{}\Big(1 - \Big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 +$$

$$3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\Big) \Big/$$

$$\left(c^2 \left(-12.566370614359172` \,\theta + \theta^2 + 39.47841760435743` \,\text{Sin}[\beta]^2\right)\right)\Big)\Big) +$$

$$\Bigg(r\,(4\pi - \theta)\,\Bigg(\frac{7.096286454050199`*^{\wedge}18\,(-12.566370614359172` + 2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2} +$$

$$(78.95683520871486`$$

$$(-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right) -$$

$$\Big(157.91367041742973`\,(-12.566370614359172` + 2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]$$

$$\Big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 +$$

$$3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^3\right)\Bigg)\Bigg)$$

$$\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}}\Bigg) \Big/$$

$$\Big(16\,\pi\,\sqrt{4\,\pi\,r - r\,\theta}\,\sqrt{}\Big(r\,\sqrt{}\Big(1 - \Big(-1.1294090667581471`*^{\wedge}18\,\theta +$$

$$8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\Big) \Big/$$

$$\left(c^2 \left(-12.566370614359172` \,\theta + \theta^2 + 39.47841760435743` \,\text{Sin}[\beta]^2\right)\right)\Big)\Big)\Big)$$

$$\sqrt{}\Big(1 - \Big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 +$$

$$3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\Big) \Big/$$

$$\left(c^2 \left(-12.566370614359172` \,\theta + \theta^2 + 39.47841760435743` \,\text{Sin}[\beta]^2\right)\right)\Big)\Big) +$$

$$\Bigg(\sqrt{4\,\pi\,r - r\,\theta}\,\Bigg(\frac{7.096286454050199`*^{\wedge}18\,(-12.566370614359172` + 2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2} +$$

$$(78.95683520871486`$$

$$(-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right) -$$

$$\Big(157.91367041742973`\,(-12.566370614359172` + 2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]$$

$$\Big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 +$$

$$3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left.\left.\left(c^2 \left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)^3\right)\right)\right)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`}*\wedge 18\ \theta+8.987551787368176\text{`}*\wedge 16\ \theta^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2}{c^2 \left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\Big(8\pi\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+8.987551787368176\text{`}*\wedge 16\ \theta^2+ 3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big/ \left(c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)\right)\Big)\Big)\Big)$$

$$\sqrt{}\Big(1-\Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+8.987551787368176\text{`}*\wedge 16\ \theta^2+ 3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big/ \left(c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)\right)\Big)\Big)+$$

$$\left(r^2\ (4\pi-\theta)\ \left(-\frac{7.096286454050199\text{`}*\wedge 18\ \text{Cos}[\beta]\ \text{Sin}[\beta]}{c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\Big(78.95683520871486\text{`}\ \text{Cos}[\beta]\ \text{Sin}[\beta]\ \Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+ 8.987551787368176\text{`}*\wedge 16\ \theta^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\left.\left.\left(c^2 \left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)^2\right)\right)\right)$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`}*\wedge 18\ \theta+8.987551787368176\text{`}*\wedge 16\ \theta^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2}{c^2 \left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)}}}}\right)\Big/$$

$$\Big(32\pi\ (4\pi r-r\theta)^{3/2}\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+ 8.987551787368176\text{`}*\wedge 16\ \theta^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big/ \left(c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)\right)\Big)\Big)\Big)$$

$$\sqrt{}\Big(1-\Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+8.987551787368176\text{`}*\wedge 16\ \theta^2+ 3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big/ \left(c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)\right)\Big)\Big)-$$

$$\left(r\ \left(-\frac{7.096286454050199\text{`}*\wedge 18\ \text{Cos}[\beta]\ \text{Sin}[\beta]}{c^2\left(-12.566370614359172\text{`}\ \theta+\theta^2+39.47841760435743\text{`}\ \text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\Big(78.95683520871486\text{`}\ \text{Cos}[\beta]\ \text{Sin}[\beta]\ \Big(-1.1294090667581471\text{`}*\wedge 18\ \theta+ 8.987551787368176\text{`}*\wedge 16\ \theta^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}[\beta]^2\Big)\Big)\Big/$$

$$\left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}}\Bigg) \Big/$$

$$\Big(8\pi\sqrt{4\pi r - r\theta}\ \sqrt{}\Big(r\sqrt{}\Big(1 - \big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big) \Big/ \left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\Big)\Big)$$

$$\sqrt{}\Big(1 - \big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big) \Big/ \left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\Big)\Big) +$$

$$\Bigg((4\pi - \theta)\ \sqrt{}\Big(r\sqrt{}\Big(1 - \big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big) \Big/ \left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\Big)\Big)$$

$$\Bigg(\Bigg(3\theta\Bigg(-\frac{-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17\,\theta}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)} + \Big((-12.566370614359172` + 2\theta)\big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big)\Big) \Big/ \left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\Bigg(-\frac{7.096286454050199`*^{\wedge}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)} + \Big(78.95683520871486`\,\text{Cos}[\beta]\,\text{Sin}[\beta]\big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big)\Big) \Big/ \left(c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\Bigg)\Bigg) \Big/$$

$$\Big(4\Big(1 - \big(-1.1294090667581471`*^{\wedge}18\,\theta + 8.987551787368176`*^{\wedge}16\,\theta^2 + 3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\big) \Big/ \Big(c^2 \left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)\Big)\Big)^{5/2}\Big) -$$

$$\Bigg(\theta\Bigg(\frac{7.096286454050199`*^{\wedge}18\,(-12.566370614359172` + 2\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\text{Sin}[\beta]^2\right)^2} +$$

$$(78.95683520871486`\,(-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[\beta]) \Big/$$

$$\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)-$$

$$\Big(157.91367041742973\text{`}\,(-12.566370614359172\text{`}+2\,\theta)\,\text{Cos}[\beta]\,\text{Sin}[$$

$$\beta]\,\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+\right.$$

$$\left.3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big)\Big/$$

$$\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^3\right)\Bigg)\Bigg)\Bigg/$$

$$\Big(2\,\Big(1-\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+\right.$$

$$\left.3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big/\Big(c^2$$

$$\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\Big)\Big)^{3/2}\Big)-$$

$$\left(-\frac{7.096286454050199\text{`}*\text{^}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.$$

$$\Big(78.95683520871486\text{`}\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+\right.$$

$$\left.8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big)\Big/$$

$$\left.\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)\right)\Bigg/$$

$$\Big(2\,\Big(1-\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+\right.$$

$$\left.3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big/\Big(c^2\,\Big(-12.566370614359172\text{`}\,\theta+$$

$$\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\Big)\Big)\Big)^{3/2}\Big)\Bigg)\Bigg)\Bigg/\ \Bigg(8\,\pi\,\sqrt{4\,\pi\,r-r\,\theta}$$

$$\left.\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}}\right)+$$

$$\Bigg(\sqrt{4\,\pi\,r-r\,\theta}\,\sqrt{}\Big(1-\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+\right.$$

$$\left.3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\Big)$$

$$\Bigg(\Bigg(3\,\theta\,\Bigg(-\frac{-1.1294090667581471\text{`}*\text{^}18+1.7975103574736352\text{`}*\text{^}17\,\theta}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+$$

$$\Big((-12.566370614359172\text{`}+2\,\theta)\,\left(-1.1294090667581471\text{`}*\text{^}18\,\theta+\right.$$

$$\left.8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\right)\Big)\Big/$$

```
(c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^2))
(- 7.096286454050199`*^18 Cos[β] Sin[β] / (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
 (78.95683520871486` Cos[β] Sin[β] (-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^2))) /
(4 (1 - (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2) / (c^2
        (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^(5/2)) -
(θ (7.096286454050199`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β] / (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^2) +
   (78.95683520871486` (-1.1294090667581471`*^18 +
        1.7975103574736352`*^17 θ) Cos[β] Sin[β]) /
    (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^2) -
   (157.91367041742973` (-12.566370614359172` + 2 θ) Cos[β] Sin[
      β] (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) /
    (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^3))) /
(2 (1 - (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2) / (c^2
        (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^(3/2)) -
(- 7.096286454050199`*^18 Cos[β] Sin[β] / (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) +
  (78.95683520871486` Cos[β] Sin[β] (-1.1294090667581471`*^18 θ +
       8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (c^2 (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^2)) /
(2 (1 - (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2) / (c^2
        (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)))^(3/2))) /
```

$$\left(8\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`*^}18\,\theta+8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}}\right.$$

$$\sqrt{}\left(r\,\sqrt{}\left(1-\left(-1.1294090667581471\text{`*^}18\,\theta+\right.\right.\right.$$

$$\left.8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left.\left.\left.\left.\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\right)\right)\right)-$$

$$\left(r\,\sqrt{4\,\pi\,r-r\,\theta}\,\left(-\frac{7.096286454050199\text{`*^}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left(78.95683520871486\text{`}\,\text{Cos}[\beta]\,\text{Sin}[\beta]\,\left(-1.1294090667581471\text{`*^}18\,\theta+\right.\right.$$

$$\left.\left.8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left(-\left(\theta\,\left(-\frac{-1.1294090667581471\text{`*^}18+1.7975103574736352\text{`*^}17\,\theta}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}+\right.\right.\right.$$

$$\left(\left(-12.566370614359172\text{`}+2\,\theta\right)\,\left(-1.1294090667581471\text{`*^}18\,\theta+\right.\right.$$

$$\left.\left.8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left.\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/$$

$$\left(2\,\left(1-\left(-1.1294090667581471\text{`*^}18\,\theta+8.987551787368176\text{`*^}16\,\theta^2+\right.\right.\right.$$

$$\left.3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2\right)\Big/$$

$$\left.\left.\left(c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)\right)\right)^{3/2}\right)+$$

$$\left.\left.\frac{1}{\sqrt{1-\frac{-1.1294090667581471\text{`*^}18\,\theta+8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}\right)\right)\Big/$$

$$\left(32\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\text{`*^}18\,\theta+8.987551787368176\text{`*^}16\,\theta^2+3.5481432270250993\text{`*^}18\,\text{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}}}}\right.$$

$$\left(r\sqrt{\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)}\right)^{3/2}\right)+$$

$$\left((4\pi-\theta)\,\theta\left(-\frac{7.096286454050199`*^{\wedge}18\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left(78.95683520871486`\,\text{Cos}[\beta]\,\text{Sin}[\beta]\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\sqrt{\left(r\sqrt{\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)}\right)}$$

$$\left(-\left(\theta\left(-\frac{-1.1294090667581471`*^{\wedge}18+1.7975103574736352`*^{\wedge}17\,\theta}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}+\right.\right.\right.$$

$$\left((-12.566370614359172`+2\,\theta)\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\right)\Big/$$

$$\left.\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/$$

$$\left(2\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)\right)\right)^{3/2}\right)+$$

$$\left.\left.\frac{1}{\sqrt{1-\frac{-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}\right)\right)\Big/\left(32\right.$$

$$\pi\,\sqrt{4\pi r-r\,\theta}$$

$$\left(\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+3.5481432270250993`*^{\wedge}18\,\text{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\text{Sin}[\beta]^2\right)}}}\right)^{3/2}$$

$$\left(1-\left(-1.1294090667581471`*^{\wedge}18\,\theta+8.987551787368176`*^{\wedge}16\,\theta^2+\right.\right.$$

$$3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\left.\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\right)\right)^{3/2}\Bigg) +$$

$$\Bigg(\theta\,\sqrt{4\pi r - r\theta}\,\Bigg(-\frac{7.096286454050199`*^18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\Big(78.95683520871486`\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\Big(-1.1294090667581471`*^18\,\theta+ 8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)$$

$$\Bigg(-\Bigg(\theta\,\Bigg(-\frac{-1.1294090667581471`*^18+1.7975103574736352`*^17\,\theta}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}+$$

$$\Big(\left(-12.566370614359172`+2\theta\right)\Big(-1.1294090667581471`*^18\,\theta+ 8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^2\right)\Bigg)\Bigg)\Bigg/$$

$$\Big(2\,\Big(1-\Big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+ 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\right)\Big)^{3/2}\Big) +$$

$$\frac{1}{\sqrt{1-\frac{-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}\Bigg)\Bigg)\Bigg/$$

$$\left(32\pi\left(\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2}{c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)}}}\right)\right)^{3/2}$$

$$\sqrt{}\Big(r\sqrt{}\Big(1-\Big(-1.1294090667581471`*^18\,\theta+ 8.987551787368176`*^16\,\theta^2+3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\left(c^2\left(-12.566370614359172`\,\theta+\theta^2+39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\right)\Big)\Big)$$

$$\Big(1-\Big(-1.1294090667581471`*^18\,\theta+8.987551787368176`*^16\,\theta^2+ 3.5481432270250993`*^18\,\mathrm{Sin}[\beta]^2\Big) \Big/$$

$$\left.\left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)\right)\right)\right) +$$

$$\left(r (4\pi - \theta) \left(-\frac{7.096286454050199`*^{\wedge}18 \text{Cos}[\beta] \text{Sin}[\beta]}{c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)} + \right.\right.$$

$$\left(78.95683520871486` \text{Cos}[\beta] \text{Sin}[\beta] \left(-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2\right)\right) \Big/ \left.\left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left(-\left(\theta \left(-\frac{-1.1294090667581471`*^{\wedge}18 + 1.7975103574736352`*^{\wedge}17 \theta}{c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)} + \right.\right.\right.$$

$$\left((-12.566370614359172` + 2\theta) \left(-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2\right)\right) \Big/ \left.\left.\left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)^2\right)\right)\right) \Big/$$

$$\left(2 \left(1 - \left(-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2\right) \Big/ \left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)\right)\right)^{3/2}\right) +$$

$$\left.\left.\frac{1}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2}{c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)}}}\right)\right) \Big/ \left(32\right.$$

$$\pi \sqrt{4\pi r - r\theta}$$

$$\sqrt{\frac{\theta}{\sqrt{1 - \frac{-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2}{c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)}}}}$$

$$\sqrt{}\left(r \sqrt{}\left(1 - \left(-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2\right) \Big/ \left(c^2 \left(-12.566370614359172` \theta + \theta^2 + 39.47841760435743` \text{Sin}[\beta]^2\right)\right)\right)\right)$$

$$\sqrt{}\left(1 - \left(-1.1294090667581471`*^{\wedge}18 \theta + 8.987551787368176`*^{\wedge}16 \theta^2 + 3.5481432270250993`*^{\wedge}18 \text{Sin}[\beta]^2\right) \Big/\right.$$

$$\left.\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)\right)\right)\right)+$$

$$\left(\sqrt{4\,\pi\,r-r\,\theta}\ \left(-\frac{7.096286454050199\grave{}*\hat{}18\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)}+\right.\right.$$

$$\left(78.95683520871486\grave{}\ \mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\,\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+\right.\right.$$
$$\left.\left.8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$
$$\left.\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)^2\right)\right)$$

$$\left(-\left(\theta\,\left(-\frac{-1.1294090667581471\grave{}*\hat{}18+1.7975103574736352\grave{}*\hat{}17\,\theta}{c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)}+\right.\right.\right.$$

$$\left(\left(-12.566370614359172\grave{}+2\,\theta\right)\,\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+\right.\right.$$
$$\left.\left.8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)\right)\Big/$$
$$\left.\left.\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)^2\right)\right)\right)\Big/$$

$$\left(2\,\left(1-\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\,\theta^2+\right.\right.\right.$$
$$\left.3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)\Big/$$
$$\left.\left.\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)\right)\right)^{3/2}\right)+$$

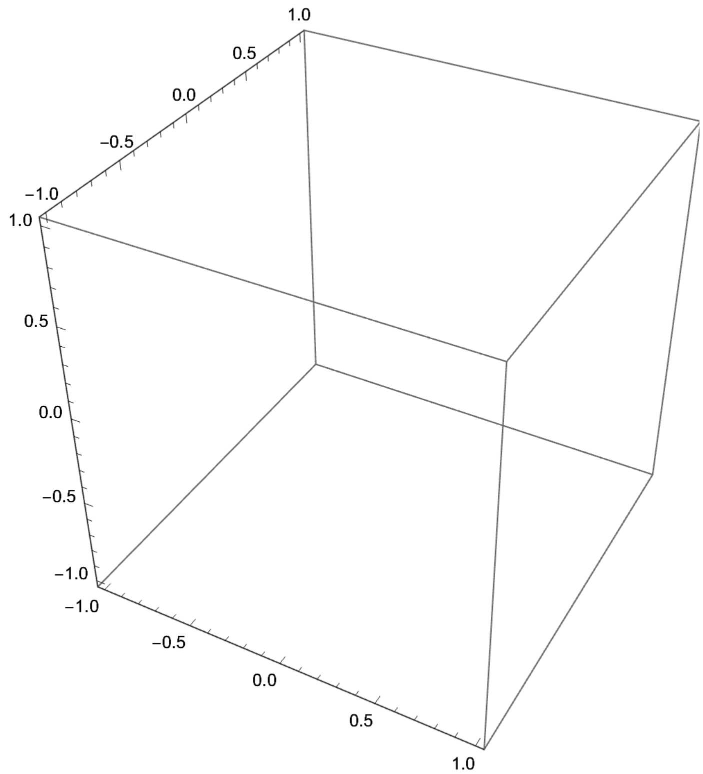
$$\left.\left.\frac{1}{\sqrt{1-\frac{-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)}}}\right)\right)\Big/$$

$$\left(16\,\pi\,\sqrt{\frac{\theta}{\sqrt{1-\frac{-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2}{c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)}}}}\right.$$

$$\sqrt{}\left(r\,\sqrt{}\left(1-\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+\right.\right.\right.$$
$$\left.8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)\Big/$$
$$\left.\left.\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2\right)\right)\right)\right)$$

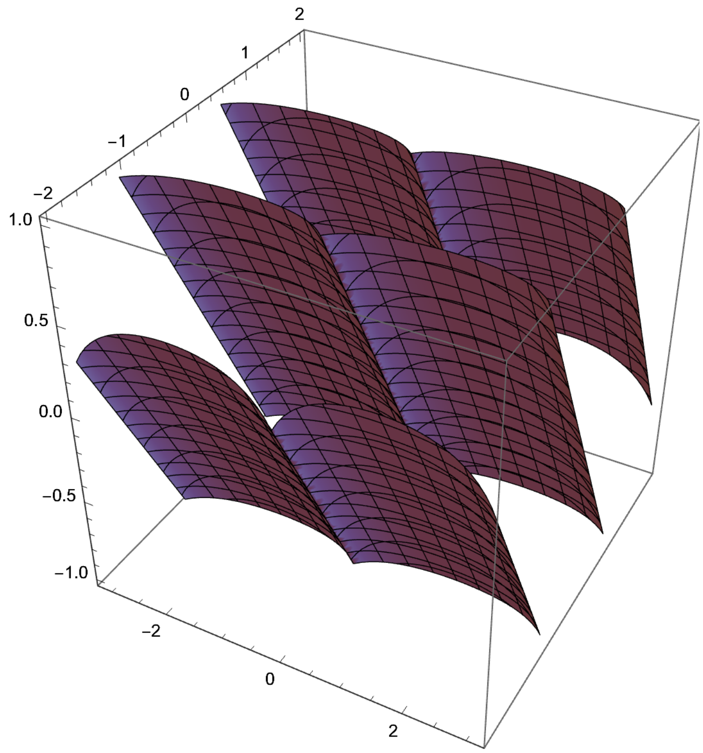
$$\sqrt{}\left(1-\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\,\theta^2+\right.\right.$$
$$\left.3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\right)\Big/\left(c^2\,\left(-12.566370614359172\grave{}\ \theta+\right.\right.$$

```
θ^2 + 39.47841760435743` Sin[β]^2))) ), {θ, -2 π, 2 π}, {β, -π, π}]
```




```
r := 4 * (10^-9)
```

```
ContourPlot3D[-1/(Sqrt[3] π) (Sqrt[3] j π + Sqrt[3] k π - 3 Log[-1 + (4 π)/3 - (-4 π^2 + 12 π^2 Sin[β]^2)/
      (6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
     2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3] Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)]),
 {β, -π, π}, {k, -2, 2}, {j, -1, 1}]
```



On the Processing of Tachyon Emulsion from a Photon' s Energy

by Parker Emmerson

In the name of Allah, the following mathematics is invoked, may there be truth to it. Irony from the combination of two unlike things is the meaning of the act of emulsion.

I recommend further studies into the realm of complex infinity including systems that can account for counting from infinity like we count from zero.

These are theoretical models that suppose that the velocity of a tachyon is positive as well as the

velocity of a regular particle.

Velocity of a Photon's Geometry

Only when the exact speed of light, or an extremely close approximation is used during the solution of these equations are any solutions able to be found. If I use a variable c, the equation cancels out. Only when designating c to be numerically the exact value of light or close to it can the equation be solved for the innate velocity.

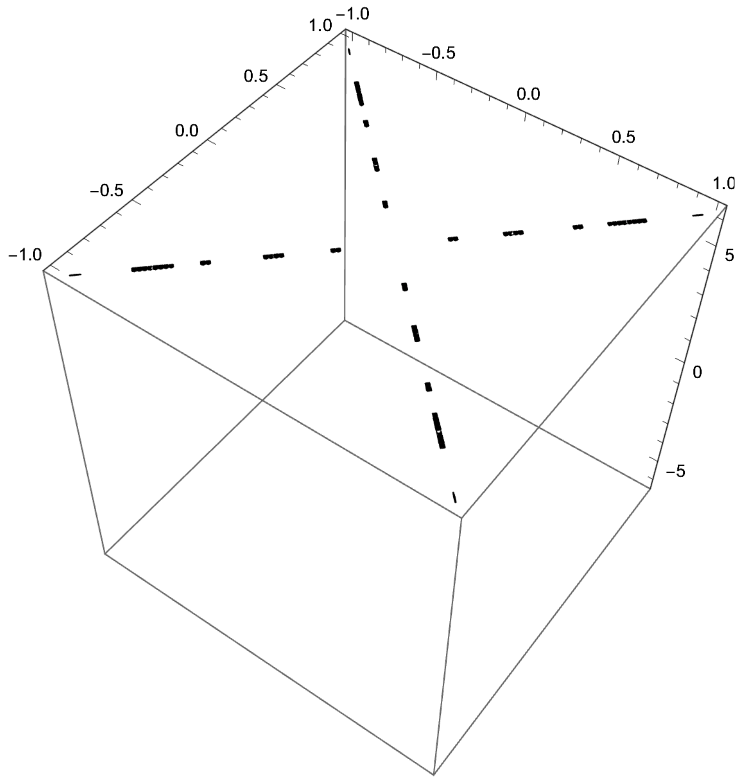
```
c := 2.99792458
```

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{3.54814\times 10^{18}\,\eta^2 - 1.12941\times 10^{18}\,r^2\,\theta + 8.98755\times 10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,\eta^2 - 12.5664\,r^2\,\theta + r^2\,\theta^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{3.54814\times 10^{18}\,\eta^2 - 1.12941\times 10^{18}\,r^2\,\theta + 8.98755\times 10^{16}\,r^2\,\theta^2}}{\sqrt{39.4784\,\eta^2 - 12.5664\,r^2\,\theta + r^2\,\theta^2}}\right\}\right\}$$

```
ContourPlot3D[(√(3.5481432270250993`*^18 η^2 -
    1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
  (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)),
 {r, -1, 1}, {η, -1, 1}, {θ, -2 π, 2 π}]
```

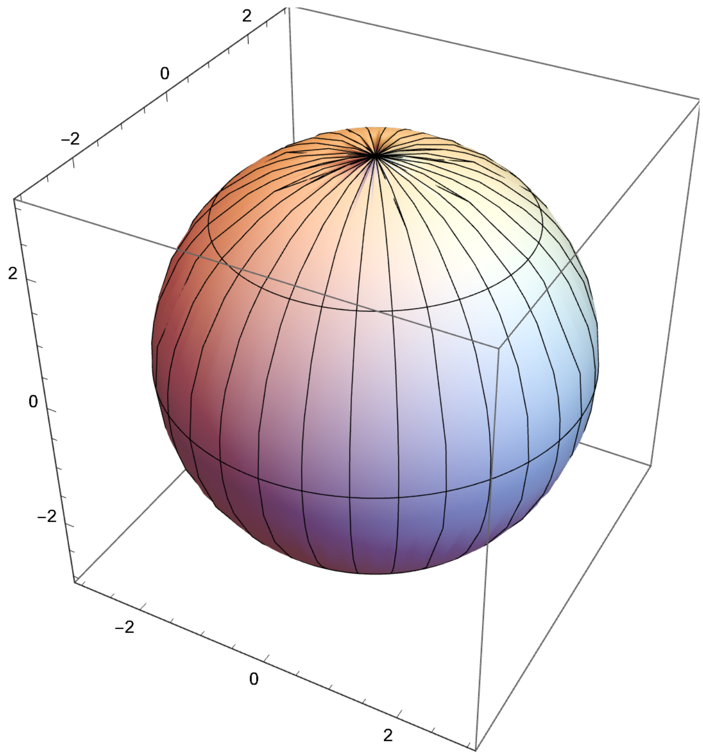


$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\ \sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\ \sqrt{4\pi r - r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2}}{\sqrt{-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2}}{\sqrt{-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2}}\right\}\right\}$$

```
SphericalPlot3D[(√(-9.004950935909588`*^24 θ +
      7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
  (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
      3.147674514204298`*^24 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



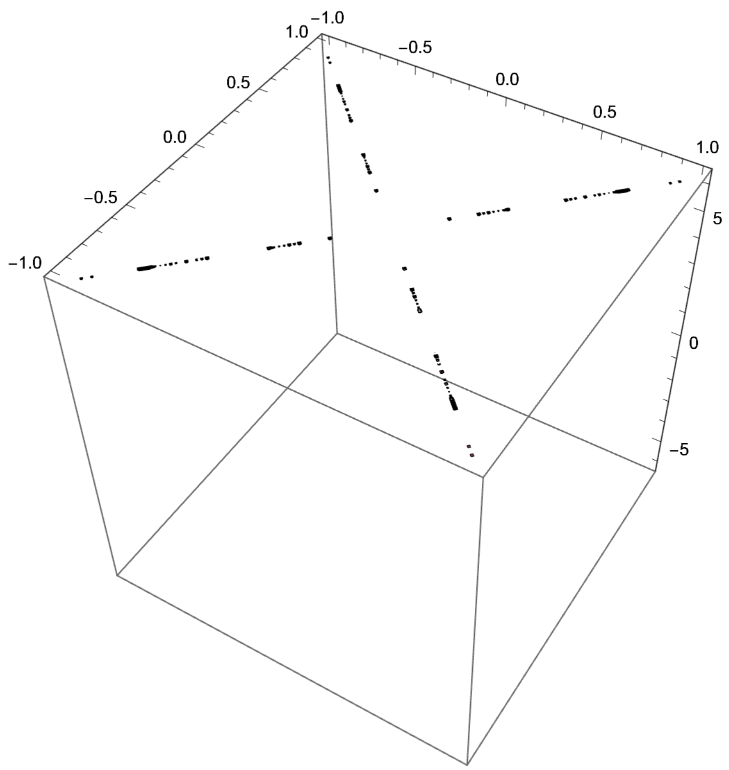
Velocity of a Tachyon' s Geometry

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{\frac{(v)^2}{2.99792458^2}-1}}\sqrt{\frac{\theta}{\sqrt{\frac{(v)^2}{2.99792458^2}-1}}}\sqrt{4\pi r - r\theta}}{2\pi} == \eta,\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{2.82899\times10^{25}\,\eta^2 - 9.00495\times10^{24}\,r^2\,\theta + 7.16591\times10^{23}\,r^2\,\theta^2}}{\sqrt{3.14767\times10^{24}\,\eta^2 - 1.00194\times10^{24}\,r^2\,\theta + 7.97315\times10^{22}\,r^2\,\theta^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{2.82899\times10^{25}\,\eta^2 - 9.00495\times10^{24}\,r^2\,\theta + 7.16591\times10^{23}\,r^2\,\theta^2}}{\sqrt{3.14767\times10^{24}\,\eta^2 - 1.00194\times10^{24}\,r^2\,\theta + 7.97315\times10^{22}\,r^2\,\theta^2}}\right\}\right\}$$

```
ContourPlot3D[(√(2.8289887706190094`*^25 η^2 -
      9.004950935909588`*^24 r^2 θ + 7.16591226875`*^23 r^2 θ^2)) /
  (√(3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2 θ +
      7.9731526875`*^22 r^2 θ^2)), {r, -1, 1}, {η, -1, 1}, {θ, -2 π, 2 π}]
```

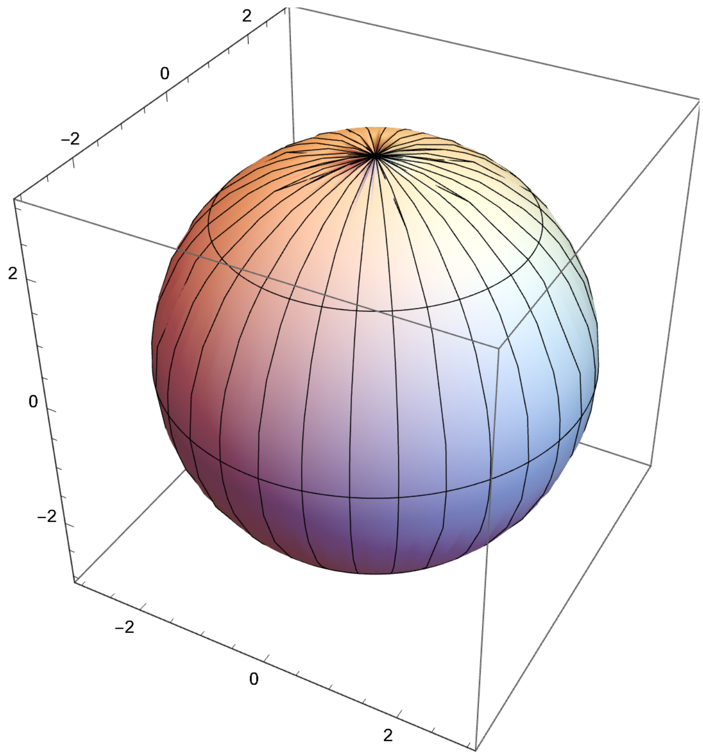


$$\text{Solve}\left[\frac{\sqrt{r\ \sqrt{\frac{(v)^2}{c^2}-1}}\ \sqrt{\frac{\theta}{\sqrt{\frac{(v)^2}{c^2}-1}}}\ \sqrt{4\,\pi\, r - r\,\theta}}{2\,\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\ \sqrt{-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2}}{\sqrt{-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2}}\right\},\right.$$

$$\left.\left\{v \to \frac{\sqrt{-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2}}{\sqrt{-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2}}\right\}\right\}$$

```
SphericalPlot3D[(√(-9.004950935909588`*^24 θ +
      7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
  (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
      3.147674514204298`*^24 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



A clear conclusion : The innate velocity expressions are exactly the same.

```
Solve[(√(-9.004950935909588`*^24 θ +
        7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
    (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
        3.147674514204298`*^24 Sin[β]^2)) ==
  (√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
        2.8289887706190094`*^25 Sin[β]^2)) /
    (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
        3.147674514204298`*^24 Sin[β]^2)), θ]
```

{{}}

```
Solve[(√(-9.004950935909588`*^24 θ +
        7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
    (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
        3.147674514204298`*^24 Sin[β]^2)) ==
   (√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
        2.8289887706190094`*^25 Sin[β]^2)) /
    (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
        3.147674514204298`*^24 Sin[β]^2)), β]
```

```
{{}}
```

```
Check[(√(3.5481432270250993`*^18 η^2 -
        1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
    (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)) ==
   (√(2.8289887706190094`*^25 η^2 - 9.004950935909588`*^24 r^2 θ +
        7.16591226875`*^23 r^2 θ^2)) / (√(3.147674514204298`*^24 η^2 -
        1.0019359163599887`*^24 r^2 θ + 7.9731526875`*^22 r^2 θ^2)), η]
```

```
{}
```

This suggests that information from a photon could be emulsed onto a Tachyon.

```
u = v =
  λ f = (√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25
           Sin[β]^2)) / (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
          3.147674514204298`*^24 Sin[β]^2)) == λ (1 / (θ / 2 π)) = λ (1 / (θ / 2 π))
```

```
E = h (1 / (θ / 2 π)) = m c^2 / √(1 - (u^2 / c^2)) = (ⅈ m) c^2 / √((u^2 / c^2) - 1)
```

Mass of the Emulsing Photon

```
h (1 / (θ / 2 π)) = m c^2 / √(1 - (u^2 / c^2))
```

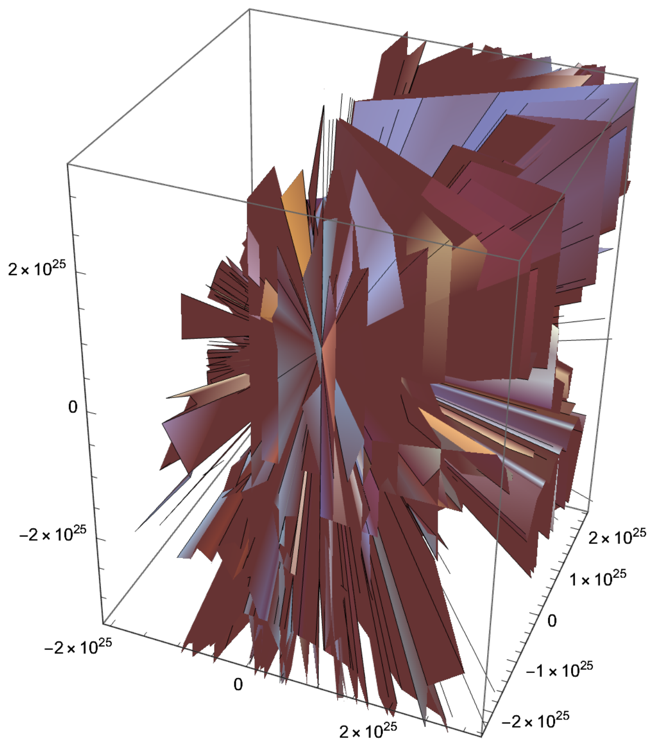
```
c := 2.99792458
```

```
h := 6.62606896 * (10^34)
```

```
h (1 / (θ / 2 π)) =
 m c^2 / √(1 - (u^2 / c^2)) = m c^2 / √(1 - (((√(3.5481432270250993`*^18 η^2 -
            1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
          (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2))) ^2 / c^2)) =
   m c^2 / √(1 - (((√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
            2.8289887706190094`*^25 Sin[β]^2)) /
          (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
            3.147674514204298`*^24 Sin[β]^2))) ^2 / c^2))

Solve[m c^2 / √(1 - (((√(-9.004950935909588`*^24 θ +
           7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
         (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
           3.147674514204298`*^24 Sin[β]^2))) ^2 / c^2)) == h (1 / (θ / 2 π)), m]
```

$$\left\{\left\{m \to \frac{1}{\theta} 4.69348 \times 10^{33} \sqrt{\left(1. - \left(0.111265 \left(-9.00495 \times 10^{24}\, \theta + 7.16591 \times 10^{23}\, \theta^2 + 2.82899 \times 10^{25}\, \mathrm{Sin}[\beta]^2\right)\right) \Big/ \left(-1.00194 \times 10^{24}\, \theta + 7.97315 \times 10^{22}\, \theta^2 + 3.14767 \times 10^{24}\, \mathrm{Sin}[\beta]^2\right)\right)}\right\}\right\}$$

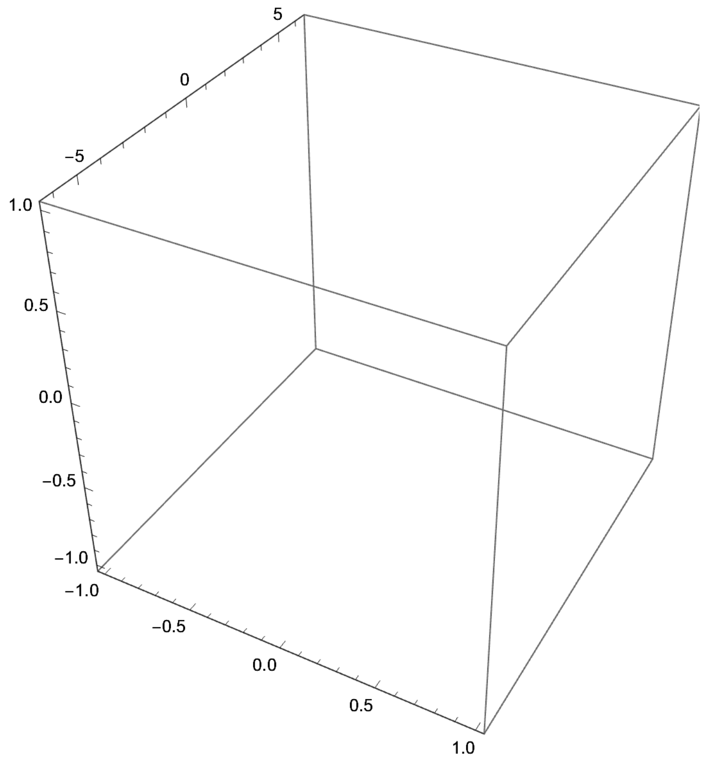
```
SphericalPlot3D[
 1/θ 4.6934767251475683`*^33 √(1.`- (0.11126500560536184` (-9.004950935909588`*^24 θ +
      7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
    (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
     3.147674514204298`*^24 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



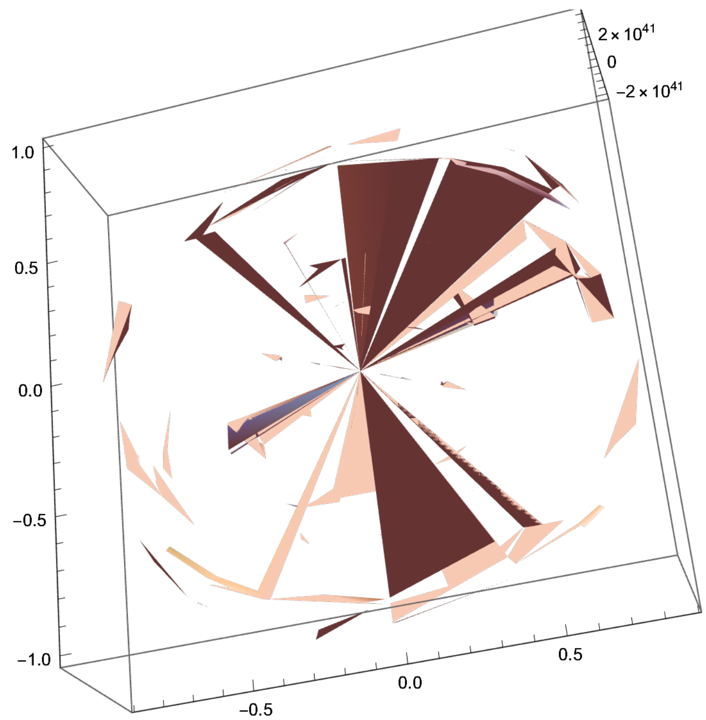

```
Solve[m c^2/ √(1 - (((√(3.5481432270250993`*^18 η^2 -
        1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
      (√(39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)))^
     2/ c^2)) == h (1 / (θ / 2 π)), m]
```

$$\left\{\left\{m \to \frac{4.69348\times 10^{33}\sqrt{1.-\frac{0.111265\,(3.54814\times 10^{18}\,\eta^2-1.12941\times 10^{18}\,r^2\,\theta+8.98755\times 10^{16}\,r^2\,\theta^2)}{39.4784\,\eta^2-12.5664\,r^2\,\theta+r^2\,\theta^2}}}{\theta}\right\}\right\}$$

```
ContourPlot3D[1/θ 4.6934767251475683`*^33
  √(1.` - (0.11126500560536184` (3.5481432270250993`*^18 η^2 -
        1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
     (39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2)),
 {r, -1, 1}, {θ, -2 π, 2 π}, {η, -1, 1}]
```



```
RevolutionPlot3D[1/θ 4.6934767251475683`*^33 Sqrt[(1.` -
    (0.11126500560536184` (3.5481432270250993`*^18 (r Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]])^2 -
         1.1294090667581471`*^18 r^2 θ + 8.987551787368176`*^16 r^2 θ^2)) /
      (39.47841760435743` (r Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]])^2 -
         12.566370614359172` r^2 θ + r^2 θ^2))], {r, -1, 1}, {θ, -2 π, 2 π}]
```

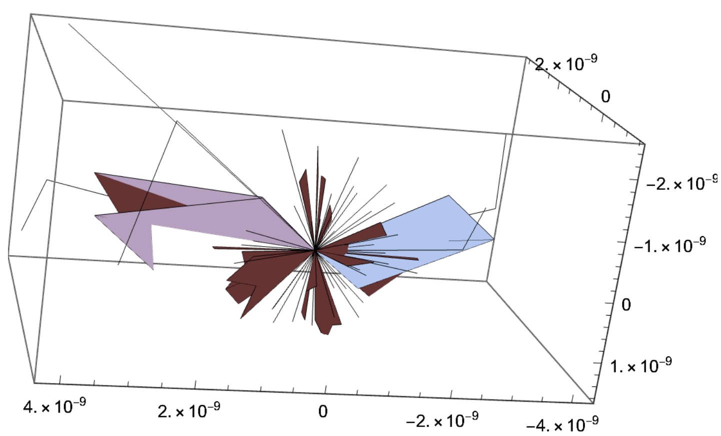


Mass of the Emulsed Tachyon

```
Solve[m c^2 / √ (1 - (((√ (-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
            2.8289887706190094`*^25 Sin[β]^2)) / (√ (-1.0019359163599887`*^24 θ +
            7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2))) ^2 / c^2)) ==
  ((ⅈ m) c^2) / √ ((((√ (-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
            2.8289887706190094`*^25 Sin[β]^2)) /
        (√ (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
            3.147674514204298`*^24 Sin[β]^2))) ^2 / c^2) - 1, m]
```

$$\left\{\left\{m \to -1. \Big/ \left(-\frac{0.+26.944\,i}{\sqrt{\frac{-9.00495\times10^{24}\,\theta+7.16591\times10^{23}\,\theta^2+2.82899\times10^{25}\,\mathrm{Sin}[\beta]^2}{-1.00194\times10^{24}\,\theta+7.97315\times10^{22}\,\theta^2+3.14767\times10^{24}\,\mathrm{Sin}[\beta]^2}}} + \frac{8.98755}{\sqrt{1.-\frac{0.111265\left(-9.00495\times10^{24}\,\theta+7.16591\times10^{23}\,\theta^2+2.82899\times10^{25}\,\mathrm{Sin}[\beta]^2\right)}{-1.00194\times10^{24}\,\theta+7.97315\times10^{22}\,\theta^2+3.14767\times10^{24}\,\mathrm{Sin}[\beta]^2}}}\right)\right\}\right\}$$

```
SphericalPlot3D[
 -1.` / (- (0.` + 26.944002417373987` ⅈ) / Sqrt[(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2) / (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)] +
    8.987551787368176` / (√(1.` - (0.11126500560536184` (-9.004950935909588`*^24 θ +
             7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
          (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
             3.147674514204298`*^24 Sin[β]^2)))), {β, -π, π}, {θ, -4 π, 4 π}]
```



The Special Case : mass of photon equals mass of tachyon

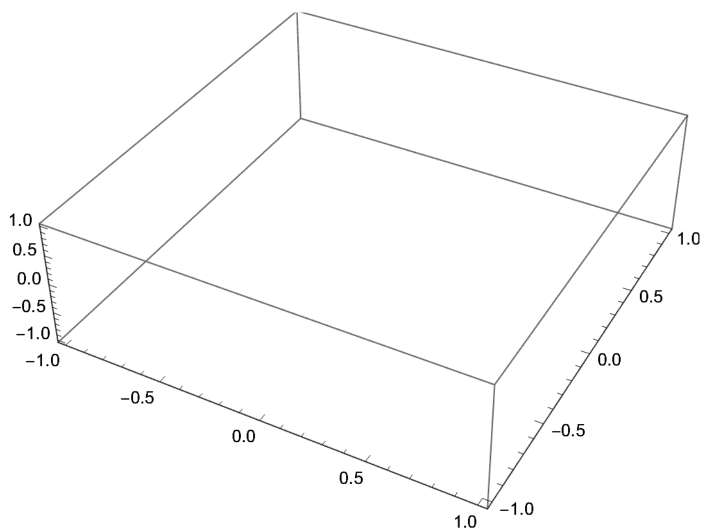
```
Solve[1/θ 4.6934767251475683`*^33
   √(1.`- (0.11126500560536184` (-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
            2.8289887706190094`*^25 Sin[β]^2)) / (-1.0019359163599887`*^24 θ +
          7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)) ==
  -1.` / (-(0.`+ 26.944002417373987` ⅈ) /
        √((-9.004950935909588`*^24 θ+7.16591226875`*^23 θ^2+2.8289887706190094`*^25 Sin[β]^2) /
          (-1.0019359163599887`*^24 θ+7.9731526875`*^22 θ^2+3.147674514204298`*^24 Sin[β]^2)) +
     8.987551787368176` /
      (√(1.`- (0.11126500560536184` (-9.004950935909588`*^24 θ + 7.16591226875`*^23
                 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) / (-1.0019359163599887`*^24
                 θ + 7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)))), θ]
```

$$\Big\{\Big\{\theta \to -1.4061\times 10^{34} + \Big(\big(1.57322\times 10^{-16} - 2.7249\times 10^{-16}\,i\big)\,\big(-3.17012\times 10^{99} + 2.11001\times 10^{32}\,\text{Sin}[\beta]^2\big)\Big)\Big/ \Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3} - \big(9.91069\times 10^{-17} + 1.71658\times 10^{-16}\,i\big)\,\Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3}\Big\},$$

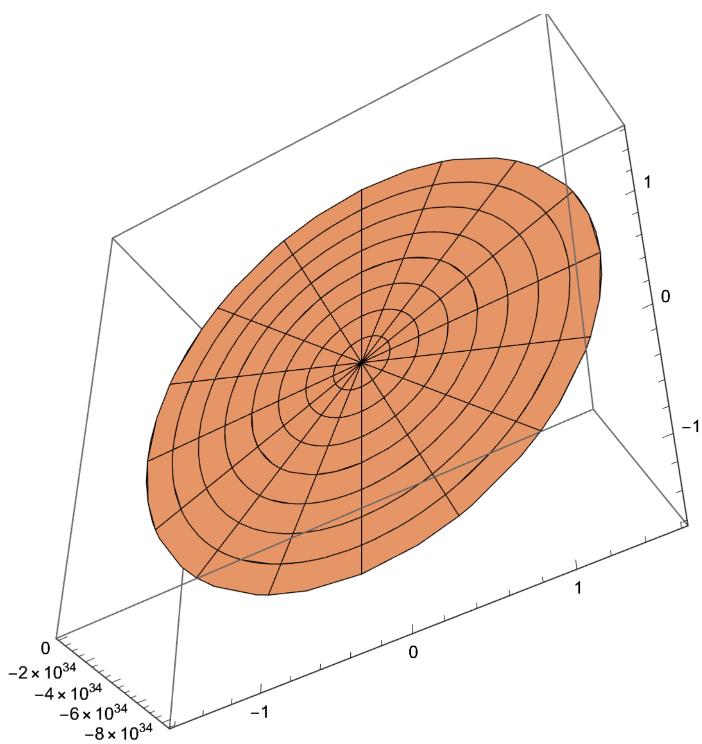
$$\Big\{\theta \to -1.4061\times 10^{34} + \Big(\big(1.57322\times 10^{-16} + 2.7249\times 10^{-16}\,i\big)\,\big(-3.17012\times 10^{99} + 2.11001\times 10^{32}\,\text{Sin}[\beta]^2\big)\Big)\Big/ \Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3} - \big(9.91069\times 10^{-17} - 1.71658\times 10^{-16}\,i\big)\,\Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3}\Big\},$$

$$\Big\{\theta \to -1.4061\times 10^{34} - \Big(3.14645\times 10^{-16}\,\big(-3.17012\times 10^{99} + 2.11001\times 10^{32}\,\text{Sin}[\beta]^2\big)\Big)\Big/ \Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3} + 1.98214\times 10^{-16}\,\Big(-3.56979\times 10^{149} - 7.12809\times 10^{82}\,\text{Sin}[\beta]^2 + 6.12994\times 10^{48}\,\text{Sin}[\beta]\,\sqrt{2.03154\times 10^{135} + 9.01452\times 10^{67}\,\text{Sin}[\beta]^2 + \text{Sin}[\beta]^4}\Big)^{1/3}\Big\}\Big\}$$

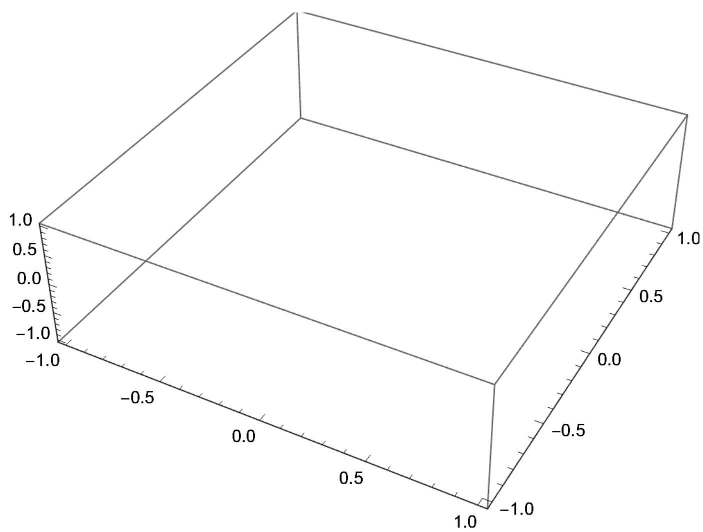
```
RevolutionPlot3D[
 -1.406095504335699`*^34 + ((1.573223658846742`*^-16 - 2.7249033087919633`*^-16 ⅈ)
      (-3.170117605322233`*^99 + 2.1100085574114824`*^32 Sin[β]^2)) /
    (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
       6.129941368665291`*^48 Sin[β]
        √(2.031537410396714`*^135 + 9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3) -
  (9.910688019868207`*^-17 + 1.7165815188375924`*^-16 ⅈ)
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β] √(2.031537410396714`*^135 +
          9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4)), {β, -π / 2, π / 2}]
```



```
RevolutionPlot3D[
 -1.406095504335699`*^34 + ((1.573223658846742`*^-16 + 2.7249033087919633`*^-16 ⅈ)
      (-3.170117605322233`*^99 + 2.1100085574114824`*^32 Sin[β]^2)) /
    (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β]
       √(2.031537410396714`*^135 + 9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3) -
  (9.910688019868207`*^-17 - 1.7165815188375924`*^-16 ⅈ)
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β] √(2.031537410396714`*^135 +
          9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3), {β, -π / 2, π / 2}]
```

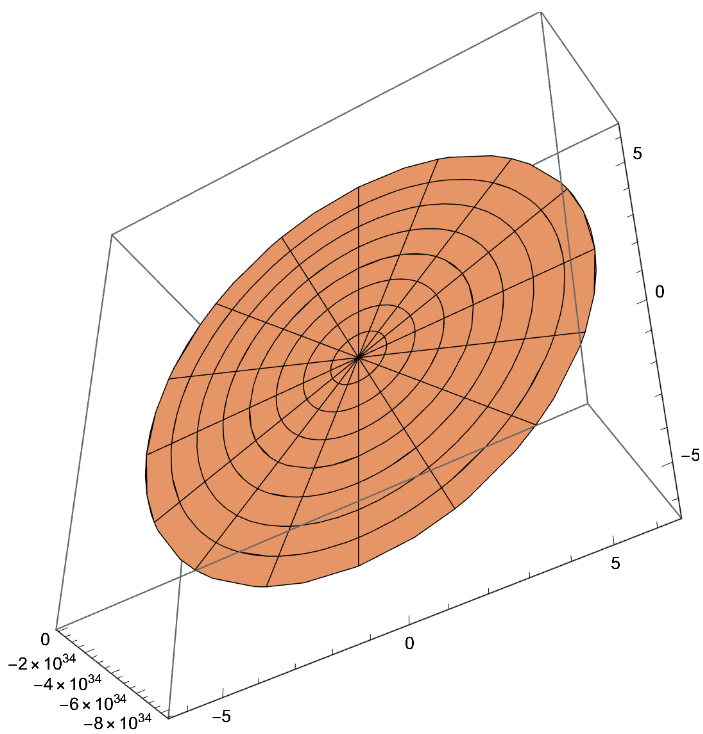


```
RevolutionPlot3D[-1.406095504335699`*^34 - (3.146447317693484`*^-16
    (-3.170117605322233`*^99 + 2.1100085574114824`*^32 Sin[β]^2)) /
  (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
     6.129941368665291`*^48 Sin[β]
      √(2.031537410396714`*^135 + 9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3) +
 1.9821376039736414`*^-16 (-3.569793189746561`*^149 - 7.128089663842775`*^82
      Sin[β]^2 + 6.129941368665291`*^48 Sin[β] √(2.031537410396714`*^135 +
         9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3), {β, -π, π}]
```

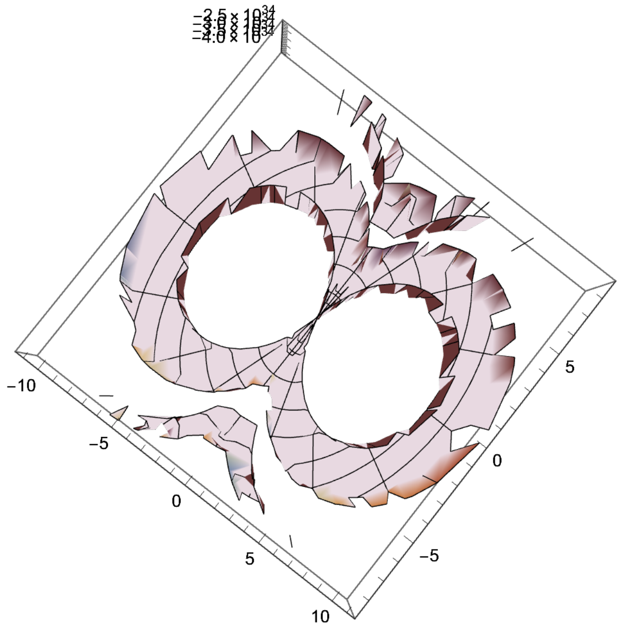


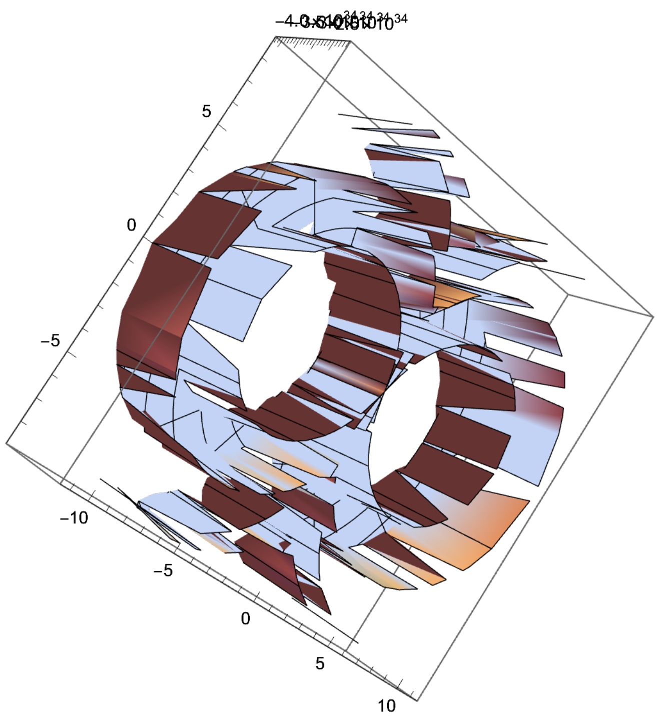
Examples of Substitutions for the Visible Plane Case

```
RevolutionPlot3D[
 -1.406095504335699`*^34 + ((1.573223658846742`*^-16 + 2.7249033087919633`*^-16 ⅈ)
     (-3.170117605322233`*^99 + 2.1100085574114824`*^32 Sin[β]^2)) /
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β]
       √(2.031537410396714`*^135 + 9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3) -
  (9.910688019868207`*^-17 - 1.7165815188375924`*^-16 ⅈ)
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β] √(2.031537410396714`*^135 +
          9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4))^(1/3), {β, -2 π, 2 π}]
```



```
RevolutionPlot3D[-1.406095504335699`*^34 +
  ((1.573223658846742`*^-16 + 2.7249033087919633`*^-16 ⅈ) (-3.170117605322233`*^99 +
       2.1100085574114824`*^32 Sin[ArcSin[Sqrt[-4 π^2 θ + 4 π θ^2 - θ^3]/(2 π Sqrt[-4 π + θ])]]^2))/
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[β] Sqrt[(2.031537410396714`*^135 +
          9.014515872517417`*^67 Sin[ArcSin[Sqrt[(4 π - θ) θ]/(2 π)]]^2 + Sin[β]^4)])^(1/3) -
  (9.910688019868207`*^-17 - 1.7165815188375924`*^-16 ⅈ)
   (-3.569793189746561`*^149 - 7.128089663842775`*^82 Sin[β]^2 +
      6.129941368665291`*^48 Sin[ArcSin[
        Sqrt[-4 π^2 θ + 4 π θ^2 - (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^3]/
          (2 π Sqrt[-4 π + θ])]] Sqrt[(2.031537410396714`*^135 +
          9.014515872517417`*^67 Sin[β]^2 + Sin[β]^4)])^(1/3), {θ, -4 π, 4 π}, {β, -π, π}]
```

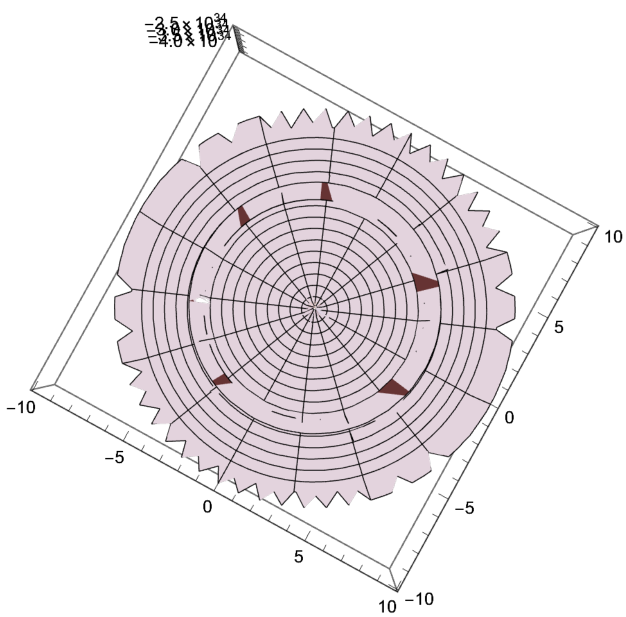

−10
−5
0
5
10
5
0
−5

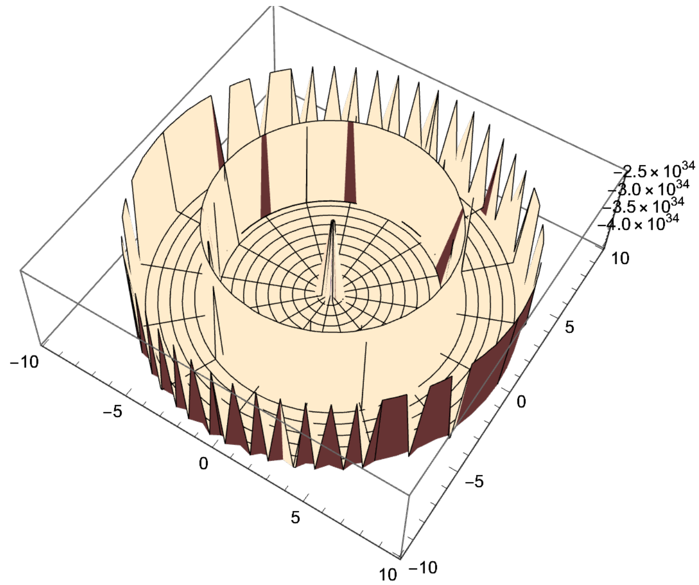

5
0
−5
−10
−5
0
5
10

$$\text{RevolutionPlot3D}\Big[-1.406095504335699\grave{}*\hat{}34+\Big((1.573223658846742\grave{}*\hat{}-16+2.7249033087919633\grave{}*\hat{}-16\,i)\Big(-3.170117605322233\grave{}*\hat{}99+2.1100085574114824\grave{}*\hat{}32\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2\Big)\Big)\Big/$$

$$\Big(-3.569793189746561\grave{}*\hat{}149-7.128089663842775\grave{}*\hat{}82\,\text{Sin}[\beta]^2+6.129941368665291\grave{}*\hat{}48\,\text{Sin}[\beta]\sqrt{\Big(2.031537410396714\grave{}*\hat{}135+9.014515872517417\grave{}*\hat{}67\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{(4\pi-\theta)\,\theta}}{2\pi}\Big]\Big]^2+\text{Sin}[\beta]^4\Big)}\Big)^{1/3}-$$

$$(9.910688019868207\grave{}*\hat{}-17-1.7165815188375924\grave{}*\hat{}-16\,i)\Big(-3.569793189746561\grave{}*\hat{}149-7.128089663842775\grave{}*\hat{}82\,\text{Sin}[\beta]^2+6.129941368665291\grave{}*\hat{}48\,\text{Sin}\Big[\text{ArcSin}\Big[\frac{\sqrt{-4\pi^2\theta+4\pi\theta^2-\theta^3}}{2\pi\sqrt{-4\pi+\theta}}\Big]\Big]\sqrt{\Big(2.031537410396714\grave{}*\hat{}135+9.014515872517417\grave{}*\hat{}67\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\Big)}\Big)^{1/3},\ \{\theta,-4\pi,4\pi\},\ \{\beta,-\pi,\pi\}\Big]$$






```
Solve[1/θ 4.6934767251475683`*^33
   √(1.`- (0.11126500560536184` (-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
            2.8289887706190094`*^25 Sin[β]^2)) / (-1.0019359163599887`*^24 θ +
          7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)) ==
  -1.` / (-((0.`+ 26.944002417373987` i) / (√((-9.004950935909588`*^24 θ +
              7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2) /
            (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
              3.147674514204298`*^24 Sin[β]^2)))) + 8.987551787368176` /
       (√(1.`- (0.11126500560536184` (-9.004950935909588`*^24 θ + 7.16591226875`*^23
                θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) / (-1.0019359163599887`*^24
              θ + 7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)))), β]
```

{{}}

```
h ν = h (1 / (θ / 2 π)) = (ⅈ m) c^2/ √((u^2 / c^2) - 1) =
  (ⅈ (-1.` / (-(0.` + 26.944002417373987` ⅈ) / (√((-9.004950935909588`*^24 θ +
          7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2) /
         (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
          3.147674514204298`*^24 Sin[β]^2))) + 8.987551787368176` /
       (√(1.` - (0.11126500560536184` (-9.004950935909588`*^24 θ +
            7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25 Sin[β]^2)) /
         (-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
          3.147674514204298`*^24 Sin[β]^2))))) c^2) /
   √(((√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
         2.8289887706190094`*^25 Sin[β]^2)) / (√(-1.0019359163599887`*^24 θ +
         7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)))^2 / c^2) - 1

Solve[(ⅈ (-1.` / (-(0.` + 26.944002417373987` ⅈ) /
        (√((-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
             2.8289887706190094`*^25 Sin[β]^2) / (-1.0019359163599887`*^24 θ +
             7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2))) +
       8.987551787368176` / (√(1.` - (0.11126500560536184`
              (-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
                2.8289887706190094`*^25 Sin[β]^2)) / (-1.0019359163599887`*^24
              θ + 7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)))))
     c^2) / √(((√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
           2.8289887706190094`*^25 Sin[β]^2)) /
         (√(-1.0019359163599887`*^24 θ + 7.9731526875`*^22 θ^2 +
           3.147674514204298`*^24 Sin[β]^2)))^2 / c^2) - 1 == h (1 / (θ / 2 π)), β]

{{}}

h := 6.62606896 * (10^34)
```

$$\lambda = \eta = \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}$$

η' for a Tachyon

For a Tachyon :

$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \sqrt{(u\char`^2 / c\char`^2) - 1} = \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \sqrt{(v\char`^2 / c\char`^2) - 1} =$$

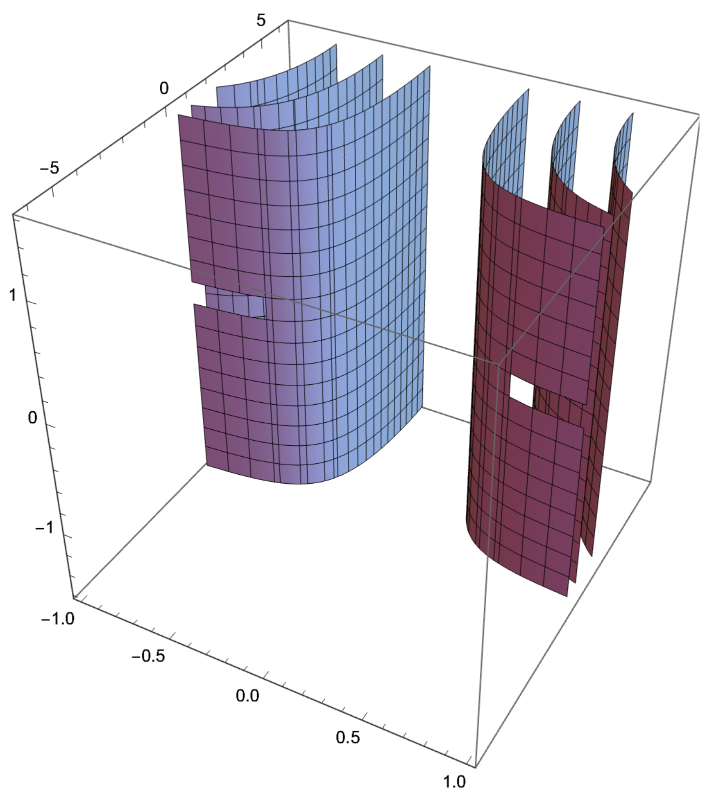
$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \surd\Big(\Big(\Big(\surd\Big(-9.004950935909588\text{`}{*}\char`^24\,\theta + 7.16591226875\text{`}{*}\char`^23\,\theta^2 + 2.8289887706190094\text{`}{*}\char`^25\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/ \Big(\surd\Big(-1.0019359163599887\text{`}{*}\char`^24\,\theta + 7.9731526875\text{`}{*}\char`^22\,\theta^2 + 3.147674514204298\text{`}{*}\char`^24\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big)\char`^2 \Big/ c\char`^2\Big) - 1 =$$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \surd\Big(\Big(\Big(\Big(\surd\Big(2.8289887706190094\text{`}{*}\char`^25\,\eta^2 - 9.004950935909588\text{`}{*}\char`^24\,r^2\,\theta + 7.16591226875\text{`}{*}\char`^23\,r^2\,\theta^2\Big)\Big) \Big/ \Big(\surd\Big(3.147674514204298\text{`}{*}\char`^24\,\eta^2 - 1.0019359163599887\text{`}{*}\char`^24\,r^2\,\theta + 7.9731526875\text{`}{*}\char`^22\,r^2\,\theta^2\Big)\Big)\Big)\Big)\char`^2 \Big/ c\char`^2\Big) - 1$$

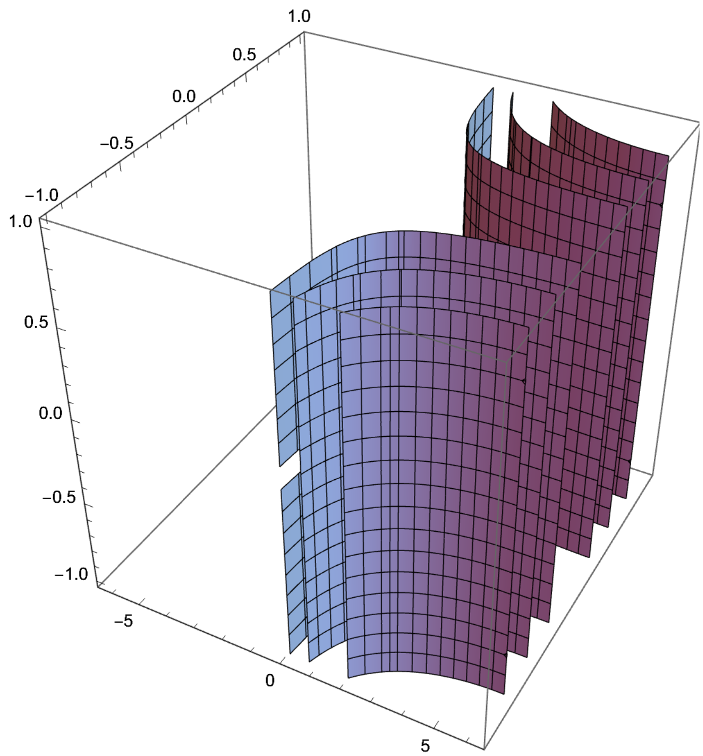
ContourPlot3D$\Big[$

$$\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\ \surd\Big(\Big(\Big(\surd\Big(-9.004950935909588\text{`}{*}\char`^24\,\theta + 7.16591226875\text{`}{*}\char`^23\,\theta^2 + 2.8289887706190094\text{`}{*}\char`^25\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/ \Big(\surd\Big(-1.0019359163599887\text{`}{*}\char`^24\,\theta + 7.9731526875\text{`}{*}\char`^22\,\theta^2 + 3.147674514204298\text{`}{*}\char`^24\,\mathrm{Sin}[\beta]^2\Big)\Big)\Big)\char`^2 \Big/ c\char`^2\Big) -$$

$1, \{r, -1, 1\}, \{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi / 2, \pi / 2\}\Big]$



```
ContourPlot3D[
 √(4 π r^2 θ - r^2 θ^2)/(2 π) √((((√(2.8289887706190094`*^25 η^2 - 9.004950935909588`*^24 r^2 θ +
        7.16591226875`*^23 r^2 θ^2)) / (√(3.147674514204298`*^24 η^2 -
        1.0019359163599887`*^24 r^2 θ + 7.9731526875`*^22 r^2 θ^2)))) ^
    2 / c ^ 2) - 1, {θ, -2 π, 2 π}, {r, -1, 1}, {η, -1, 1}]
```



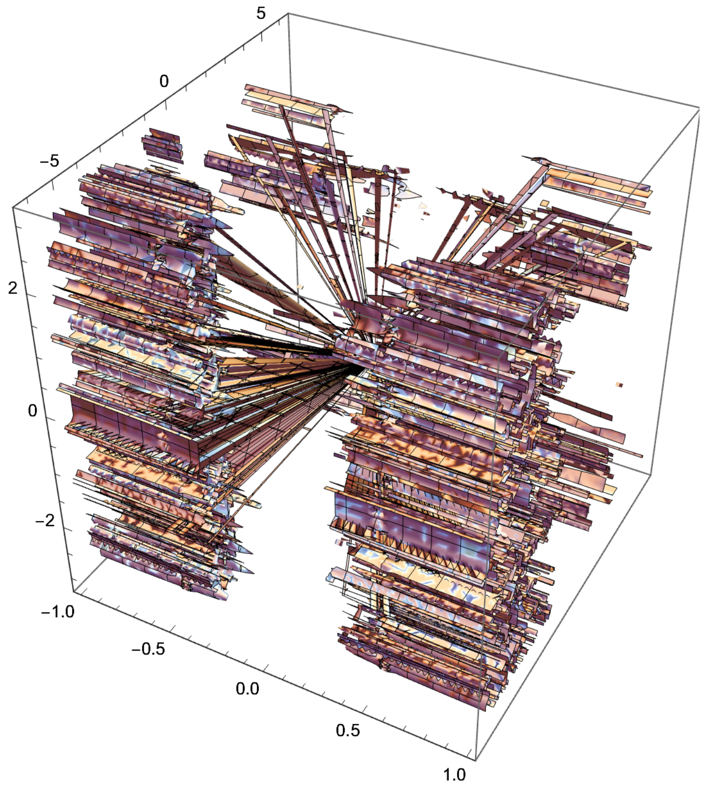
η' for a Regular Particle

For a regular particle : $\eta' = \frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} \sqrt{1 - u^2/c^2} =$

$$\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} \sqrt{}(1 - ((((\sqrt{}(-9.004950935909588`*^24\,\theta + 7.16591226875`*^23\,\theta^2 + 2.8289887706190094`*^25\,\mathrm{Sin}[\beta]^2)) / (\sqrt{}(-1.0019359163599887`*^24\,\theta + 7.9731526875`*^22\,\theta^2 + 3.147674514204298`*^24\,\mathrm{Sin}[\beta]^2)))) \hat{} 2 / c \hat{} 2)) =$$

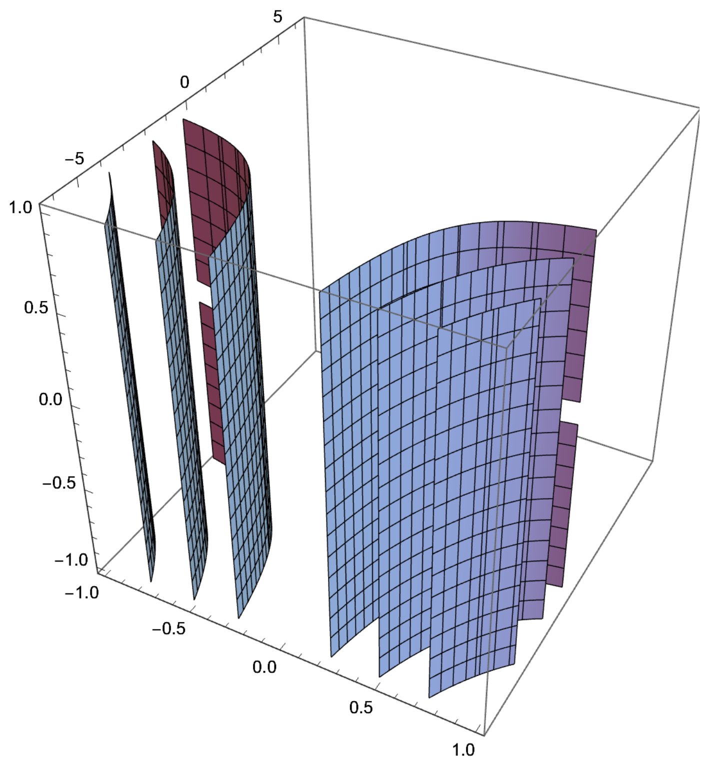
$$\frac{\sqrt{4\pi r^2 \theta - r^2 \theta^2}}{2\pi} \sqrt{}\left(1 - \left(\left(\sqrt{}\left(3.5481432270250993`*^18\,\eta^2 - 1.1294090667581471`*^18\, r^2\,\theta + 8.987551787368176`*^16\, r^2\,\theta^2\right)\right) \Big/ \left(\sqrt{39.47841760435743`\,\eta^2 - 12.566370614359172`\, r^2\,\theta + r^2\,\theta^2}\right)\right) \hat{} 2 \Big/ c \hat{} 2\right)$$

```
ContourPlot3D[
 Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π) √(1 - ((((√(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
 2.8289887706190094`*^25 Sin[β]^2)) / (√(-1.0019359163599887`*^24
 θ + 7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)))) ^
 2/c^2)), {r, -1, 1}, {θ, -2 π, 2 π}, {β, -π, π}]
```



Right now, mathematics does a better job of describing the visual world than a photo. We are looking for a way of expressing what we see in terms of actual texture and depth, so why not use mathematics? Paint peeling of a wall has a certain visual texture that does not come across very well in a photograph or video. For some reason, mathematics can describe an entire object of perception.

```
ContourPlot3D[
 Sqrt[4 π r^2 θ - r^2 θ^2]/(2 π) √(1 - ((√(3.5481432270250993`*^18 η^2 - 1.1294090667581471`*^18 r^2 θ +
        8.987551787368176`*^16 r^2 θ^2)) /
      (Sqrt[39.47841760435743` η^2 - 12.566370614359172` r^2 θ + r^2 θ^2])) ^2 /
    c^2), {r, -1, 1}, {θ, -2 π, 2 π}, {η, -1, 1}]
```



This is extremely useful in processing the information emulsed by a photon onto a tachyon, because it has the same form as the relativistic height of the cone for regular particle traveling. These forms may be interchanged, allowing information of the same kind to pass through one form of the equation, while being expressed only in that form when the tachyon has the information transformed into it.

Frequency of a Tachyon

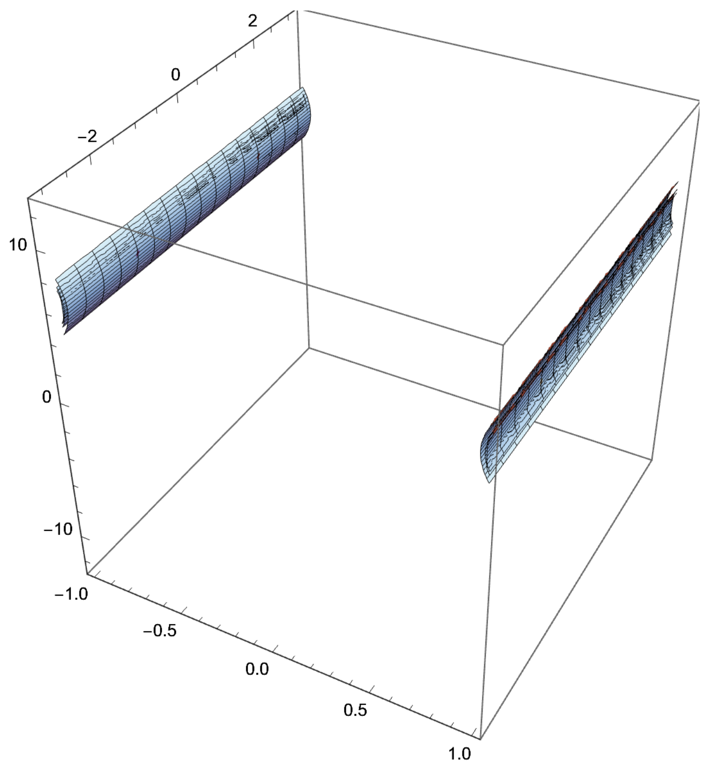
f = frequency

$$\eta\,'\,f = \left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\sqrt{\left(\left(\left(\sqrt{\left(-9.004950935909588`*^{\wedge}24\,\theta + 7.16591226875`*^{\wedge}23\,\theta^2 + 2.8289887706190094`*^{\wedge}25\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-1.0019359163599887`*^{\wedge}24\,\theta + 7.9731526875`*^{\wedge}22\,\theta^2 + 3.147674514204298`*^{\wedge}24\,\text{Sin}[\beta]^2\right)}\right)\right)^{\wedge}2\Big/c^{\wedge}2\right) - 1}\right) f = v = \left(\sqrt{\left(-9.004950935909588`*^{\wedge}24\,\theta + 7.16591226875`*^{\wedge}23\,\theta^2 + 2.8289887706190094`*^{\wedge}25\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-1.0019359163599887`*^{\wedge}24\,\theta + 7.9731526875`*^{\wedge}22\,\theta^2 + 3.147674514204298`*^{\wedge}24\,\text{Sin}[\beta]^2\right)}\right) = \left(\sqrt{\left(3.5481432270250993`*^{\wedge}18\,\eta^2 - 1.1294090667581471`*^{\wedge}18\,r^2\,\theta + 8.987551787368176`*^{\wedge}16\,r^2\,\theta^2\right)}\right)\Big/\left(\sqrt{39.47841760435743`\,\eta^2 - 12.566370614359172`\,r^2\,\theta + r^2\,\theta^2}\right)$$

$$\text{Solve}\Big[\left(\sqrt{\left(-9.004950935909588`*^{\wedge}24\,\theta + 7.16591226875`*^{\wedge}23\,\theta^2 + 2.8289887706190094`*^{\wedge}25\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-1.0019359163599887`*^{\wedge}24\,\theta + 7.9731526875`*^{\wedge}22\,\theta^2 + 3.147674514204298`*^{\wedge}24\,\text{Sin}[\beta]^2\right)}\right) == \left(\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\sqrt{\left(\left(\left(\sqrt{\left(-9.004950935909588`*^{\wedge}24\,\theta + 7.16591226875`*^{\wedge}23\,\theta^2 + 2.8289887706190094`*^{\wedge}25\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-1.0019359163599887`*^{\wedge}24\,\theta + 7.9731526875`*^{\wedge}22\,\theta^2 + 3.147674514204298`*^{\wedge}24\,\text{Sin}[\beta]^2\right)}\right)\right)^{\wedge}2\Big/c^{\wedge}2\right) - 1}\right) f,\ f\Big]$$

$$\Big\{\Big\{f \to \left(1.\ \sqrt{-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2}\right)\Big/\left(\sqrt{-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2}\left(-1. + 0.159155\,\sqrt{12.5664\,r^2\,\theta - 1.\,r^2\,\theta^2}\sqrt{\left(\left(-9.00495\times10^{24}\,\theta + 7.16591\times10^{23}\,\theta^2 + 2.82899\times10^{25}\,\text{Sin}[\beta]^2\right)\Big/\left(c^2\left(-1.00194\times10^{24}\,\theta + 7.97315\times10^{22}\,\theta^2 + 3.14767\times10^{24}\,\text{Sin}[\beta]^2\right)\right)\right)}\right)\right)\Big\}\Big\}$$

```
ContourPlot3D[
 (1.` √(-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 + 2.8289887706190094`*^25
      Sin[β]^2)) / (√(-1.0019359163599887`*^24 θ +
      7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2)
    (-1.` + 0.15915494309189535` √(12.566370614359172` r^2 θ - 1.` r^2 θ^2)
      √((-9.004950935909588`*^24 θ + 7.16591226875`*^23 θ^2 +
          2.8289887706190094`*^25 Sin[β]^2) / (c^2 (-1.0019359163599887`*^24 θ +
           7.9731526875`*^22 θ^2 + 3.147674514204298`*^24 Sin[β]^2))))),
 {r, -1, 1}, {β, -π, π}, {θ, -4 π, 4 π}]
```

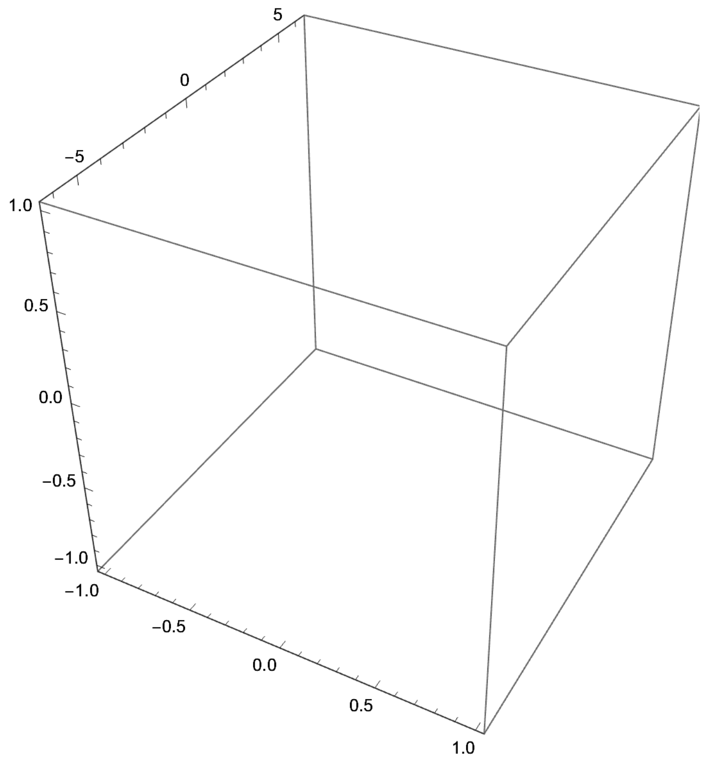



```
η' f = v = (√(2.8289887706190094`*^25 η^2 -
      9.004950935909588`*^24 r^2 θ + 7.16591226875`*^23 r^2 θ^2)) /
   (√(3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2 θ +
      7.9731526875`*^22 r^2 θ^2))
```

```
Solve[η √ ((((√ (2.8289887706190094`*^25 η^2 -
            9.004950935909588`*^24 r^2 θ + 7.16591226875`*^23 r^2 θ^2)) /
         (√ (3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2
              θ + 7.9731526875`*^22 r^2 θ^2)) ^2) / (c^2)) - 1) f ==
  (√ (2.8289887706190094`*^25 η^2 - 9.004950935909588`*^24 r^2 θ +
       7.16591226875`*^23 r^2 θ^2)) /
   (√ (3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2 θ +
       7.9731526875`*^22 r^2 θ^2)), f]
```

$$\left\{\left\{f \to \left(1.\ \sqrt{2.82899\times10^{25}\,\eta^2 - 9.00495\times10^{24}\,r^2\,\theta + 7.16591\times10^{23}\,r^2\,\theta^2}\right) \Big/ \left(\eta\ \sqrt{3.14767\times10^{24}\,\eta^2 - 1.00194\times10^{24}\,r^2\,\theta + 7.97315\times10^{22}\,r^2\,\theta^2}\ \sqrt{\left(-1. + \left(0.111265\ \sqrt{2.82899\times10^{25}\,\eta^2 - 9.00495\times10^{24}\,r^2\,\theta + 7.16591\times10^{23}\,r^2\,\theta^2}\right) \Big/ \left(3.14767\times10^{24}\,\eta^2 - 1.00194\times10^{24}\,r^2\,\theta + 7.97315\times10^{22}\,r^2\,\theta^2\right)\right)}\right)\right\}\right\}$$

```
ContourPlot3D[(1.` √(2.8289887706190094`*^25 η^2 -
        9.004950935909588`*^24 r^2 θ + 7.16591226875`*^23 r^2 θ^2)) /
  (η √(3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2 θ +
        7.9731526875`*^22 r^2 θ^2)
    √(-1.` + (0.11126500560536184` √(2.8289887706190094`*^25 η^2 -
              9.004950935909588`*^24 r^2 θ + 7.16591226875`*^23 r^2 θ^2)) /
        (3.147674514204298`*^24 η^2 - 1.0019359163599887`*^24 r^2 θ +
          7.9731526875`*^22 r^2 θ^2))), {r, -1, 1}, {θ, -2 π, 2 π}, {η, -1, 1}]
```



There are many other forms that could be used in such a process to emult photon information into tachyon information accessible in Mathematics for Describing a Circle into a Cone.

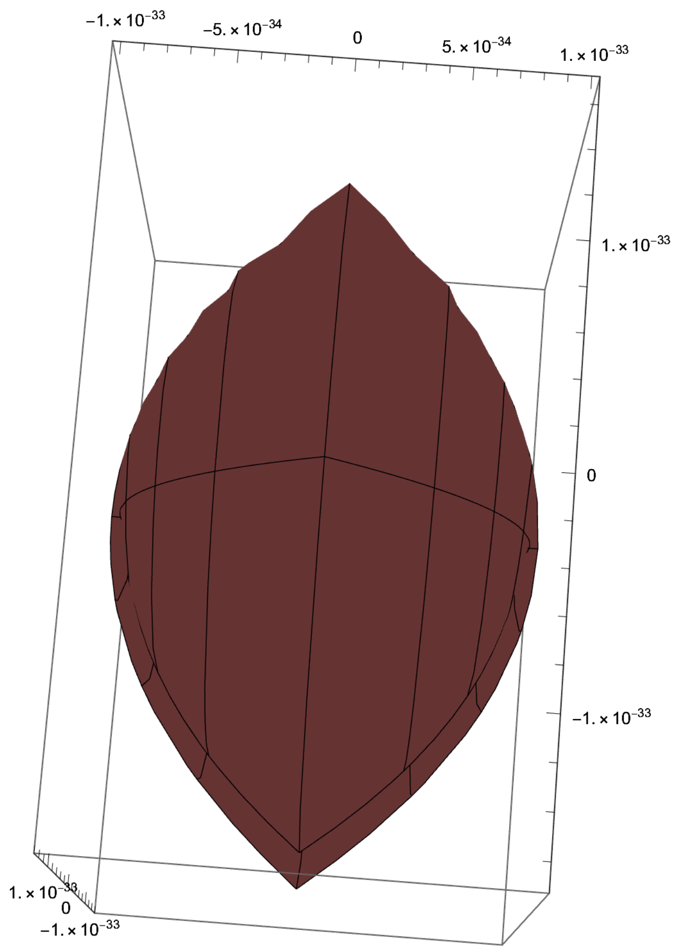
In Jesus' name, Amen.

```
h := 6.62606896 * 10 ^ (-34)
```

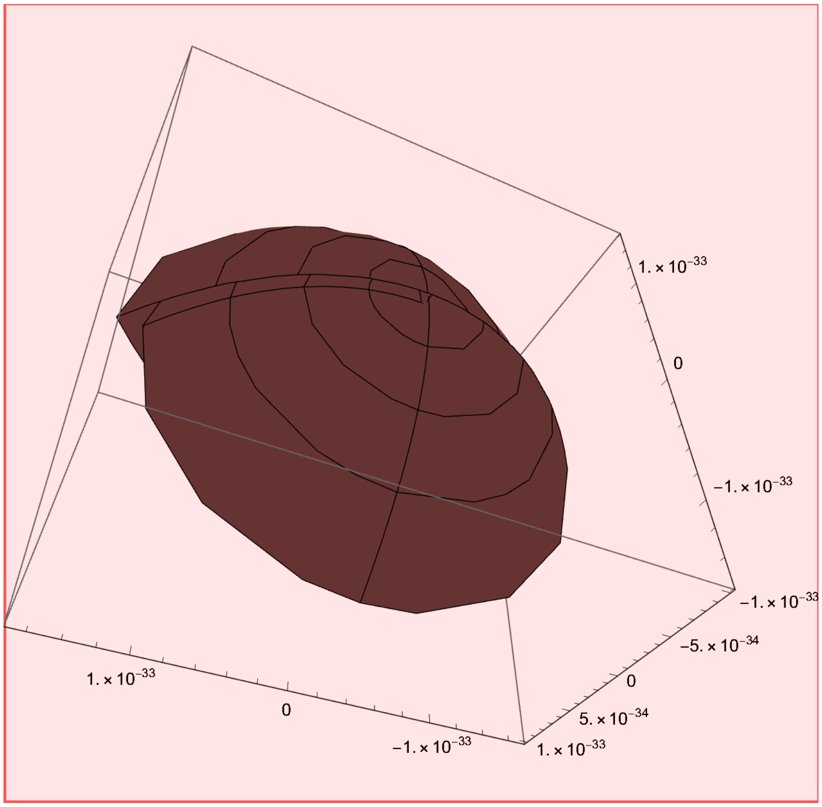
```
c := 2.99792458 * (10 ^ 8)
```

$$(\text{Energy of Photon with Wavelength } \eta) = \frac{h \left(c^2 + \left(\frac{c \sqrt{2 \left(\pi + \sqrt{\pi^2 - \pi^2 \, \text{Sin}[\beta]^2}\right)}}{\sqrt{4 \pi - \Theta}}\right)^2\right)}{2 \left(\frac{c \sqrt{2 \left(\pi + \sqrt{\pi^2 - \pi^2 \, \text{Sin}[\beta]^2}\right)}}{\sqrt{4 \pi - \Theta}}\right)^2} \text{ Joules} \qquad (244)$$

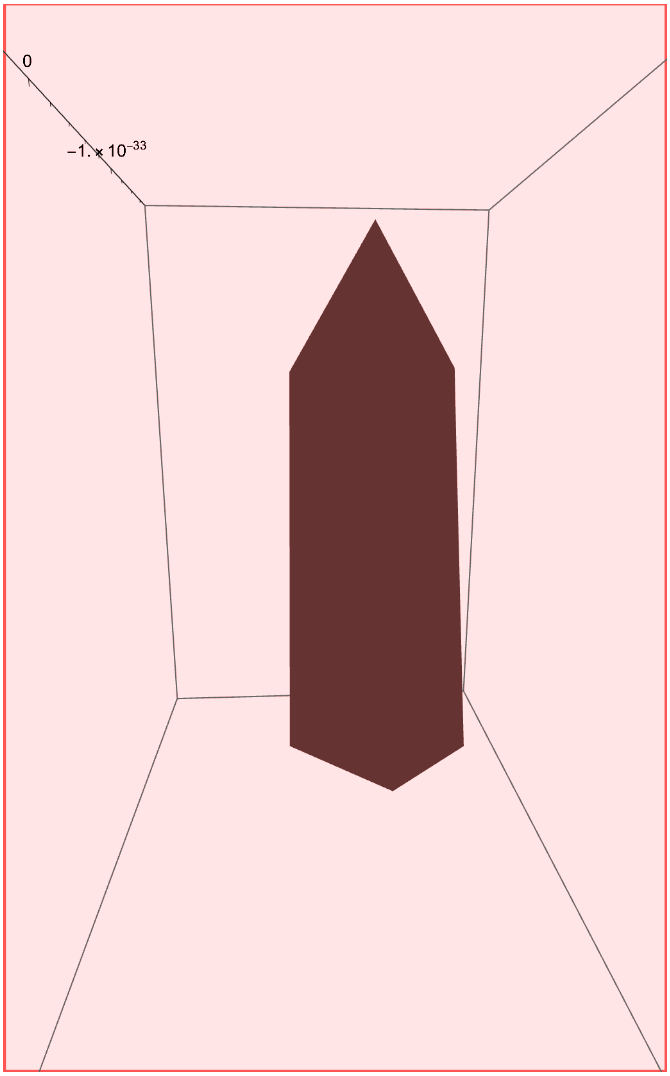
$$\text{SphericalPlot3D}\left[\frac{h\left(c^2+\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2},\ \{\beta,\ -\pi,\ \pi\},\ \{\theta,\ -4\,\pi,\ 4\,\pi\}\right]$$

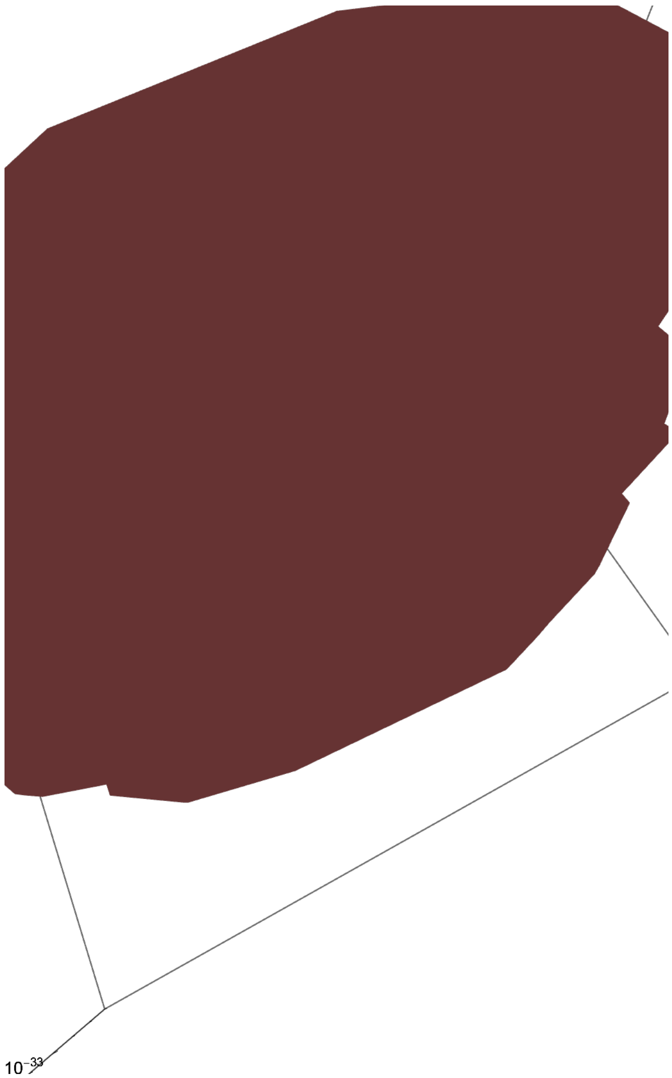


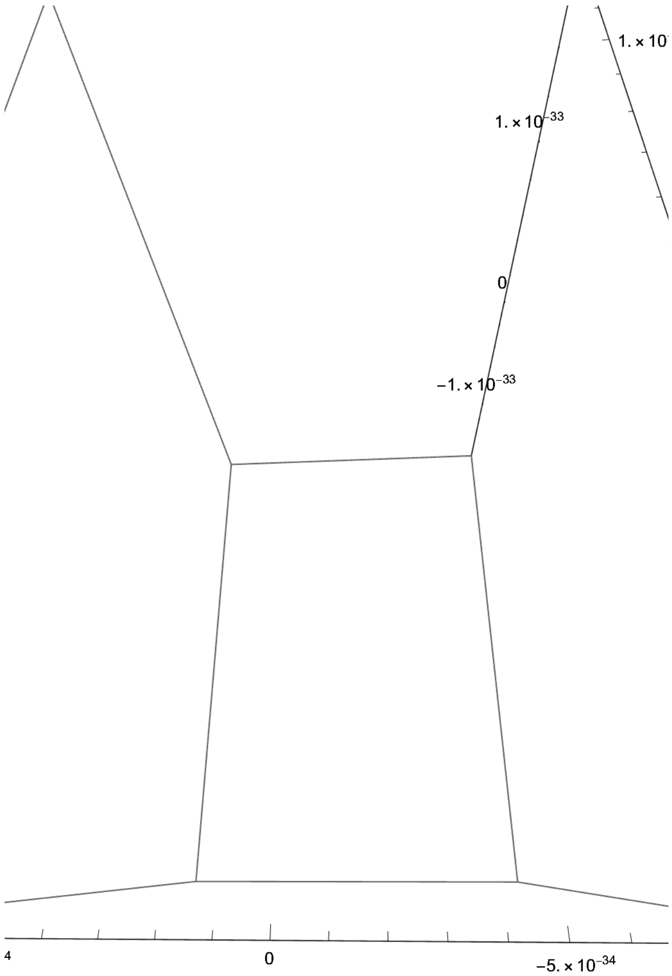
From the following position, it is easier to make the box "tesseract."



1. × 10−33
0
−1. × 10−33
−1. × 10−33
−5. × 10−34
0
5. × 10−34
1. × 10−33
1. × 10−33
0
−1. × 10−33


0
$-1. \times 10^{-33}$


10^{-33}



$$\frac{\pi}{3}$$

$$\text{Solve}\left[1 == \frac{\sqrt{4\,\pi\,r^2\,\frac{\pi}{3} - r^2\,\left(\frac{\pi}{3}\right)^2}}{2\,\pi},\ r\right]$$

$$\left\{\left\{r \to -\frac{6}{\sqrt{11}}\right\},\ \left\{r \to \frac{6}{\sqrt{11}}\right\}\right\}$$

$$\text{Solve}\left[r\ \text{Sin}[\beta] == \frac{\sqrt{4\,\pi\,r^2\,\frac{\pi}{3} - r^2\,\left(\frac{\pi}{3}\right)^2}}{2\,\pi},\ r\right]$$

$$\{\{r \to 0\}\}$$

$$\text{Solve}\left[\frac{\pi}{3} == \frac{2\pi\left(\left(\frac{6}{\sqrt{11}}\right)^2 + \sqrt{\left(\frac{6}{\sqrt{11}}\right)^4 - \left(\frac{6}{\sqrt{11}}\right)^2 \eta^2}\right)}{\left(\frac{6}{\sqrt{11}}\right)^2}, \eta\right]$$

{}

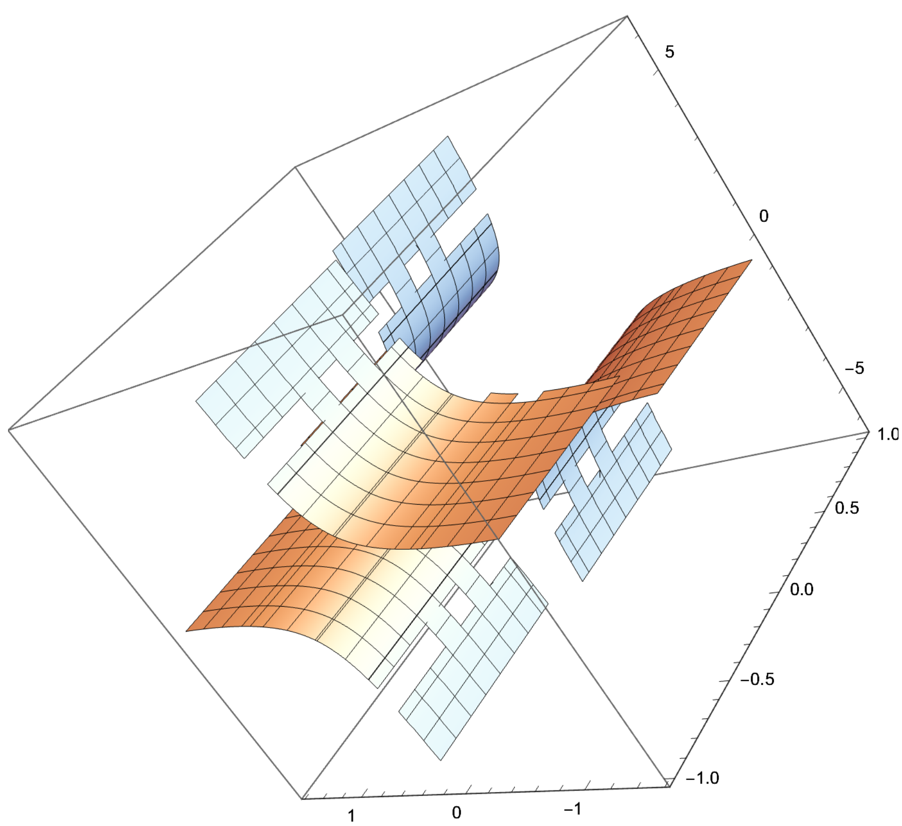
$$1 - \frac{1\ \frac{\pi}{3}}{2\pi}$$

$$\frac{5}{6}$$

$$\text{Solve}\left[(2\pi r - 2\pi r_1 - \theta r)\ \text{Sin}[\beta] == \frac{\sqrt{4\pi r^2\ \frac{\pi}{3} - r^2\left(\frac{\pi}{3}\right)^2}}{2\pi}, \theta\right]$$

$$\left\{\left\{\theta \to -\frac{\text{Csc}[\beta]\left(\sqrt{11}\ \sqrt{r^2} - 12\pi r\ \text{Sin}[\beta] + 12\pi\ \text{Sin}[\beta]\ r_1\right)}{6 r}\right\}\right\}$$

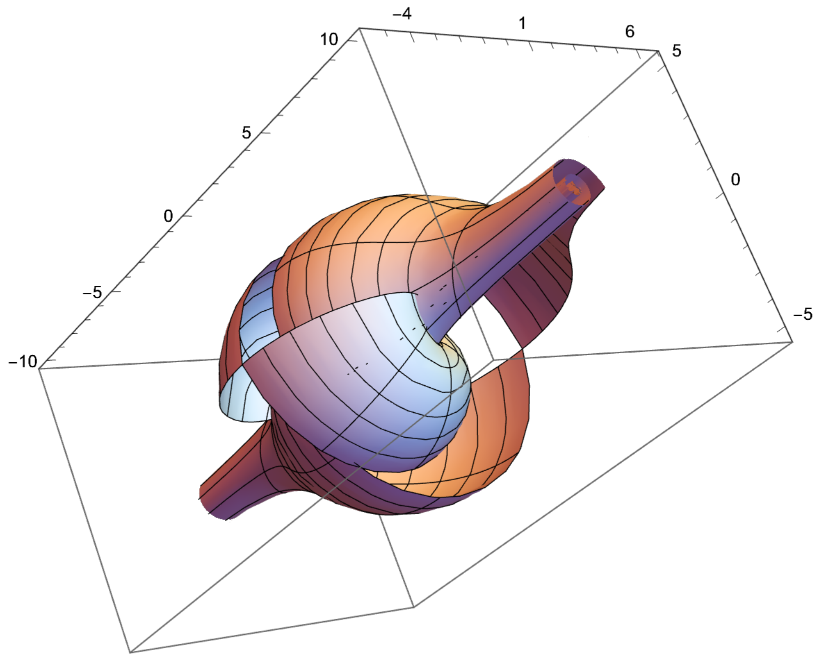
$$\text{ContourPlot3D}\left[\frac{\text{Csc}[\beta]\left(\sqrt{11}\ \sqrt{r^2} - 12\pi r\ \text{Sin}[\beta] + 12\pi\ \text{Sin}[\beta]\left(\frac{2\pi r - r\theta}{2\pi}\right)\right)}{6 r},\right.$$
$$\left.\{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\right]$$



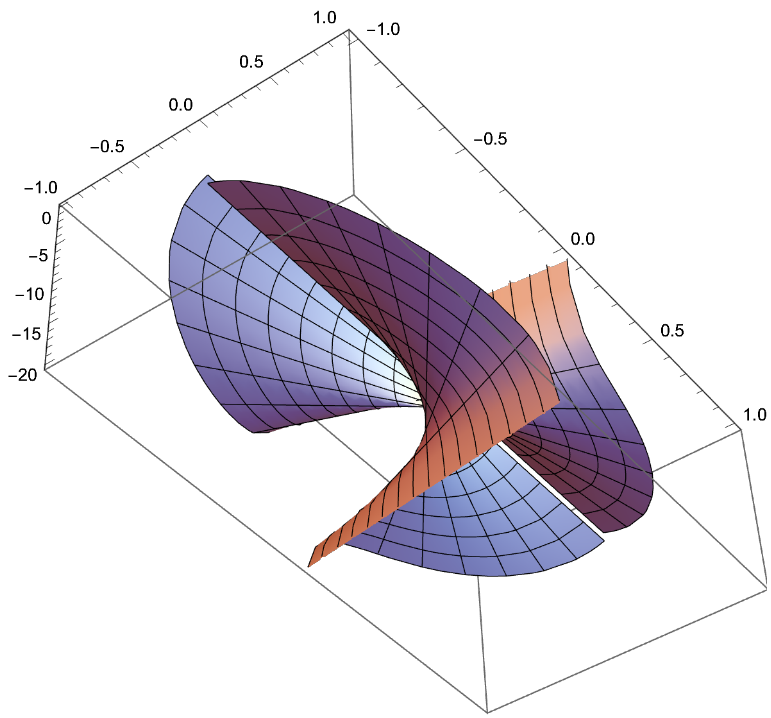
$$\frac{6}{\sqrt{11}}$$

$$\text{SphericalPlot3D}\left[\frac{\text{Csc}[\beta]\left(\sqrt{11}\ \sqrt{\left(\frac{6}{\sqrt{11}}\right)^2 - 12\,\pi\,\frac{6}{\sqrt{11}}\,\text{Sin}[\beta] + 12\,\pi\,\text{Sin}[\beta]\left(\frac{2\,\pi\,\frac{6}{\sqrt{11}} - \frac{6}{\sqrt{11}}\,\theta}{2\,\pi}\right)}\right)}{6\,\frac{6}{\sqrt{11}}},\right.$$

$$\left.\{\beta, -\pi/2, \pi/2\}, \{\theta, -2\,\pi, 2\,\pi\}\right]$$



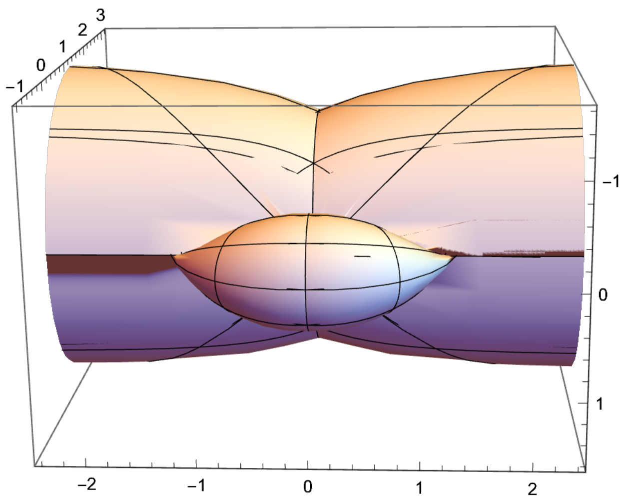
$$\text{RevolutionPlot3D}\left[\frac{1}{6\,\frac{6}{\sqrt{11}}}\,\text{Csc}[\beta]\left(\sqrt{11}\,\sqrt{\left(\frac{6}{\sqrt{11}}\right)^2} - 12\,\pi\,\frac{6}{\sqrt{11}}\,\text{Sin}[\beta] + 12\,\pi\,\text{Sin}[\beta]\left(\frac{2\,\pi\,\frac{6}{\sqrt{11}} - \frac{6}{\sqrt{11}}\,\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,(r\,\text{Sin}[\beta])^2}\right)}{r^2}}{2\,\pi}\right)\right), \{r, -1, 1\}, \{\beta, -\pi/2, \pi/2\}\right]$$



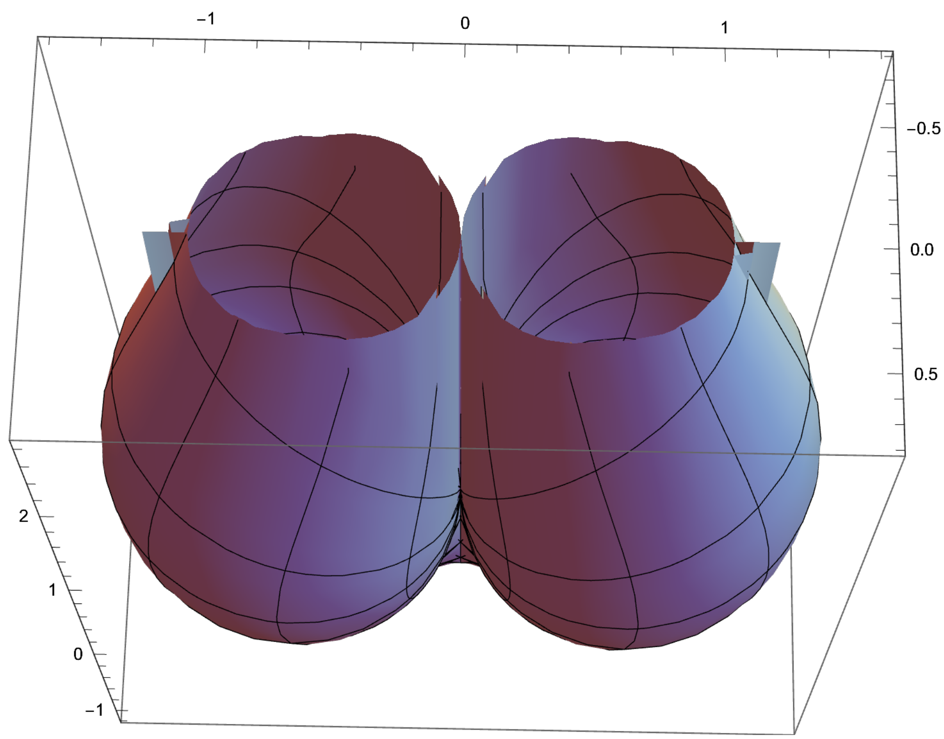
$$\text{Solve}\left[\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} == \frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}, r\right]$$

$$\left\{\left\{r \to -\frac{4\,\pi^2\,\text{Sin}[\beta]}{(4\,\pi - \theta)\,\theta}\right\}, \left\{r \to \frac{4\,\pi^2\,\text{Sin}[\beta]}{(4\,\pi - \theta)\,\theta}\right\}\right\}$$

$$\text{SphericalPlot3D}\left[\frac{4\,\pi^2\,\text{Sin}[\beta]}{(4\,\pi-\theta)\,\theta},\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$

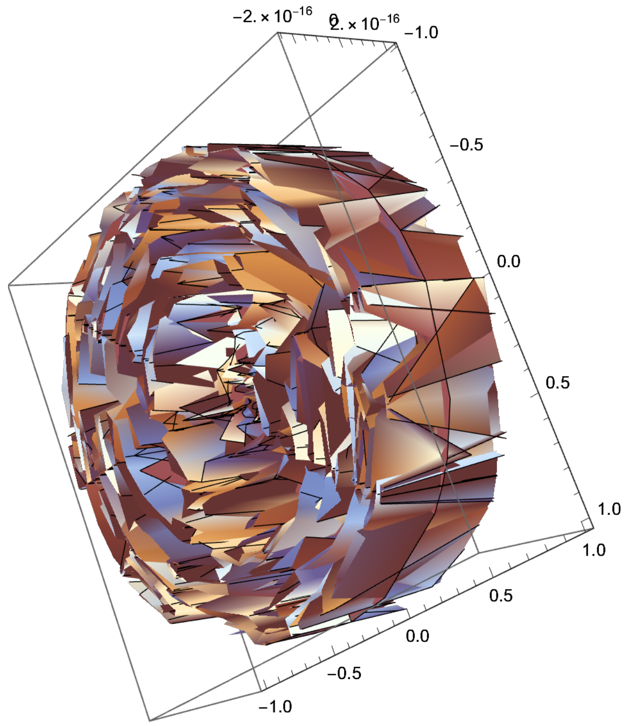


$$\text{SphericalPlot3D}\left[\frac{\sqrt{4\,\pi\,\left(\frac{4\,\pi^2\,\text{Sin}[\beta]}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{4\,\pi^2\,\text{Sin}[\beta]}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi},\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi,\,\pi\}\right]$$

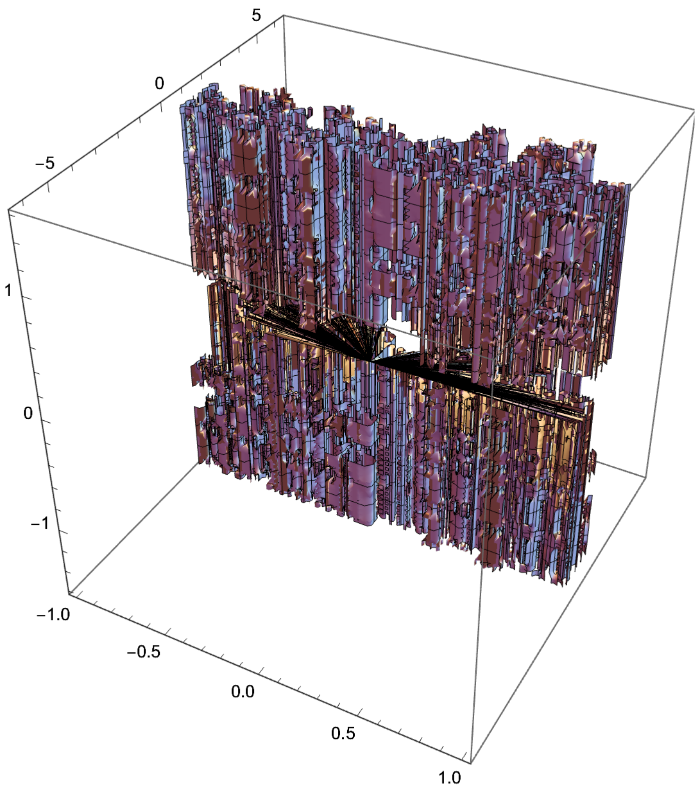


`

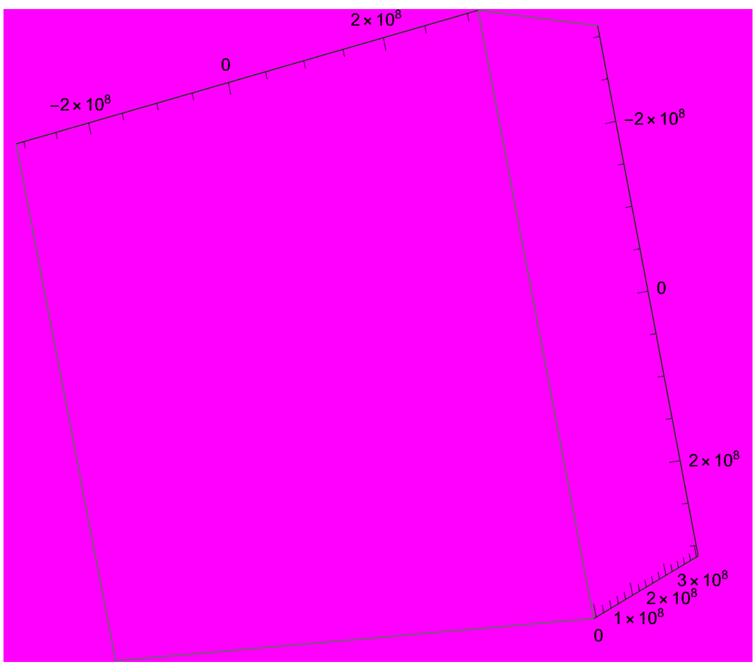
$$\texttt{RevolutionPlot3D}\left[2\,\pi\,r - 2\,\pi\,\frac{2\,\pi\,r - r\,\theta}{2\,\pi} - \theta\,r\,,\ \{r,\,-1,\,1\},\ \{\theta,\,-2\,\pi,\,2\,\pi\}\right]$$



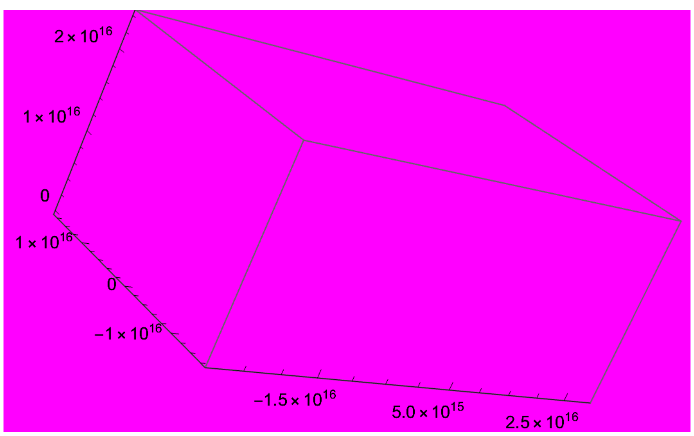
$$\text{ContourPlot3D}\left[\frac{\left(2\,\pi\,r - 2\,\pi\,\frac{2\,\pi\,r-r\,\theta}{2\,\pi} - \theta\,r\right)}{\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}},\ \{r,\ -1,\ 1\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi\,/\,2,\ \pi\,/\,2\}\right]$$



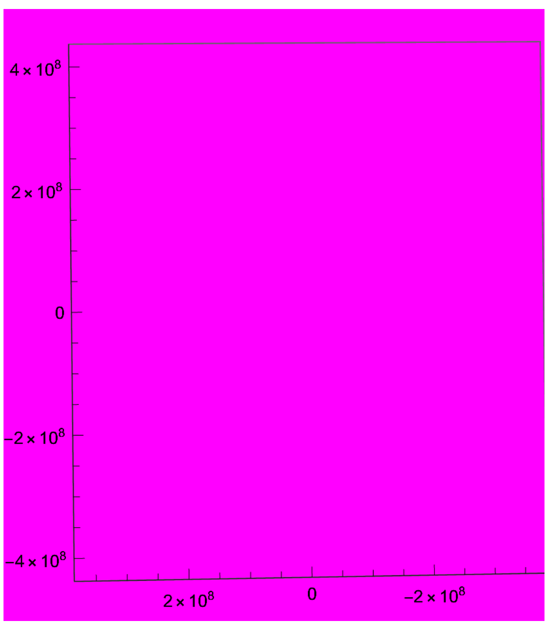
```
SphericalPlot3D[
  (Sqrt[(-1.1294090667581471`*^18 (2 π (r^2 + Sqrt[r^4 - r^2 η^2]))/r^2 + 8.987551787368176`*^16
        ((2 π (r^2 + Sqrt[r^4 - r^2 η^2]))/r^2)^2 + 3.5481432270250993`*^18 Sin[β]^2)]) /
   (Sqrt[(-12.566370614359172` (2 π (r^2 + Sqrt[r^4 - r^2 η^2]))/r^2 + ((2 π (r^2 + Sqrt[r^4 - r^2 η^2]))/r^2)^2 +
        39.47841760435743` Sin[β]^2)]),
  {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle → Opacity[.75]]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 (2 π (r^2 + √(r^4 - r^2 η^2)))/r^2 + 8.987551787368176`*^16
      ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` (2 π (r^2 + √(r^4 - r^2 η^2)))/r^2 + ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 +
      39.47841760435743` Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle → Opacity[.75]]
```



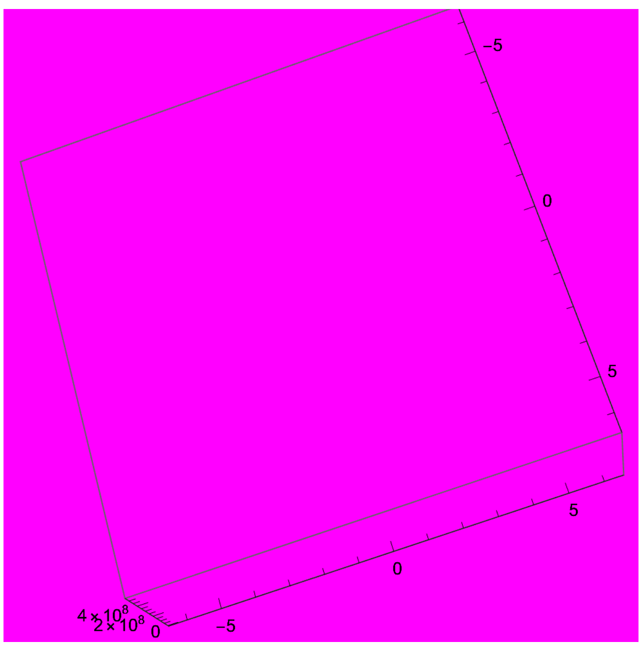
```
SphericalPlot3D[(√(-1.1294090667581471`*^18 (2 π (r^2 + √(r^4 - r^2 η^2)))/r^2 +
    8.987551787368176`*^16 ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 +
    3.5481432270250993`*^18 Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)) /
  (√(-12.566370614359172` (2 π (r^2 + √(r^4 - r^2 η^2)))/r^2 + ((2 π (r^2 + √(r^4 - r^2 η^2)))/r^2)^2 +
    39.47841760435743` Sin[ArcSin[√((4 π - θ) θ)/(2 π)]]^2)),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}, PlotStyle → Opacity[.75]]
```



$$\text{RevolutionPlot3D}\Bigg[\Bigg(\sqrt{\Bigg(-1.1294090667581471\text{`}*\wedge 18\ \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}+8.987551787368176\text{`}*\wedge 16\left(\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}\right)^2+3.5481432270250993\text{`}*\wedge 18\ \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2\Bigg)}\Bigg/$$

$$\Bigg(\sqrt{\Bigg(-12.566370614359172\text{`}\ \frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}+\left(\frac{2\,\pi\left(r^2+\sqrt{r^4-r^2\,\eta^2}\right)}{r^2}\right)^2+39.47841760435743\text{`}\ \text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]^2\Bigg)}\Bigg),$$

$$\{\theta,-2\,\pi,2\,\pi\},\ \text{PlotStyle}\to\text{Opacity}[.75]\Bigg]$$

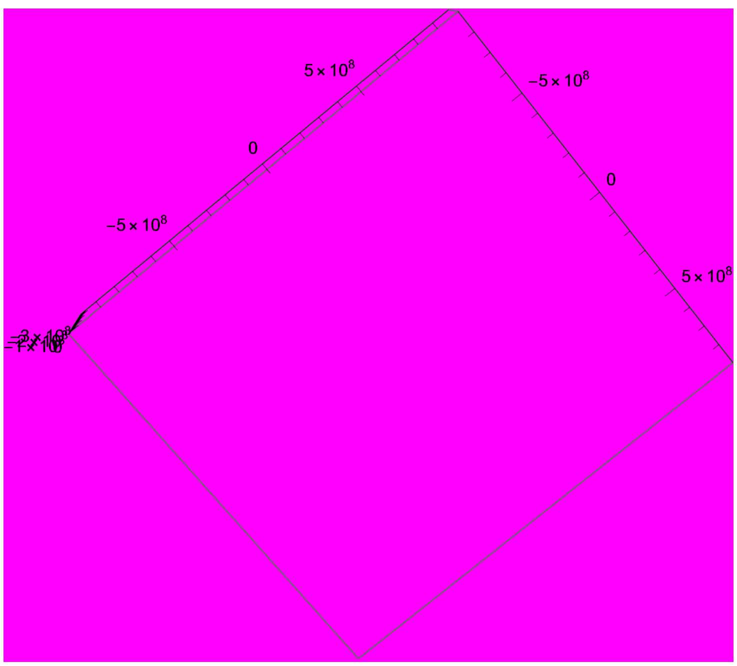


$$\theta := 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$r := \frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}$$

$$\text{SphericalPlot3D}\Big[-\Bigg(1.\text{`}\sqrt{\Big(3.5481432270250993\text{`}*\hat{}18 - 1.1294090667581471\text{`}*\hat{}18\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right) + 8.987551787368176\text{`}*\hat{}16\left(\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}\left[\text{ArcSin}\left[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\right]\right]^2}\right)\right)\right)^2\Big)}\Bigg)\Big/\left(\sqrt{39.47841760435743\text{`} - 12.566370614359172\text{`}\,\theta+\theta^2}\right),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \text{PlotStyle}\to\text{Opacity}[.75]\Big]$$



$$\text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]$$

$$\text{ArcSin}\left[\frac{4\,\pi\,r\,\theta-r\,\theta^2}{4\,\pi^2}\right] = \text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]$$

$$\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}$$

$$\text{SphericalPlot3D}\Big[-\Big(1.\grave{}\sqrt{\Big(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right) + 8.987551787368176\grave{}*\hat{}16\left(\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}\left[\text{ArcSin}\left[\frac{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta-\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta^2}{4\,\pi^2}\right]\right]^2}\right)\right)\right)^2\Big)}\Big)\Big/\left(\sqrt{39.47841760435743\grave{}-12.566370614359172\grave{}\,\theta+\theta^2}\right),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \text{PlotStyle}\to\text{Opacity}[.75]\Big]$$

$$\left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18 - 1.1294090667581471\grave{}*\hat{}18\,r^2\,\theta + 8.987551787368176\grave{}*\hat{}16\,r^2\,\theta^2\right)}\right)\Big/\left(\sqrt{39.47841760435743\grave{}-12.566370614359172\grave{}\,r^2\,\theta+r^2\,\theta^2}\right)$$

RevolutionPlot3D[

$$\left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-\right.}\right.$$

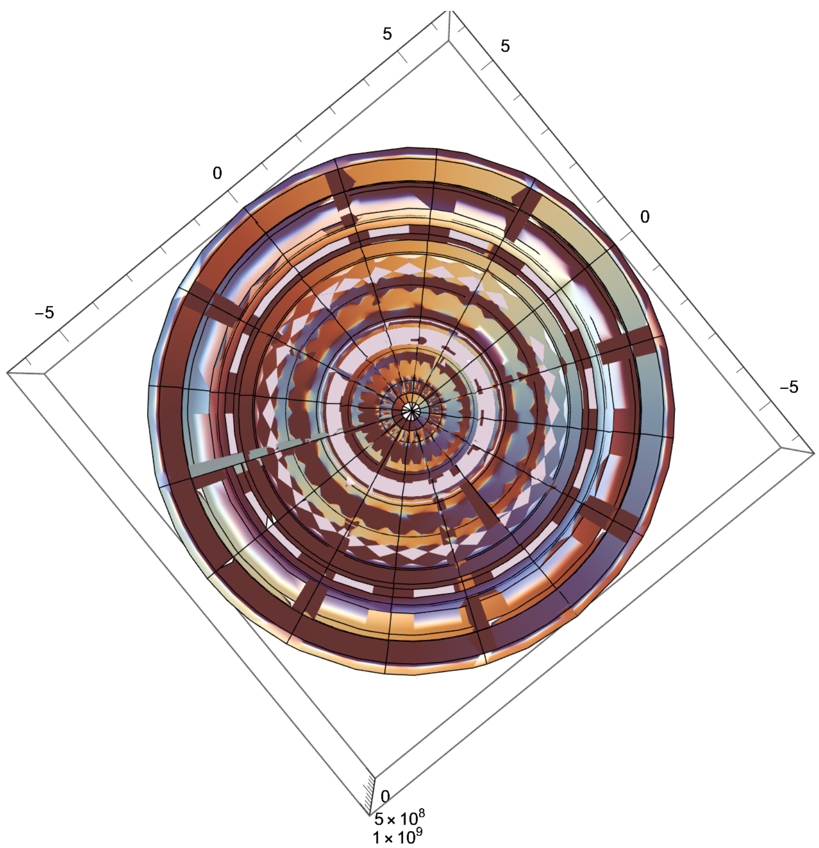
$$1.1294090667581471\grave{}*\hat{}18\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+$$

$$\left.\left.8.987551787368176\grave{}*\hat{}16\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)\right)\Big/$$

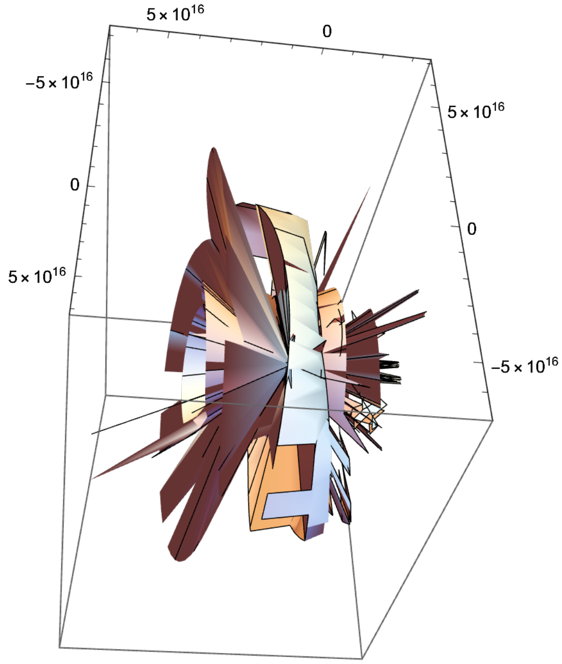
$$\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}^2\,\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-\right.}\right.$$

$$12.566370614359172\grave{}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+$$

$$\left.\left.\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\Big]$$


5
5
0
0
-5
-5
0
5×10^8
1×10^9

$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\\
&\Bigg(\sqrt{\Bigg(3.5481432270250993\text{`}*\hat{}18\left(\frac{1}{2\pi}\left(\sqrt{\left(4\pi\left(\frac{1}{(4\pi-\theta)\,\theta}\,2\pi\sqrt{\left(4\pi-\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\right)}\;\theta\right)^2\right.}\right.\right.}\\
&\qquad\left.\left.\left.\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)\right)\right)^2-1.1294090667581471\text{`}*\hat{}18\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\text{`}*\hat{}16\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)\Bigg)\Big/\\
&\Bigg(\sqrt{\Bigg(39.47841760435743\text{`}\left(\frac{\sqrt{4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}^{2}\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}\right)^2-12.566370614359172\text{`}\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)}\Bigg),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\Bigg]
\end{aligned}
$$



5 × 10^16
0
−5 × 10^16
0
5 × 10^16
5 × 10^16
0
−5 × 10^16

$$\text{RevolutionPlot3D}\Bigg[\Bigg(\sqrt{\Bigg(\texttt{3.5481432270250993`*^18}\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-}$$

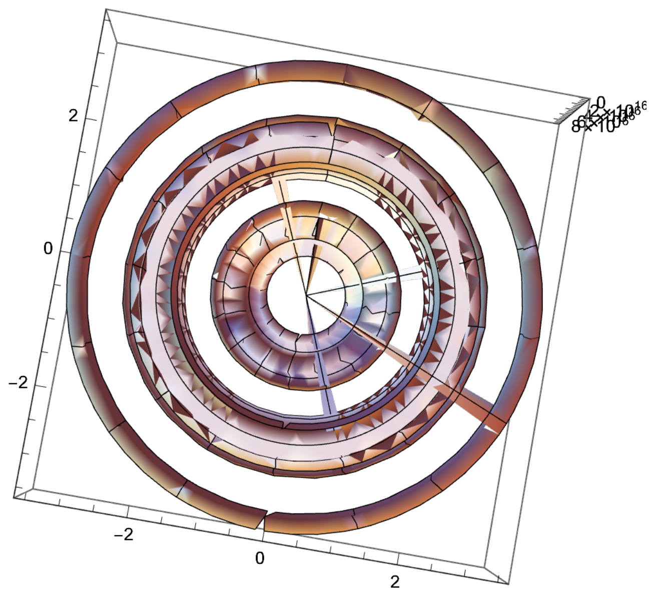
$$\texttt{1.1294090667581471`*^18}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+$$

$$\texttt{8.987551787368176`*^16}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)\Bigg)\Bigg/$$

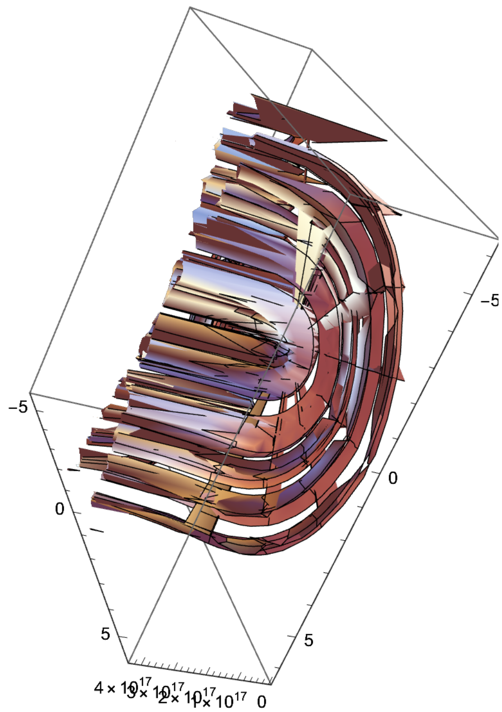
$$\Bigg(\sqrt{\Bigg(\texttt{39.47841760435743`}\left(\frac{\sqrt{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-}$$

$$\texttt{12.566370614359172`}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+$$

$$\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi,\,\pi\}\Bigg]$$


2
0
−2
−2
0
2

$$
\begin{aligned}
&\texttt{RevolutionPlot3D}\Bigg[\Bigg(\sqrt{\Bigg(3.5481432270250993\grave{}*\hat{}18}\\
&\quad\left(\frac{\sqrt{4\,\pi\left(\frac{2\,\pi\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\theta}\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-\\
&\quad 1.1294090667581471\grave{}*\hat{}18\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+\\
&\quad 8.987551787368176\grave{}*\hat{}16\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)\Bigg)\Bigg/\\
&\Bigg(\sqrt{\Bigg(39.47841760435743\grave{}\left(\frac{\sqrt{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}^2\,\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-}\\
&\quad 12.566370614359172\grave{}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+\\
&\quad\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\Bigg)\Bigg),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi,\,\pi\}\Bigg]
\end{aligned}
$$



-5
0
5
-5
0
5
4 × 10^17
3 × 10^17
2 × 10^17
1 × 10^17
0

$$\text{RevolutionPlot3D}\Bigg[\sqrt{\Bigg(3.5481432270250993\text{`*^}18\left(\frac{\sqrt{4\pi\left(\frac{2\pi\sqrt{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}}{2\pi}\right)^2-}$$

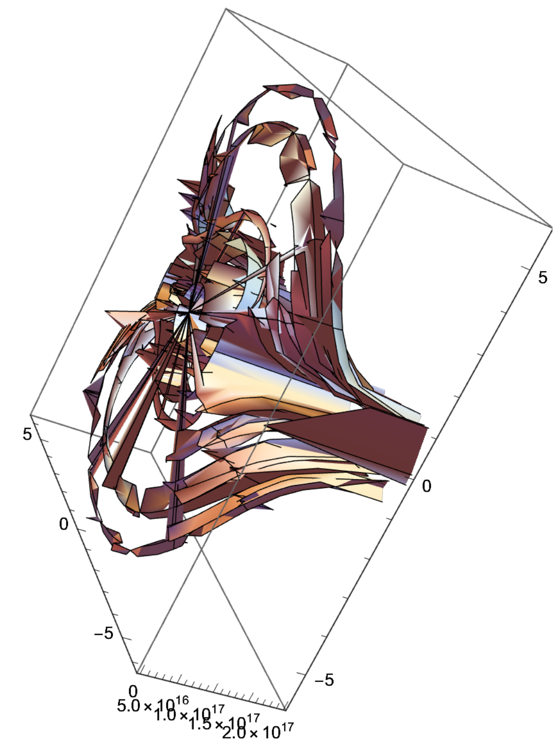
$$1.1294090667581471\text{`*^}18\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta+$$

$$8.987551787368176\text{`*^}16\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2\Bigg)\Bigg)\Big/$$

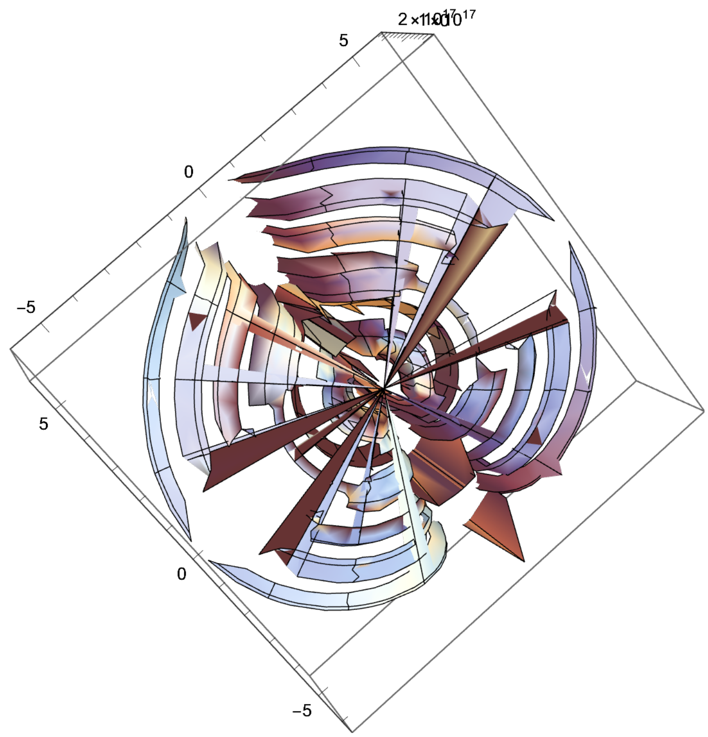
$$\Bigg(\sqrt{\Bigg(39.47841760435743\text{`}\left(\frac{\sqrt{4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2}}{2\pi}\right)^2-}$$

$$12.566370614359172\text{`}\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta+$$

$$\left(\frac{2\pi\sqrt{(4\pi-\theta)\theta}}{(4\pi-\theta)\theta}\right)^2\theta^2\Bigg)\Bigg),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\Bigg]$$


5
0
−5
5
0
−5
0
5.0×10^16
1.0×10^17
1.5×10^17
2.0×10^17

$$\text{RevolutionPlot3D}\Bigg[\left(\sqrt{\left(3.5481432270250993\grave{}*\char94 18\left(\frac{1}{2\pi}\left(\sqrt{\left(4\pi\left(\left(2\pi\sqrt{\left(\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)}\right)\Big/\left(\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\right)^2-1.1294090667581471\grave{}*\char94 18\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\grave{}*\char94 16\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}^2\,\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2}}{2\pi}\right)^2-12.566370614359172\grave{}\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\Bigg]$$



2×10^17
1×10^17
0
5
0
−5
5
0
−5

SphericalPlot3D$\Big[$

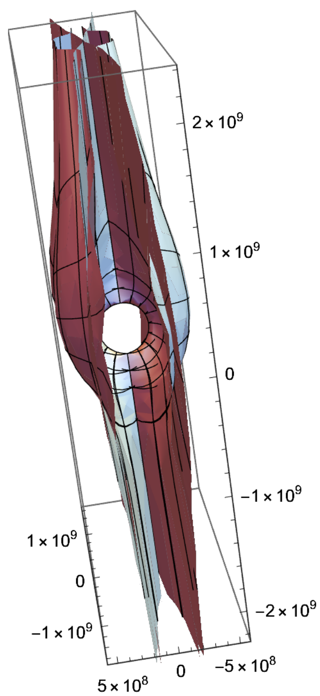
$$\left(\sqrt{\left(3.5481432270250993\grave{}{*}\hat{}18\left(\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(\left(2\,\pi\sqrt{\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}\right)\Big/\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)\right)^2\theta-\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\right)^2-\right.}\right.$$

$$\left.\left.1.1294090667581471\grave{}{*}\hat{}18\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\grave{}{*}\hat{}16\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2\right)}\right)\Big/$$

$$\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\,\pi\,\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}^2\,\theta-\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-\right.}\right.$$

$$12.566370614359172\grave{}\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}\right)^2\theta+$$

$$\left.\left.\left(\frac{2\,\pi\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\Big]$$

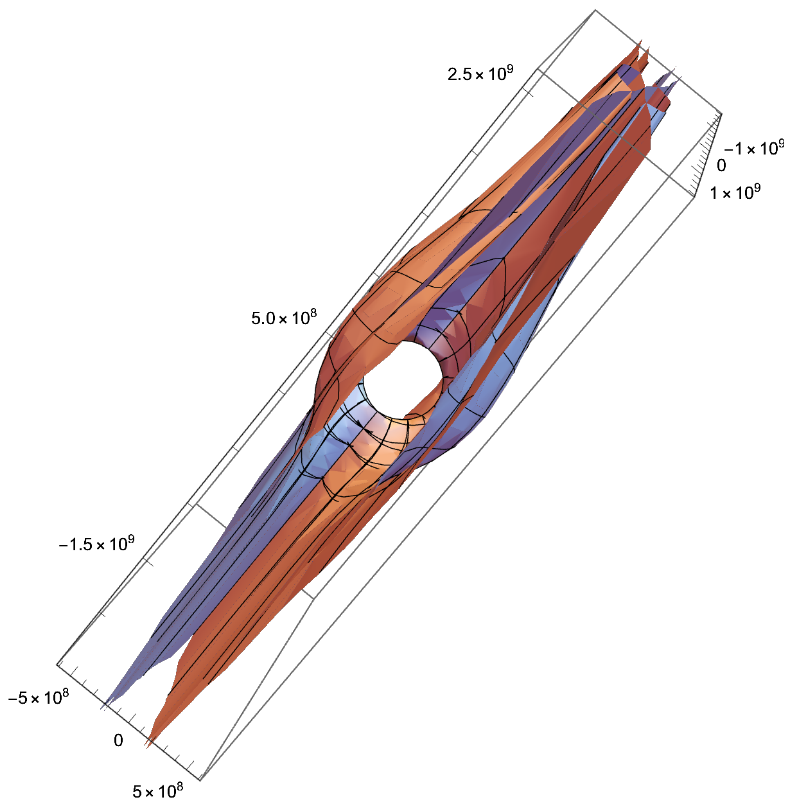


2 × 10^9
1 × 10^9
0
−1 × 10^9
−2 × 10^9
1 × 10^9
0
−1 × 10^9
5 × 10^8
0
−5 × 10^8

SphericalPlot3D[

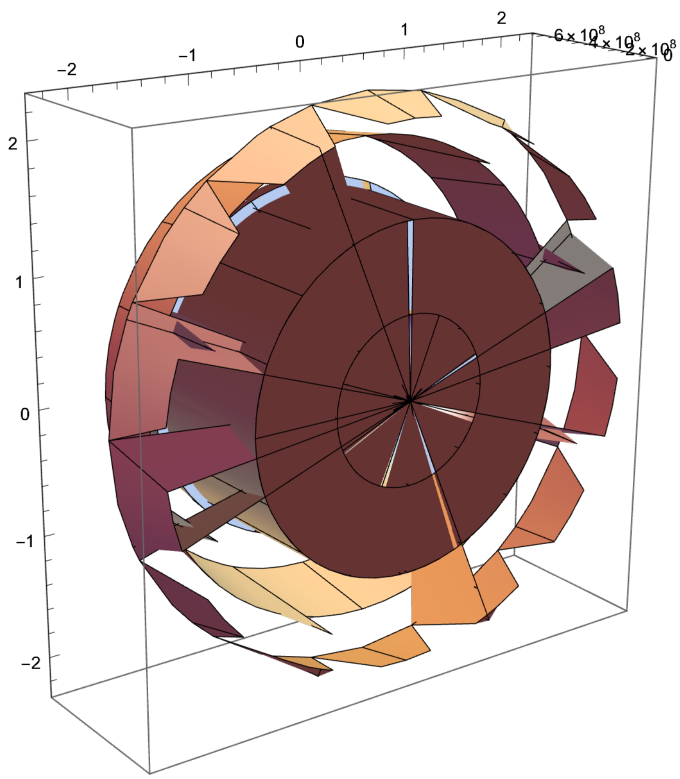
$$\left(\sqrt{\left(3.5481432270250993\grave{}*\wedge 18\left(\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(\left(2\,\pi\sqrt{\left(\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)\Big/\left(\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\right)^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}\right)\right)\right)^2-1.1294090667581471\grave{}*\wedge 18\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\grave{}*\wedge 16\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\left(2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^2\right)\right)}\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{\sqrt{4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}^2\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2}}{2\,\pi}\right)^2-12.566370614359172\grave{}\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)^2 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)$$

, {θ, -2 π, 2 π}, {β, -π, π}]



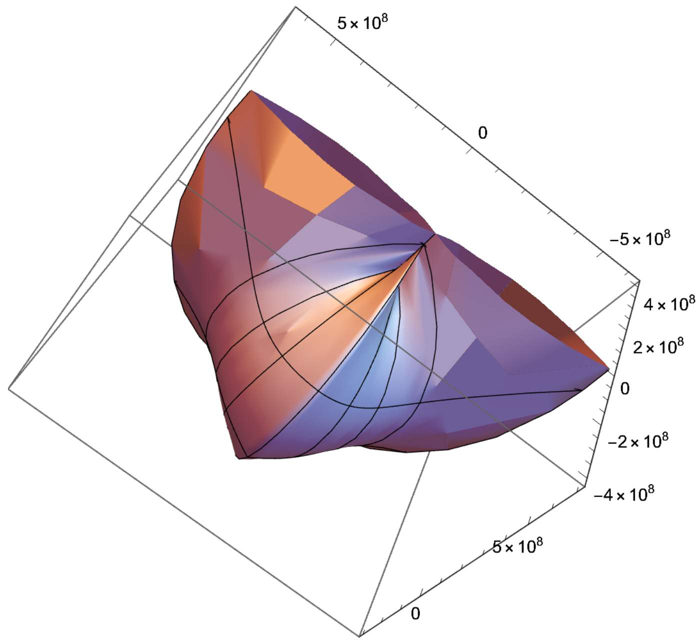
$$\theta := 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right)$$

$$
\begin{aligned}
&\mathrm{RevolutionPlot3D}\Big[\\
&\Bigg(\sqrt{\Bigg(3.5481432270250993\text{`}{*}\wedge 18\;\bigg(\frac{1}{2\pi}\;\bigg(\sqrt{\bigg(4\pi\;\Big(\Big(2\pi\sqrt{\Big(\Big(4\pi-2\;\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)\;2}}}\\
&\qquad\qquad\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)\Big)\Big/\;\Big(\Big(4\pi-2\;\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)\;2\\
&\qquad\qquad\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)\Big)^2\,\theta-\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}\right)^2\theta^2\bigg)\bigg)\bigg)^2-\\
&\quad 1.1294090667581471\text{`}{*}\wedge 18\;\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}\right)^2\theta+8.987551787368176\text{`}{*}\wedge 16\\
&\quad\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}\right)^2\;\Big(2\;\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)\Big)^2\Bigg)\Bigg)\Bigg/\\
&\Bigg(\sqrt{\Bigg(39.47841760435743\text{`}\;\left(\frac{\sqrt{4\pi\;\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}^2\;\theta-\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}\right)^2\theta^2}}{2\pi}\right)^2-}\\
&\quad 12.566370614359172\text{`}\;\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;2\;\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)}\right)^2\;2\;\Big(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\Big)+\\
&\quad\left(\frac{2\pi\;\sqrt{(4\pi-\theta)\;\theta}}{(4\pi-\theta)\;\theta}\right)^2\theta^2\Bigg)\Bigg),\;\{\beta,\,-\pi,\,\pi\}\Big]
\end{aligned}
$$



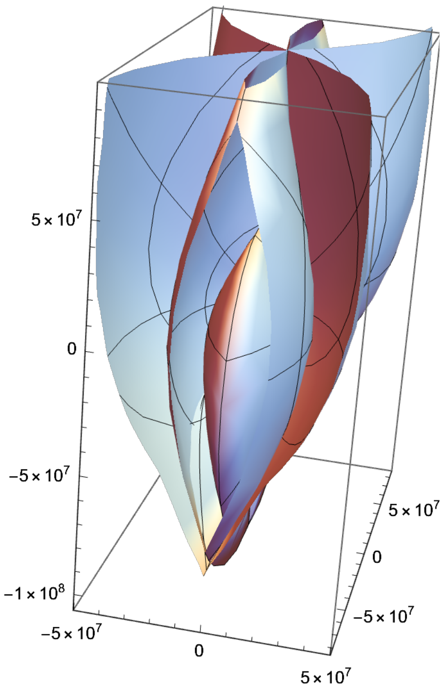
−2
−1
0
1
2
6 × 10^8
4 × 10^8
2 × 10^8
0
2
1
0
−1
−2

```
SphericalPlot3D[
 (Sqrt[(3.5481432270250993`*^18 (1/(2 π) (Sqrt[(4 π (1/((4 π - θ) θ) 2 π Sqrt[(4 π - ((4 π)/3 - (-4 π^2 +
            12 π^2 Sin[β]^2)/(6 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3]
                Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)) +
          2/3 (-π^3 + 18 π^3 Sin[β]^2 + 3 Sqrt[3]
                Sqrt[-π^6 Sin[β]^2 + 11 π^6 Sin[β]^4 + π^6 Sin[β]^6])^(1/3)))] θ)^2
        θ - ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ^2)]))^2 - 1.1294090667581471`*^18
    ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ + 8.987551787368176`*^16 ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2
    θ^2)])/(Sqrt[(39.47841760435743`
     (Sqrt[4 π ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) - ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ^2]/(2 π))^2 -
    12.566370614359172` ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2 θ +
    ((2 π Sqrt[(4 π - θ) θ])/((4 π - θ) θ))^2
    θ^2)]), {θ, -2 π, 2 π}, {β, -π, π}]
```



5 × 10^8
0
−5 × 10^8
4 × 10^8
2 × 10^8
0
−2 × 10^8
−4 × 10^8
5 × 10^8
0

$$\texttt{SphericalPlot3D}\Bigg[\left(\sqrt{\left(3.5481432270250993\grave{}*\hat{}18\left(\frac{1}{2\pi}\left(\sqrt{\left(4\pi\left(\frac{1}{(4\pi-\theta)\,\theta}\,2\pi\sqrt{\left(4\pi-\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\theta}\right)^2\theta-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\right)^2-1.1294090667581471\grave{}*\hat{}18\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\grave{}*\hat{}16\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\Big/\left(\sqrt{\left(39.47841760435743\grave{}\left(\frac{1}{2\pi}\left(\sqrt{\left(4\pi\,\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{\left(4\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}^{2}\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right)\right)^2-12.566370614359172\grave{}\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta+\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)^2\theta^2\right)}\right),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi,\pi\}\Bigg]$$



$$\texttt{SphericalPlot3D}\Big[$$

$$\left(\sqrt{\left(3.5481432270250993\text{`}*\text{^}18\left(\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\left(\frac{1}{(4\,\pi-\theta)\,\theta}\,2\,\pi\sqrt{\left(4\,\pi-\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+\right.\right.\right.}\right.}\right.\right.\right.}\right.$$

$$12\,\pi^2\,\text{Sin}[\beta]^2\Big)\Big/\Big(6\,\Big(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\,\Big)^{1/3}\Big)+$$

$$\frac{2}{3}\,\Big(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

$$\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\,\Big)^{1/3}\Big)\Big)\,\theta\Big)^2$$

$$\theta-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\Big)\Big)\Big)^2-1.1294090667581471\text{`}*\text{^}18$$

$$\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta+8.987551787368176\text{`}*\text{^}16\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2$$

$$\theta^2\Big)\Big)\Big/$$

$$\left(\sqrt{\left(39.47841760435743` \left(\frac{1}{2\,\pi}\left(\sqrt{\left(4\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}^{2}\;2\left(\pi+\right.\right.}\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)-\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\theta^2\right)\right)\right)^2-12.566370614359172`$$

$$\left(\frac{1}{(4\,\pi-\theta)\,\theta}\,2\,\pi\,\sqrt{\left(\left(4\,\pi-\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+\right.\right.\right.\right.}\right.$$

$$\left.\left.3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+\right.$$

$$18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}$$

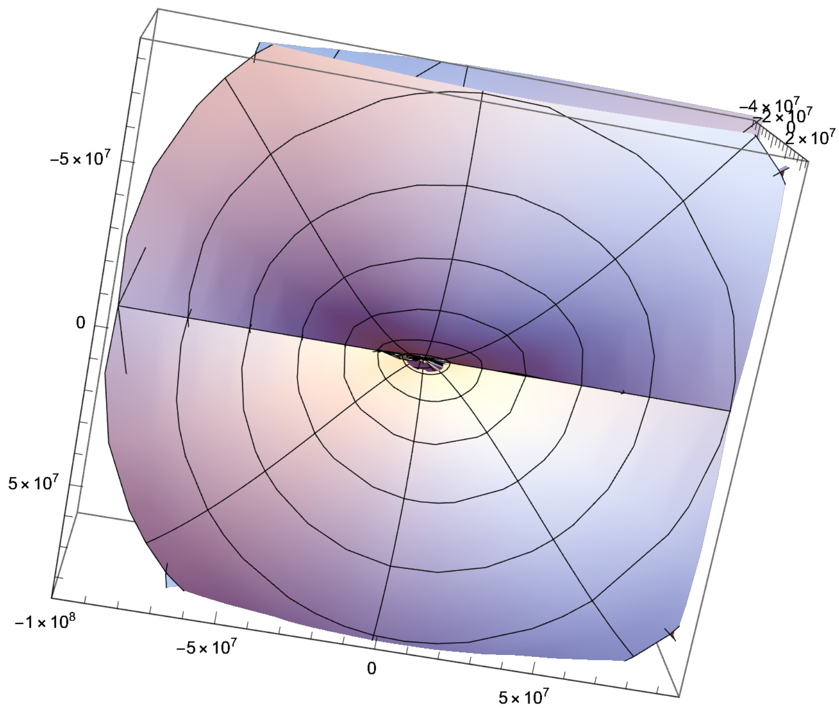
$$\left.\left.\left.\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\theta\right)\right)^2\theta+$$

$$\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)^2\left(\frac{4\,\pi}{3}-\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+\right.\right.\right.$$

$$\left.\left.3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}$$

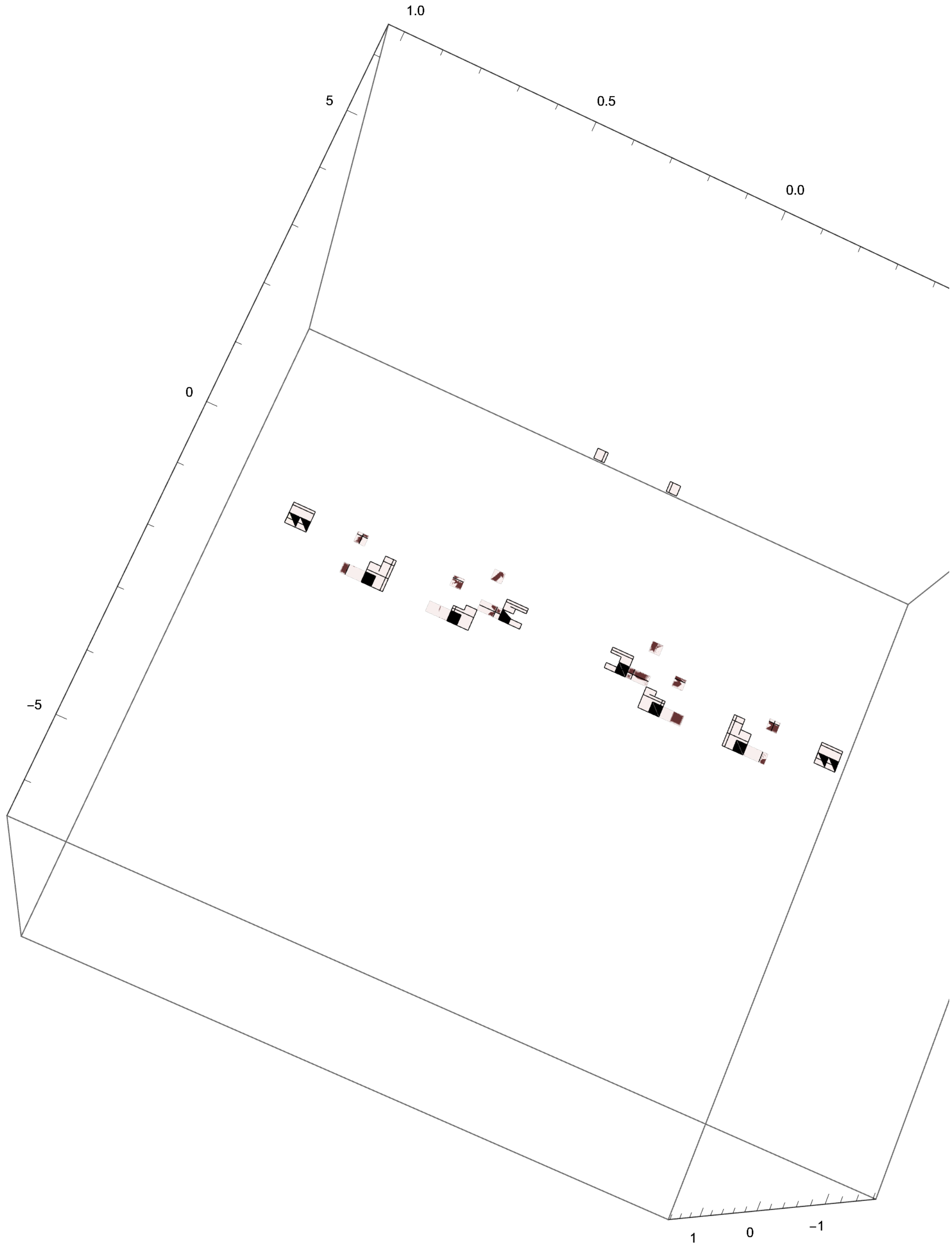
$$\left.\left.\left.\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)^2\right)\right)\right),$$

$\{\theta, -2\,\pi, 2\,\pi\}, \{\beta, -\pi/$
$2,$
$\pi/$
$2\}]$

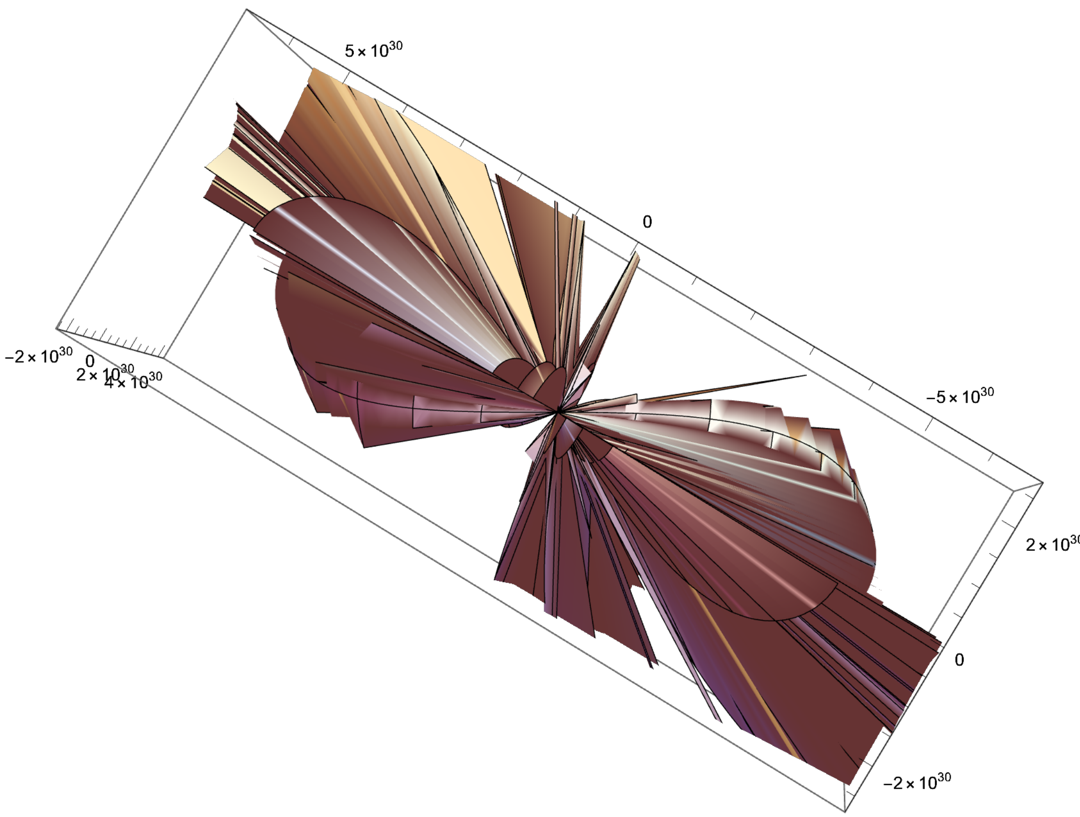


$$\text{ContourPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}} \Big/ \left(\left(2\,\pi\,r-2\,\pi\left(r-\frac{r\,\theta}{2\,\pi}\right)-\theta\,r\right)\text{^}2\right),\right.$$

$$\left.\{r,\,-1,\,1\},\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\right]$$


1.0
0.5
0.0
5
0
−5
1
0
−1

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\Big/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\text{^}2\right),\right.$$
$$\left.\{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi/2,\pi/2\}\right]$$



$$\theta := \frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+$$
$$\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\beta := \text{ArcSin}\left[\frac{\sqrt{-4\,\pi^2\,\theta+4\,\pi\,\theta^2-\theta^3}}{2\,\pi\,\sqrt{-4\,\pi+\theta}}\right]$$

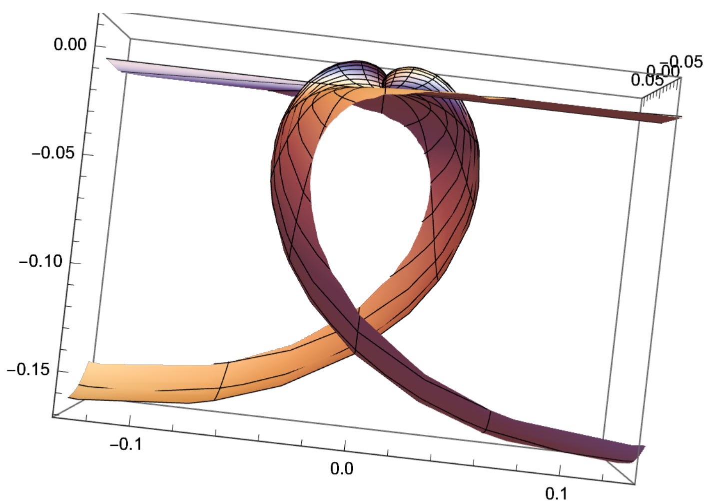
$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}\Bigg/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\,\hat{}\,2\right),\ \{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi,\pi\}\right]$$

$$\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}\Bigg/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\,\hat{}\,2\right),\ \{\theta,-2\,\pi,2\,\pi\},\{\beta,-\pi,\pi\}\right]$$

{}

$$\texttt{SphericalPlot3D}\Big[(2\,\pi\,\texttt{Sin}[\beta])\,/\,\left(\sqrt{\,}\left(4\,\pi\,\theta-\theta^{2}\right)\right)\Big/\left(\left(\left(2\,\pi\,\frac{1}{(4\,\pi-\theta)\,\theta}\,2\,\pi\,\sqrt{\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^{2}+12\,\pi^{2}\,\texttt{Sin}[\beta]^{2}}{6\left(-\pi^{3}+18\,\pi^{3}\,\texttt{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\texttt{Sin}[\beta]^{2}+11\,\pi^{6}\,\texttt{Sin}[\beta]^{4}+\pi^{6}\,\texttt{Sin}[\beta]^{6}}\right)^{1/3}}+\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\texttt{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\texttt{Sin}[\beta]^{2}+11\,\pi^{6}\,\texttt{Sin}[\beta]^{4}+\pi^{6}\,\texttt{Sin}[\beta]^{6}}\right)^{1/3}\right)\right)}-2\,\pi\left(\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\texttt{\^{}}2\right),$$

$$\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\beta,\,-\pi/2,\,\pi/2\}\Big]$$

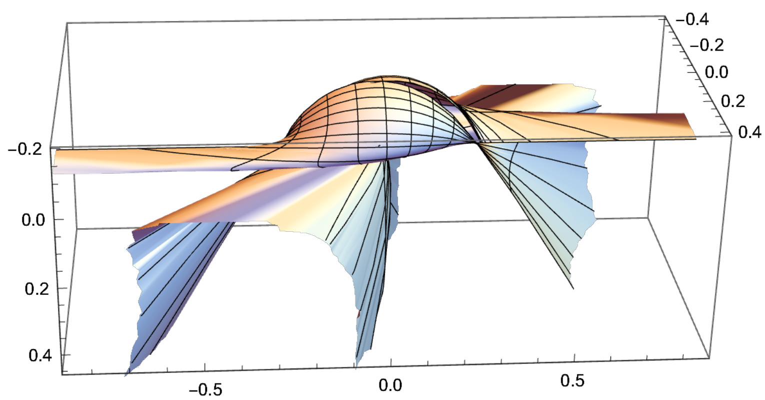


$$\texttt{SphericalPlot3D}\Big[(2\pi\,\texttt{Sin}[\beta])\Big/\Big(\sqrt{}\,(4\pi\theta-\theta^2)\Big)\Big/\Bigg(\Bigg(\Bigg(2\pi\frac{1}{(4\pi-\theta)\,\theta}\,2\pi\sqrt{\Bigg(\Bigg((4\pi-\theta)\Bigg(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\texttt{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg)-}$$

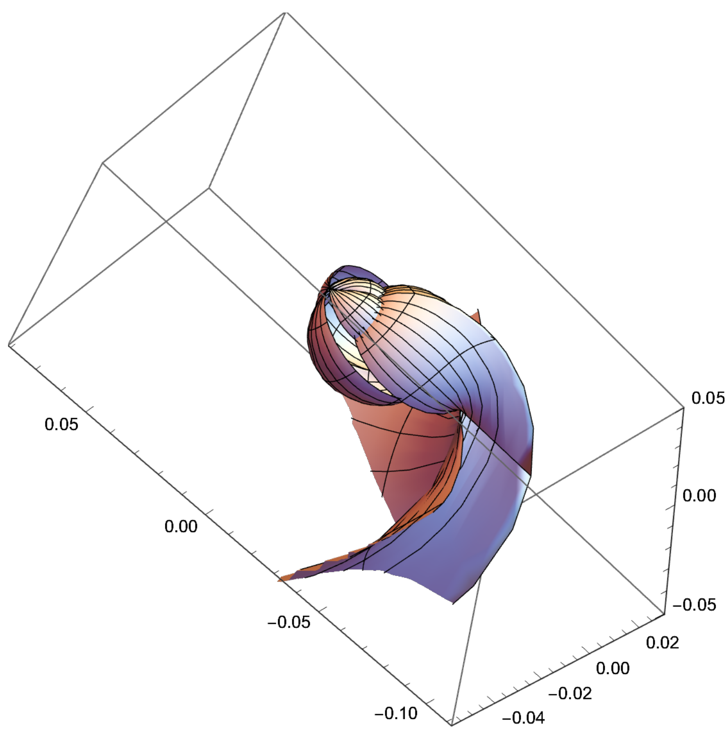
$$2\pi\left(\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}-\frac{\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\,\theta}{2\pi}\right)-\Bigg(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\texttt{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}}+$$

$$\frac{2}{3}\left(-\pi^3+18\pi^3\,\texttt{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\texttt{Sin}[\beta]^2+11\pi^6\,\texttt{Sin}[\beta]^4+\pi^6\,\texttt{Sin}[\beta]^6}\right)^{1/3}\Bigg)$$

$$\left.\left.\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}\right)\texttt{^}2\right),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}\Big]$$

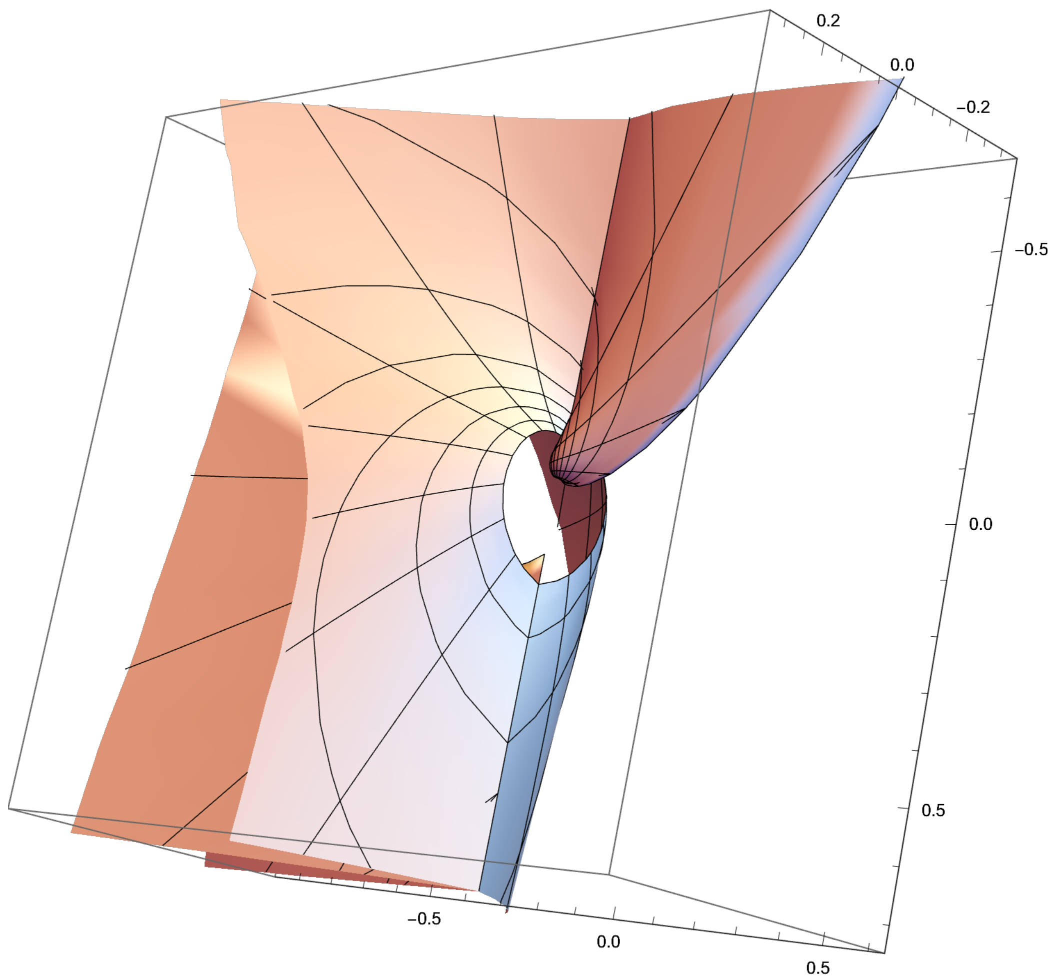


$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Bigg[\frac{2\,\pi\,\texttt{Sin}\left[\texttt{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}\Bigg/\\
&\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\,\left(\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)\Bigg/\left((4\,\pi-\theta)\,\left(\frac{4\,\pi}{3}-\right.\right.\right.\right.\right.\\
&\qquad\frac{-4\,\pi^{2}+12\,\pi^{2}\,\texttt{Sin}[\beta]^{2}}{6\,\left(-\pi^{3}+18\,\pi^{3}\,\texttt{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\texttt{Sin}[\beta]^{2}+11\,\pi^{6}\,\texttt{Sin}[\beta]^{4}+\pi^{6}\,\texttt{Sin}[\beta]^{6}}\right)^{1/3}}\\
&\qquad+\frac{2}{3}\,\left(-\pi^{3}+18\,\pi^{3}\,\texttt{Sin}[\beta]^{2}+3\,\sqrt{3}\right.\\
&\qquad\qquad\left.\left.\left.\left.\left.\sqrt{-\pi^{6}\,\texttt{Sin}[\beta]^{2}+11\,\pi^{6}\,\texttt{Sin}[\beta]^{4}+\pi^{6}\,\texttt{Sin}[\beta]^{6}}\right)^{1/3}\right)\right)-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\right.\\
&\qquad\left.\left.\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\texttt{\^{}}2\right),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\Big]
\end{aligned}
$$



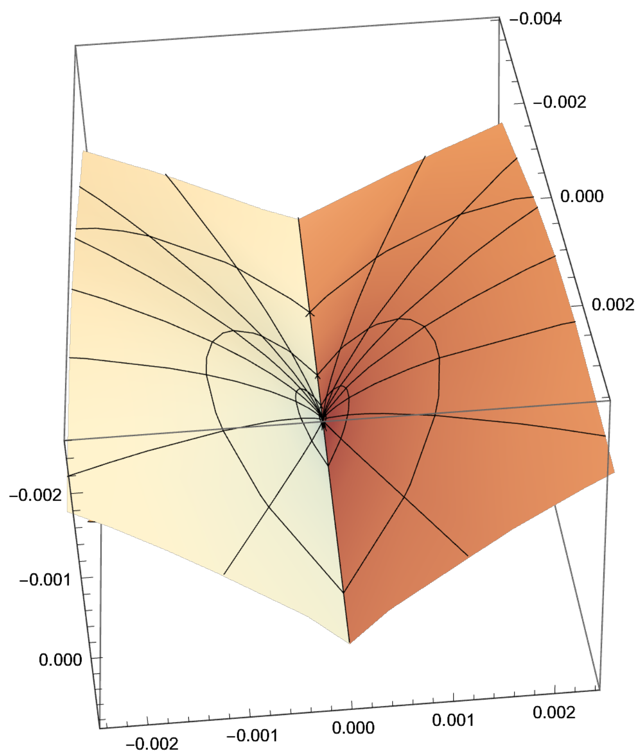
$$
\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}\Bigg/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\left(\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\right)\Bigg/\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}}{6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}}+\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)\right)-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\text{^}2\right),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\right]
$$

$$
\text{SphericalPlot3D}\left[\frac{2\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}\Bigg/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}-2\,\pi\left(\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^{2}-\pi^{2}\,\text{Sin}[\beta]^{2}}\right)}\right)\Bigg/\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^{2}+12\,\pi^{2}\,\text{Sin}[\beta]^{2}}{6\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}}+\frac{2}{3}\left(-\pi^{3}+18\,\pi^{3}\,\text{Sin}[\beta]^{2}+3\,\sqrt{3}\,\sqrt{-\pi^{6}\,\text{Sin}[\beta]^{2}+11\,\pi^{6}\,\text{Sin}[\beta]^{4}+\pi^{6}\,\text{Sin}[\beta]^{6}}\right)^{1/3}\right)\right)-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\right)\text{^}2\right),\ \{\theta,\,-2\,\pi,\,2\,\pi\},\ \{\beta,\,-\pi/2,\,\pi/2\}\right]
$$

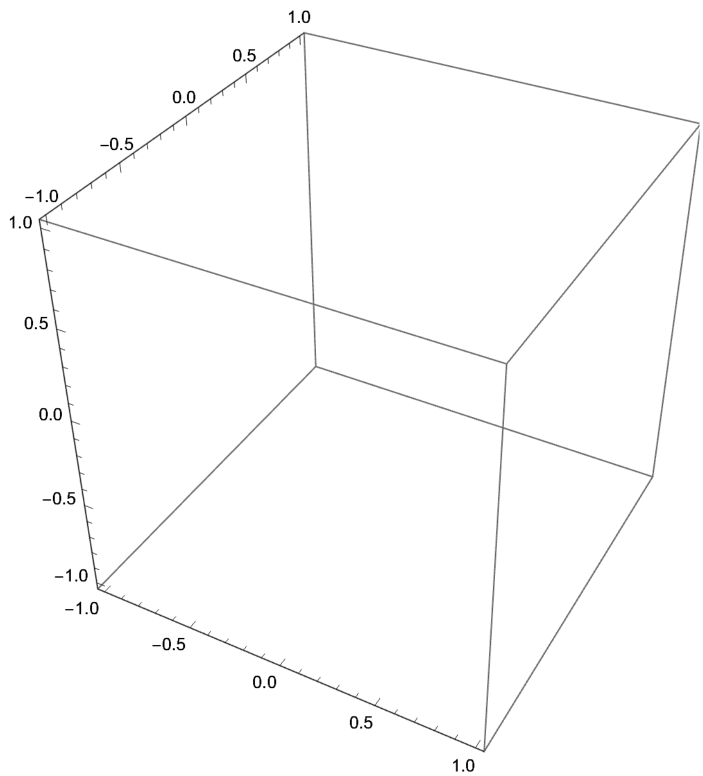


0.2
0.0
−0.2
−0.5
0.0
0.5
−0.5
0.0
0.5

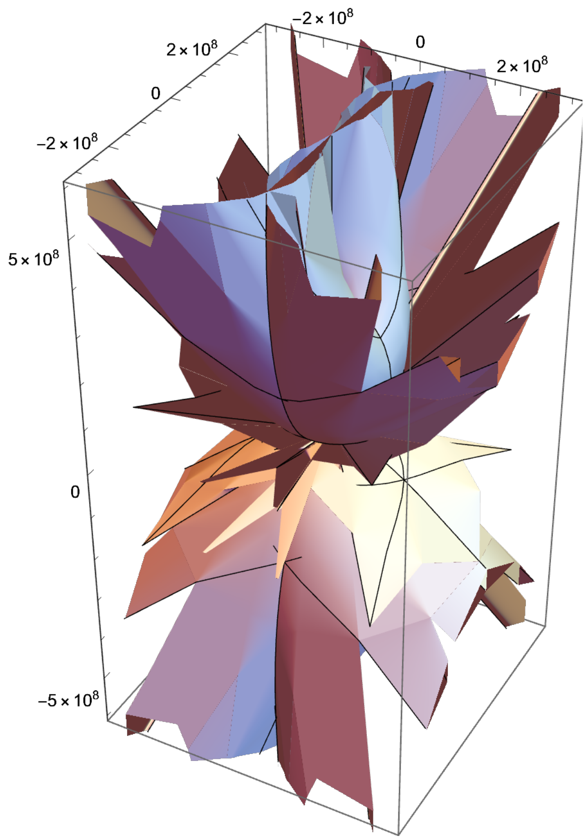
$$\text{SphericalPlot3D}\Bigg[\frac{2\,\pi\,\text{Sin}\left[\text{ArcSin}\left[\frac{\sqrt{(4\,\pi-\theta)\,\theta}}{2\,\pi}\right]\right]}{\sqrt{4\,\pi\,\theta-\theta^2}}\Bigg/\left(\left(2\,\pi\,\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}-2\,\pi\left(\left(2\,\pi\,\sqrt{(4\,\pi-\theta)\,2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)\Bigg/\left((4\,\pi-\theta)\left(\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\right)-\frac{\frac{2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}}{(4\,\pi-\theta)\,\theta}\,\theta}{2\,\pi}\right)-\theta\,\frac{2\,\pi\,\sqrt{\left(4\,\pi-2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)\theta}}{(4\,\pi-\theta)\,\theta}\right)\text{^}2,\ \{\theta,-2\,\pi,2\,\pi\},\ \{\beta,-\pi/2,\pi/2\}\Bigg]$$



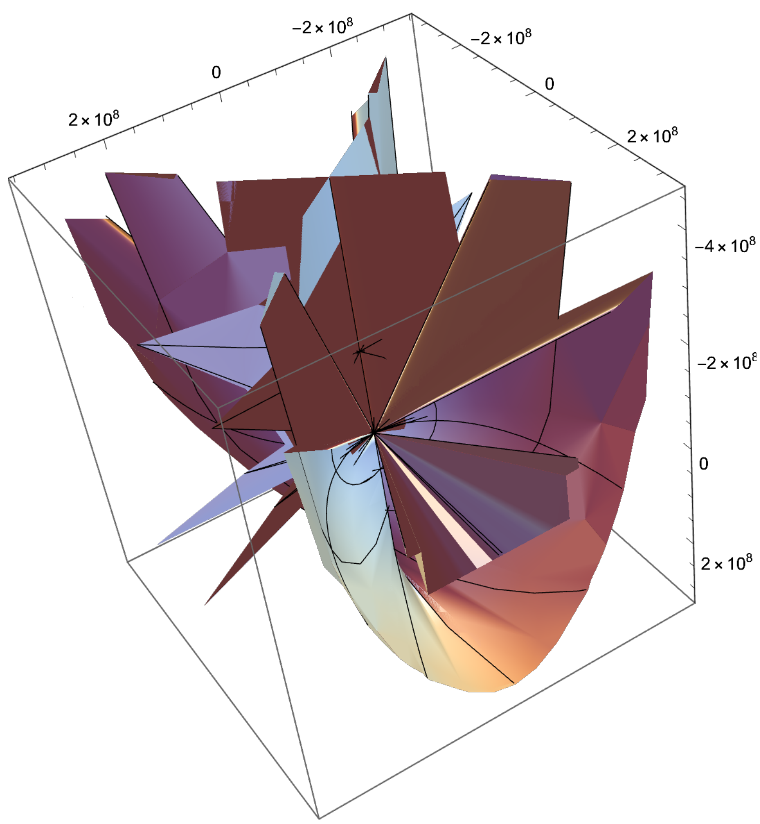
```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
       8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)),
 {β, -π / 2, π / 2}, {θ, -2 π, 2 π}]
```



```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)),
 {β, -π, π}, {θ, -4 π, 4 π}]
```



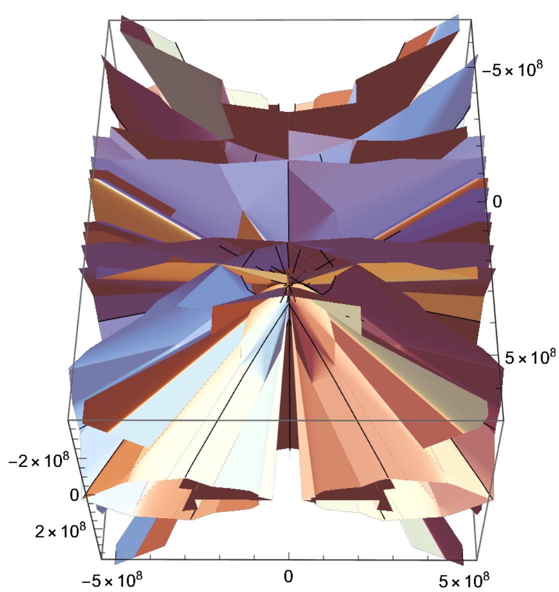
```
SphericalPlot3D[
 (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)),
 {θ, -4 π, 4 π}, {β, -π, π}]
```



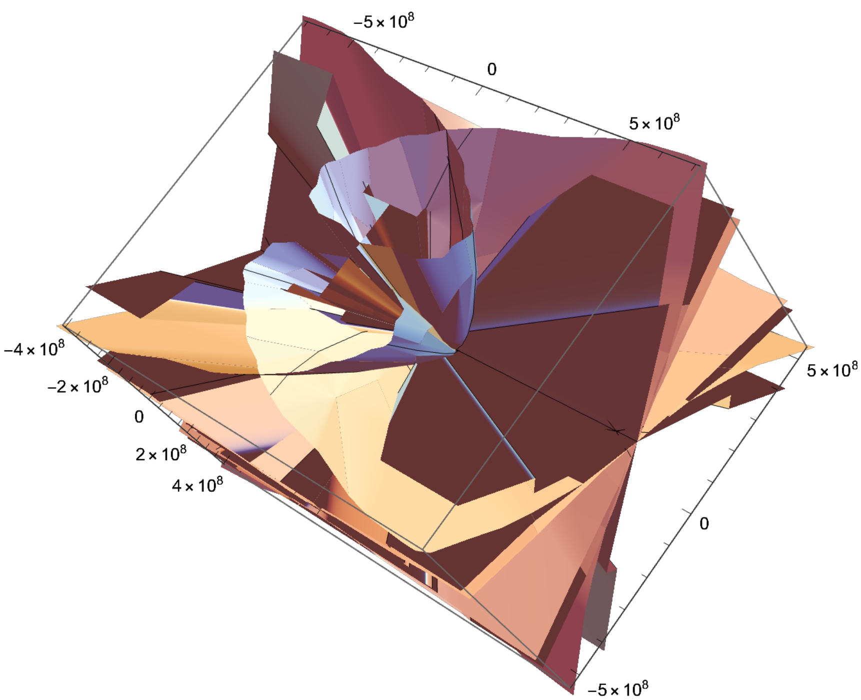
```
D[(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2)) + (θ)^2))), θ, β]
```

$$
-\left(\theta\left(\frac{2.22936\times10^{19}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]}{\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}}-\frac{7.09629\times10^{18}\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}{\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}}\right)\right)\Big/
\left(2\left(39.4784+\theta^2-25.1327\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}\sqrt{\left(3.54814\times10^{18}-2.25882\times10^{18}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)+3.59502\times10^{17}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)^2\right)}\right)+
\left(372.075\,\theta\,\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\sqrt{\left(3.54814\times10^{18}-2.25882\times10^{18}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)+3.59502\times10^{17}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)^2\right)}\right)\Big/
\left(\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\left(39.4784+\theta^2-25.1327\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{5/2}\right)
$$

```
SphericalPlot3D[-(θ (2.2293641391812866`*^19 Cos[β] Sin[β] / Sqrt[π^2 - π^2 Sin[β]^2] -
      7.096286454050199`*^18 Cos[β] Sin[β] (π + Sqrt[π^2 - π^2 Sin[β]^2]) / Sqrt[π^2 - π^2 Sin[β]^2])) /
   (2 (39.47841760435743` + θ^2 - 25.132741228718345` (π + Sqrt[π^2 - π^2 Sin[β]^2]))^(3/2)
     Sqrt[(3.5481432270250993`*^18 - 2.2588181335162941`*^18 (π + Sqrt[π^2 - π^2 Sin[β]^2]) +
        3.5950207149472704`*^17 (π + Sqrt[π^2 - π^2 Sin[β]^2])^2)]) +
  (372.0753201635978` θ Cos[β] Sin[β] Sqrt[(3.5481432270250993`*^18 -
        2.2588181335162941`*^18 (π + Sqrt[π^2 - π^2 Sin[β]^2]) +
        3.5950207149472704`*^17 (π + Sqrt[π^2 - π^2 Sin[β]^2])^2)]) / (Sqrt[π^2 - π^2 Sin[β]^2]
     (39.47841760435743` + θ^2 - 25.132741228718345` (π + Sqrt[π^2 - π^2 Sin[β]^2]))^(5/2)),
 {β, -π, π}, {θ, -4 π, 4 π}]
```



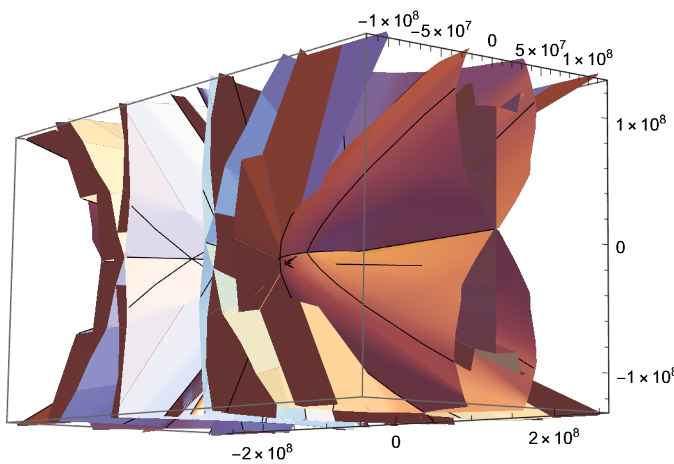
$$
\begin{aligned}
&\text{SphericalPlot3D}\Bigg[-\left(\theta\left(\frac{\text{2.2293641391812866`*^19}\,\text{Cos}[\beta]\,\text{Sin}[\beta]}{\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}}-\right.\right.\\
&\qquad\left.\left.\frac{\text{7.096286454050199`*^18}\,\text{Cos}[\beta]\,\text{Sin}[\beta]\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}{\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}}\right)\right)\Big/\\
&\quad\left(2\left(\text{39.47841760435743`}+\theta^2-\text{25.132741228718345`}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{3/2}\right.\\
&\qquad\sqrt{\left(\text{3.5481432270250993`*^18}-\text{2.2588181335162941`*^18}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+\right.}\\
&\qquad\qquad\left.\left.\text{3.5950207149472704`*^17}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)^2\right)\right)+\\
&\quad\left(\text{372.0753201635978`}\,\theta\,\text{Cos}[\beta]\,\text{Sin}[\beta]\sqrt{\left(\text{3.5481432270250993`*^18}-\right.}\right.\\
&\qquad\qquad\text{2.2588181335162941`*^18}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)+\\
&\qquad\qquad\left.\left.\text{3.5950207149472704`*^17}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)^2\right)\right)\Big/\left(\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right.\\
&\qquad\left.\left(\text{39.47841760435743`}+\theta^2-\text{25.132741228718345`}\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)\right)^{5/2}\right),\\
&\quad\{\theta,-4\,\pi,4\,\pi\},\{\beta,-\pi,\pi\}\Bigg]
\end{aligned}
$$



```
D[(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
      8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)) /
  (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)), θ]
```

$$-\left(\left(\theta\sqrt{\left(3.54814\times10^{18}-2.25882\times10^{18}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)+3.59502\times10^{17}\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)^2\right)}\right)\Big/\left(39.4784+\theta^2-25.1327\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^{3/2}\right)$$

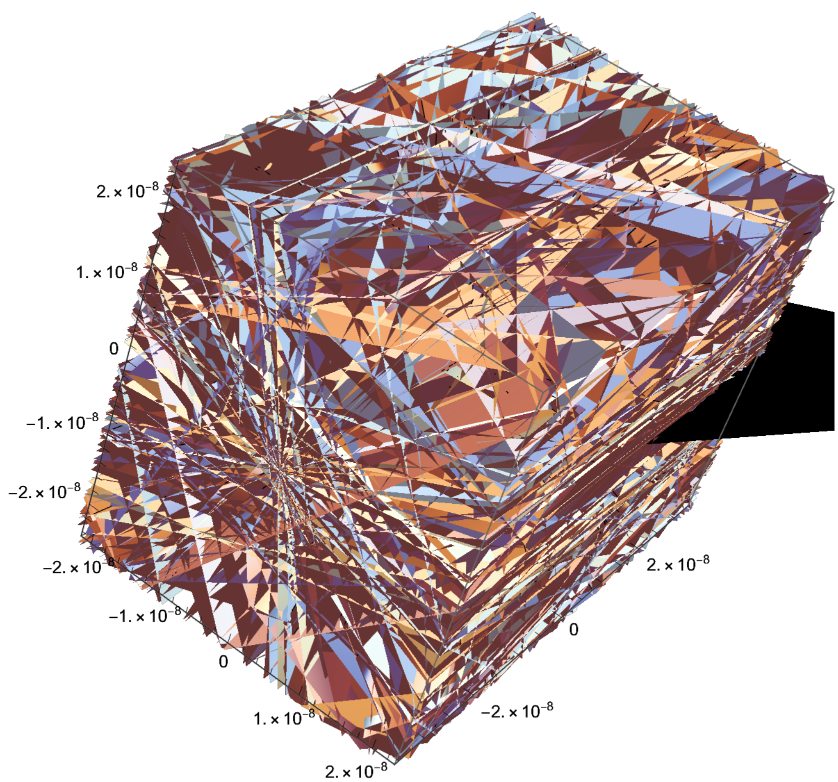
```
SphericalPlot3D[
 -(θ √(3.5481432270250993`*^18 - 2.2588181335162941`*^18 (π + √(π^2 - π^2 Sin[β]^2)) +
        3.5950207149472704`*^17 (π + √(π^2 - π^2 Sin[β]^2))^2)) /
   (39.47841760435743` + θ^2 - 25.132741228718345` (π + √(π^2 - π^2 Sin[β]^2)))^(3/2),
 {β, -π, π}, {θ, -4 π, 4 π}]
```



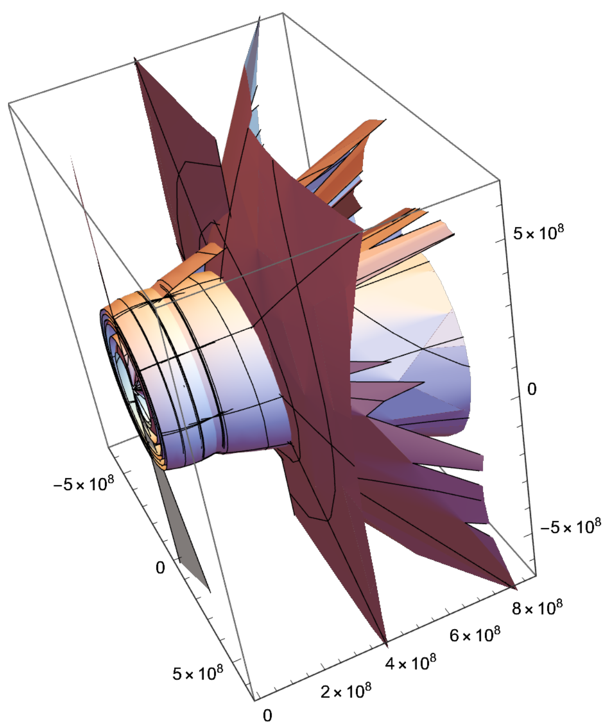
```
D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), θ, β]
```

$$-\left(1.77407\times10^{18}\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\sqrt{-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2}\left(-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2\right)^{3/2}\right)-\left(1.77407\times10^{18}\left(-12.5664+2\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{3/2}\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)-\left(19.7392\left(-1.12941\times10^{18}+1.79751\times10^{17}\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\right)\Big/\left(\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{3/2}\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)+\left(59.2176\left(-12.5664+2\,\theta\right)\mathrm{Cos}[\beta]\,\mathrm{Sin}[\beta]\sqrt{-1.12941\times10^{18}\,\theta+8.98755\times10^{16}\,\theta^2+3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}\right)\Big/\left(-12.5664\,\theta+\theta^2+39.4784\,\mathrm{Sin}[\beta]^2\right)^{5/2}$$

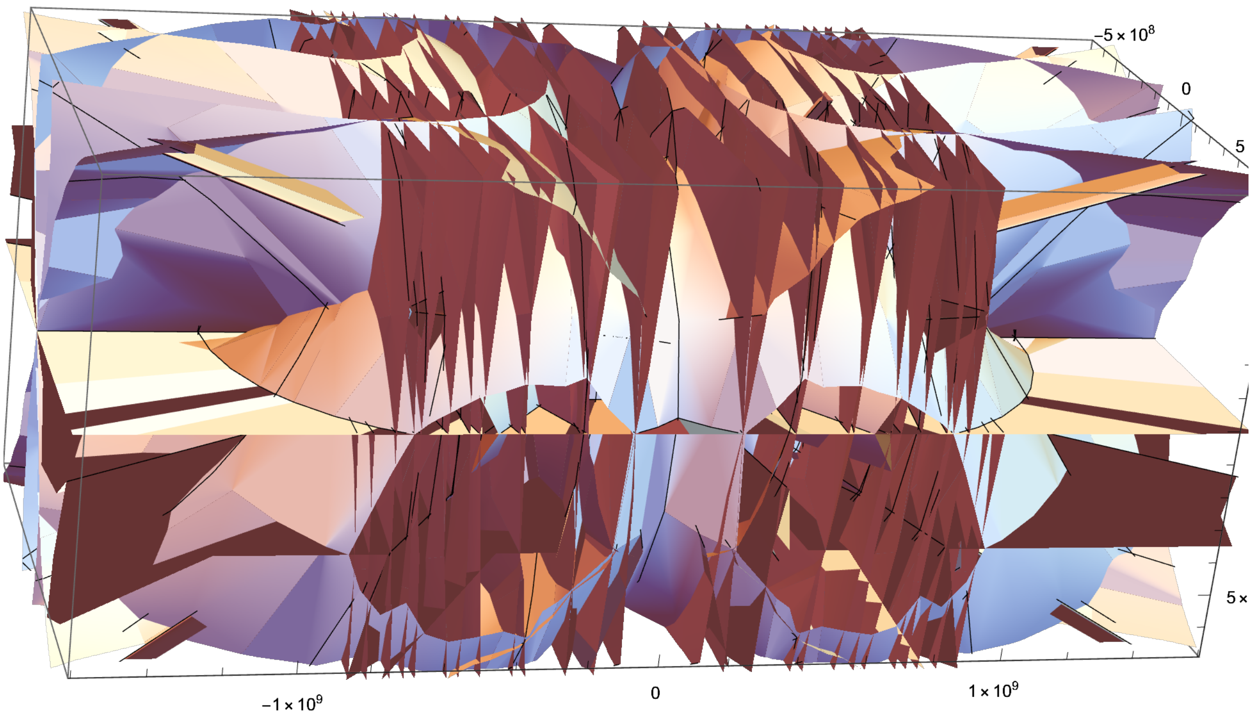
```
SphericalPlot3D[
 - (1.7740716135125496`*^18 (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
      Cos[β] Sin[β]) / (Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]
     (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)^(3/2)) -
  (1.7740716135125496`*^18 (-12.566370614359172` + 2 θ) Cos[β] Sin[β]) /
   ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) -
  (19.739208802178716` (-1.1294090667581471`*^18 + 1.7975103574736352`*^17 θ)
     Cos[β] Sin[β]) / ((-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(3/2)
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) +
  (59.21762640653615` (-12.566370614359172` + 2 θ) Cos[β] Sin[β]
     Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)]) /
   (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(5/2), {θ, -2
  π, 2 π}, {β, -π, π}]
```



$$
\begin{aligned}
&\texttt{SphericalPlot3D}\Big[\\
&\Bigg\{\left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16 \times 2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)}\right) \Big/ \\
&\quad\left(\sqrt{-12.566370614359172\grave{}\;\theta + \theta^2 + 39.47841760435743\grave{}\;\mathrm{Sin}[\beta]^2}\right),\\
&\quad\Bigg(\sqrt{\Bigg(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\left(2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right)\right)^2 +}\\
&\qquad\qquad\sqrt{3.5481432270250993\grave{}*\hat{}18\,\mathrm{Sin}[\beta]^2\Bigg)}\Bigg) \Big/\\
&\quad\Bigg(\sqrt{\Bigg(-12.566370614359172\grave{}\;\theta + \Bigg(\frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\,\mathrm{Sin}[\beta]^2\right) \Big/}\\
&\qquad\qquad\qquad\left(6\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right) +\\
&\qquad\qquad\qquad\frac{2}{3}\left(-\pi^3 + 18\pi^3\,\mathrm{Sin}[\beta]^2 + 3\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\Bigg)^2 +\\
&\qquad\qquad\sqrt{39.47841760435743\grave{}\;\mathrm{Sin}[\beta]^2\Bigg)}\Bigg)\Bigg\}, \{\beta, -\pi/2, \pi/2\}, \{\theta, -2\pi, 2\pi\}\Big]
\end{aligned}
$$



```
SphericalPlot3D[{(√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
   (√(39.47841760435743` - 12.566370614359172` θ + θ^2)),
  (√(3.5481432270250993`*^18 - 1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
   (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + (θ)^2)),
  -(1.` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2))/
   (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)),
  -(1.` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 (θ)^2))/
   (√(39.47841760435743` - 12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) +
        (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)),
  -(1.` √(3.5481432270250993`*^18 - 1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 (θ)^2))/
   (√(39.47841760435743` - 12.566370614359172` (θ) + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2)),
  -(1.` √(3.5481432270250993`*^18 -
          1.1294090667581471`*^18 (2 (π + √(π^2 - π^2 Sin[β]^2))) +
          8.987551787368176`*^16 ((2 (π + √(π^2 - π^2 Sin[β]^2))))^2))/
   (√(39.47841760435743` - 12.566370614359172` θ + θ^2))}, {β, -π, π}, {θ, -4 π, 4 π}]
```



$$\text{Solve}\left[\eta_1 == \frac{\frac{2\pi r - r\theta}{2\pi}\sqrt{4\pi-\theta_1}\sqrt{\theta_1}}{2\pi}, \theta_1\right]$$

$$\left\{\left\{\theta_1 \to \left(-\pi r^2\left(-16\pi^2+16\pi\Theta-4\Theta^2\right) - \sqrt{\pi^2 r^4\left(-16\pi^2+16\pi\Theta-4\Theta^2\right)^2 - 64\pi^4 r^2\left(4\pi^2-4\pi\Theta+\Theta^2\right)\eta_1^2}\right)\Big/\left(2 r^2\left(4\pi^2-4\pi\Theta+\Theta^2\right)\right)\right\}, \left\{\theta_1 \to \left(-\pi r^2\left(-16\pi^2+16\pi\Theta-4\Theta^2\right) + \sqrt{\pi^2 r^4\left(-16\pi^2+16\pi\Theta-4\Theta^2\right)^2 - 64\pi^4 r^2\left(4\pi^2-4\pi\Theta+\Theta^2\right)\eta_1^2}\right)\Big/\left(2 r^2\left(4\pi^2-4\pi\Theta+\Theta^2\right)\right)\right\}\right\}$$

$$\frac{r_1\sqrt{4\pi-\theta_1}\sqrt{\theta_1}}{2\pi}$$

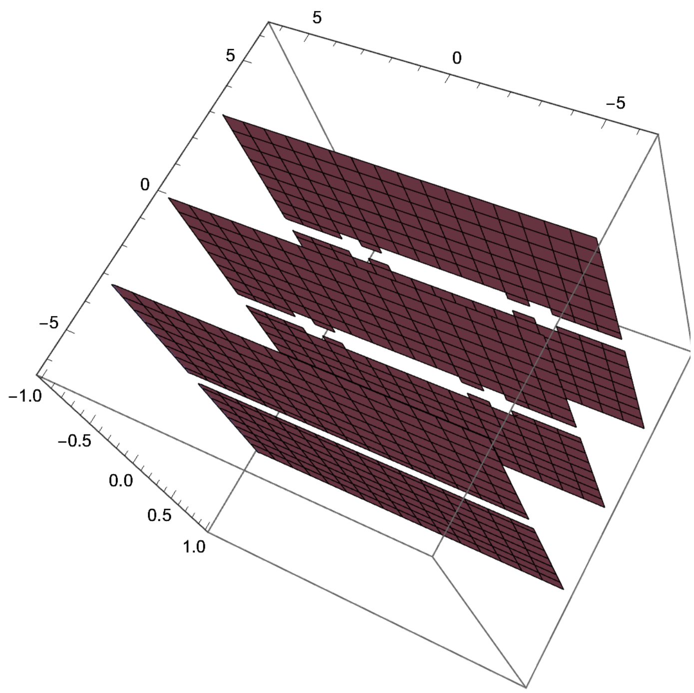
$$\left(-\pi r^2 \left(-16\pi^2+16\pi\theta-4\theta^2\right)-\sqrt{\pi^2 r^4 \left(-16\pi^2+16\pi\theta-4\theta^2\right)^2-64\pi^4 r^2 \left(4\pi^2-4\pi\theta+\theta^2\right) \frac{r_1 \sqrt{4\pi-\theta_1} \sqrt{\theta_1}}{2\pi}\hat{}\,2}\right) \Big/ \left(2 r^2 \left(4\pi^2-4\pi\theta+\theta^2\right)\right)$$

$$\frac{1}{2 r^2 \left(4\pi^2-4\pi\Theta+\Theta^2\right)} \left(-\pi r^2 \left(-16\pi^2+16\pi\Theta-4\Theta^2\right)-\sqrt{\pi^2 r^4 \left(-16\pi^2+16\pi\Theta-4\Theta^2\right)^2-16\pi^2 r^2 \left(4\pi^2-4\pi\Theta+\Theta^2\right) r_1^2 \left(4\pi-\Theta_1\right)\Theta_1}\right)$$

ContourPlot3D[

$$\frac{1}{2 r^2 \left(4\pi^2-4\pi\theta+\theta^2\right)} \left(-\pi r^2 \left(-16\pi^2+16\pi\theta-4\theta^2\right)-\sqrt{\left(\pi^2 r^4 \left(-16\pi^2+16\pi\theta-4\theta^2\right)^2-16\pi^2 r^2 \left(4\pi^2-4\pi\theta+\theta^2\right) \left(\left(\frac{2\pi r-r\theta}{2\pi}\right)\hat{}\,2\right) \left(4\pi-\theta_1\right)\theta_1\right)}\right),$$

{r, -1, 1}, {θ, -2 π, 2 π}, {θ_1, -2 π, 2 π}]



$$r := \frac{2\pi \sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$\text{Solve}\Big[\frac{1}{2\,r^2\,(4\,\pi^2-4\,\pi\,\theta+\theta^2)}\Big(-\pi\,r^2\,(-16\,\pi^2+16\,\pi\,\theta-4\,\theta^2)-\sqrt{\Big(\pi^2\,r^4\,(-16\,\pi^2+16\,\pi\,\theta-4\,\theta^2)^2-16\,\pi^2\,r^2\Big(4\,\pi^2-4\,\pi\,2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\Big)+\theta^2\Big)\Big(\Big(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\Big)\wedge 2\Big)\,(4\,\pi-\theta_1)\,\theta_1\Big)}\Big)==\theta_1,\,\theta_1\Big]$$

$\{\{\theta_1\to 0\},\,\{\theta_1\to 4\,\pi\}\}$

$$\text{Solve}\Big[\frac{1}{2\,r^2\,(4\,\pi^2-4\,\pi\,\theta+\theta^2)}\Big(-\pi\,r^2\,\Big(-16\,\pi^2+16\,\pi\,\theta-4\,\Big(2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\Big)\Big)^2\Big)-\sqrt{\Big(\pi^2\,r^4\,(-16\,\pi^2+16\,\pi\,\theta-4\,\theta^2)^2-16\,\pi^2\,r^2\Big(4\,\pi^2-4\,\pi\,2\,\Big(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\Big)+\theta^2\Big)\Big(\Big(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\Big)\wedge 2\Big)\,(4\,\pi-\theta_1)\,\theta_1\Big)}\Big)==\theta_1,\,\theta_1\Big]$$

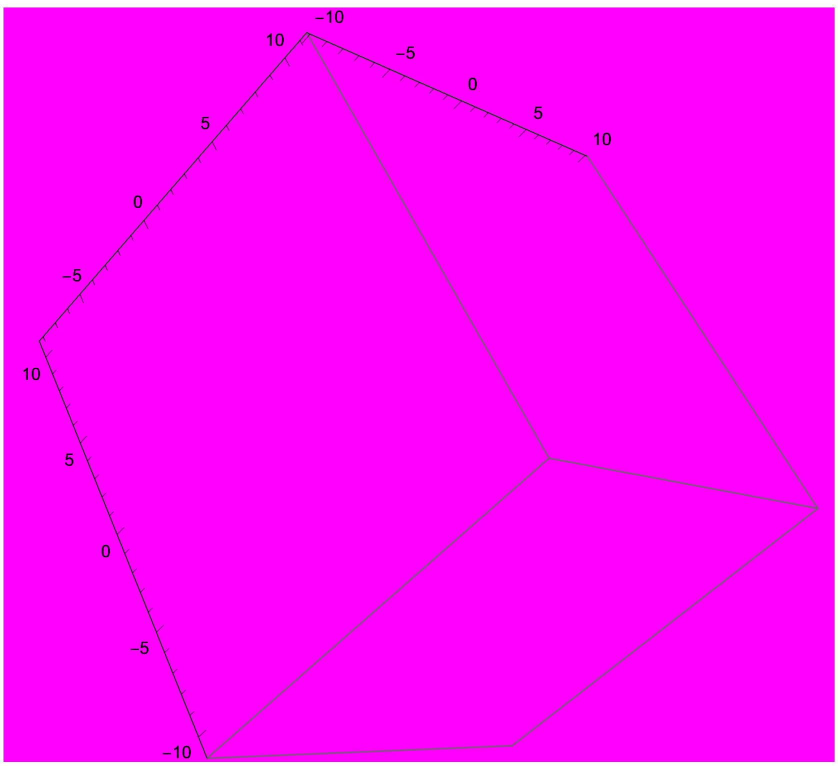
$$\Big\{\Big\{\theta_1\to\frac{1}{2\,(-4\,\pi^2+4\,\pi\,\theta-\theta^2)}\Big(-24\,\pi^3+20\,\pi^2\,\theta-2\,\pi\,\theta^2-\theta^3-8\,\pi^3\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^2\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}-2\,\pi\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}-\sqrt{\Big(\Big(24\,\pi^3-20\,\pi^2\,\theta+2\,\pi\,\theta^2+\theta^3+8\,\pi^3\,\sqrt{1-\text{Sin}[\beta]^2}-8\,\pi^2\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}+2\,\pi\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}\Big)^2-4\,(-4\,\pi^2+4\,\pi\,\theta-\theta^2)\Big(-48\,\pi^4+6\,\pi^2\,\theta^2-\pi\,\theta^3+24\,\pi^4\,\text{Sin}[\beta]^2+4\,\pi^3\,\theta\,\text{Sin}[\beta]^2-48\,\pi^4\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^3\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}-2\,\pi^2\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{1-\text{Sin}[\beta]^2}\Big)\Big)}\Big)\Big\},$$

$$\Big\{\theta_1\to\frac{1}{2\,(-4\,\pi^2+4\,\pi\,\theta-\theta^2)}\Big(-24\,\pi^3+20\,\pi^2\,\theta-2\,\pi\,\theta^2-\theta^3-8\,\pi^3\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^2\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}-2\,\pi\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}+\sqrt{\Big(\Big(24\,\pi^3-20\,\pi^2\,\theta+2\,\pi\,\theta^2+\theta^3+8\,\pi^3\,\sqrt{1-\text{Sin}[\beta]^2}-8\,\pi^2\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}+2\,\pi\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}\Big)^2-4\,(-4\,\pi^2+4\,\pi\,\theta-\theta^2)\Big(-48\,\pi^4+6\,\pi^2\,\theta^2-\pi\,\theta^3+24\,\pi^4\,\text{Sin}[\beta]^2+4\,\pi^3\,\theta\,\text{Sin}[\beta]^2-48\,\pi^4\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^3\,\theta\,\sqrt{1-\text{Sin}[\beta]^2}-2\,\pi^2\,\theta^2\,\sqrt{1-\text{Sin}[\beta]^2}+8\,\pi^4\,\text{Sin}[\beta]^2\,\sqrt{1-\text{Sin}[\beta]^2}\Big)\Big)}\Big)\Big\}\Big\}$$

```
SphericalPlot3D[
```

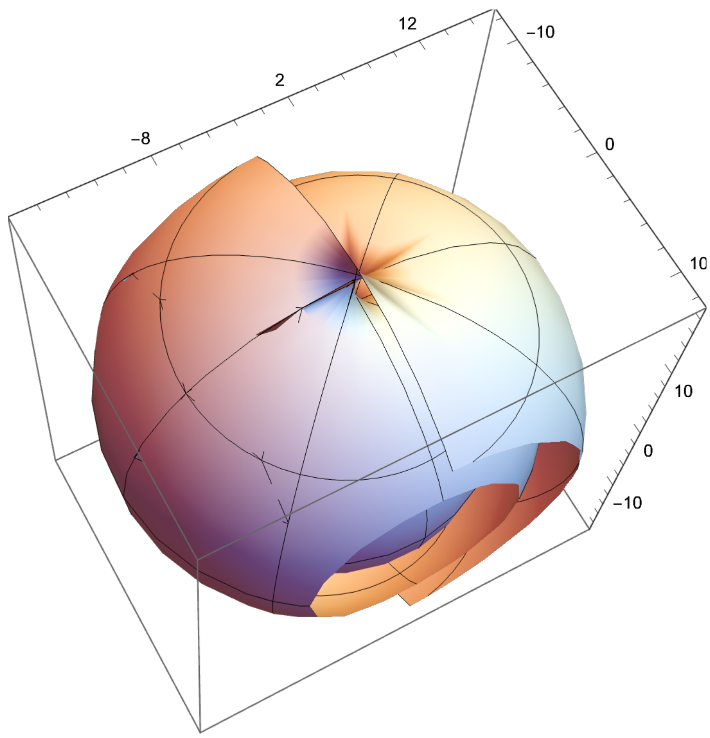
$$\frac{1}{2\left(-4\pi^2+4\pi\theta-\theta^2\right)}\left(-24\pi^3+20\pi^2\theta-2\pi\theta^2-\theta^3-8\pi^3\sqrt{1-\text{Sin}[\beta]^2}+8\pi^2\theta\sqrt{1-\text{Sin}[\beta]^2}-2\pi\theta^2\sqrt{1-\text{Sin}[\beta]^2}+\sqrt{\left(\left(24\pi^3-20\pi^2\theta+2\pi\theta^2+\theta^3+8\pi^3\sqrt{1-\text{Sin}[\beta]^2}-8\pi^2\theta\sqrt{1-\text{Sin}[\beta]^2}+2\pi\theta^2\sqrt{1-\text{Sin}[\beta]^2}\right)^2-4\left(-4\pi^2+4\pi\theta-\theta^2\right)\left(-48\pi^4+6\pi^2\theta^2-\pi\theta^3+24\pi^4\text{Sin}[\beta]^2+4\pi^3\theta\,\text{Sin}[\beta]^2-48\pi^4\sqrt{1-\text{Sin}[\beta]^2}+8\pi^3\theta\sqrt{1-\text{Sin}[\beta]^2}-2\pi^2\theta^2\sqrt{1-\text{Sin}[\beta]^2}+8\pi^4\text{Sin}[\beta]^2\sqrt{1-\text{Sin}[\beta]^2}\right)\right)}\right),$$

```
{θ, -2 π, 2 π}, {β, -π, π}, PlotStyle → Opacity[.5]]
```

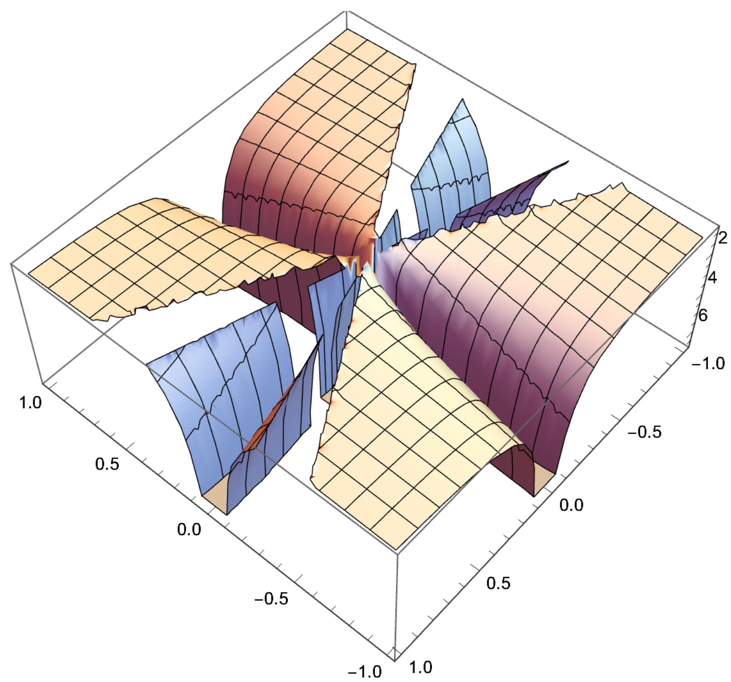


$$2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)$$

$$\text{SphericalPlot3D}\left[\frac{1}{2\,r^2\,\left(4\,\pi^2-4\,\pi\,\theta+\theta^2\right)}\left(-\pi\,r^2\,\left(-16\,\pi^2+16\,\pi\,\theta-4\,\theta^2\right)-\sqrt{\left(\pi^2\,r^4\,\left(-16\,\pi^2+16\,\pi\,\theta-4\,\theta^2\right)^2-16\,\pi^2\,r^2\,\left(4\,\pi^2-4\,\pi\,\theta+\theta^2\right)\left(\left(\frac{2\,\pi\,r-r\,\theta}{2\,\pi}\right)\hat{}\,2\right)\,(4\,\pi-\theta_1)\,\theta_1\right)}\right),\,\{\theta,\,-2\,\pi,\,2\,\pi\},\,\{\theta_1,\,-2\,\pi,\,2\,\pi\}\right]$$

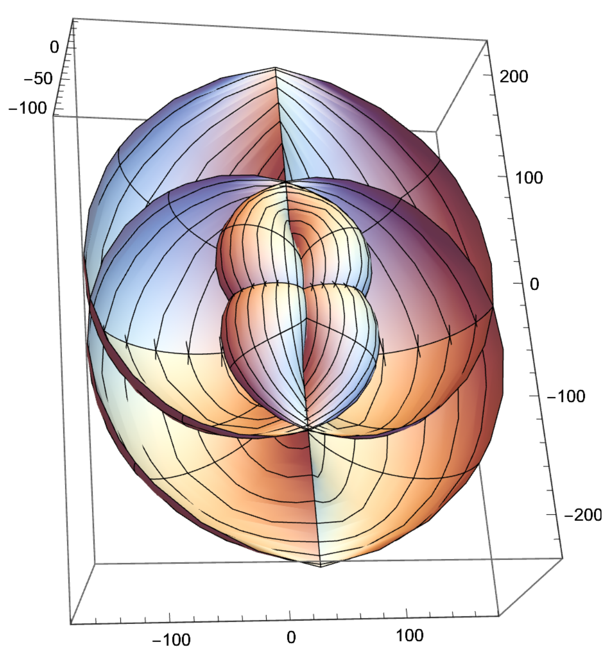


$$\text{Plot3D}\Bigg[1\Bigg/\Bigg(\Bigg(\left(4\pi-\left(\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2}\right)\right)\left(\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2}\right)\Bigg)\times 2\pi\sqrt{\left(\left(4\pi-\left(\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2}\right)\right)\left(\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2}\right)\right)}\Bigg), \{r, -1, 1\}, \{\eta, -1, 1\}\Bigg]$$

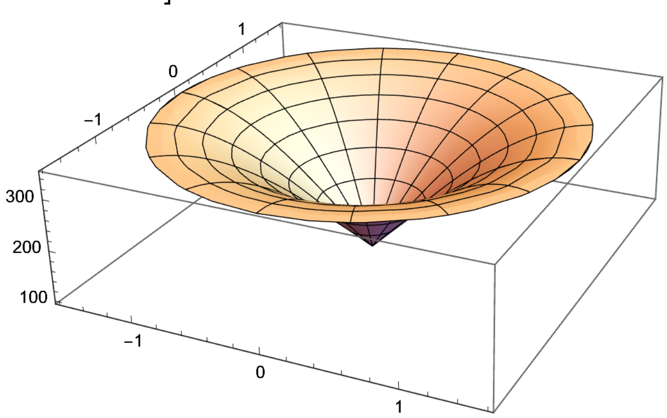


2
4
6
−1.0
−0.5
0.0
0.5
1.0
1.0
0.5
0.0
−0.5
−1.0

$$\text{SphericalPlot3D}\Bigg[1\Bigg/\left(\left(4\pi-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)2\pi\sqrt{\left(4\pi-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)}\right)(\theta),\ \{\theta,-2\pi,2\pi\},\ \{\beta,-\pi/2,\pi/2\}\Bigg]$$



$$\text{RevolutionPlot3D}\Big[1\Big/\left(\left(4\pi-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)2\pi\sqrt{\left(4\pi-\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)\left(\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)}\right),\ \{\beta,-\pi/2,\pi/2\}\Big]$$



$$1\Bigg/\left(\left(\left(4\pi-\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\times 2\pi$$

$$\sqrt{\left(\left(\left(4\pi-\frac{4\pi}{3}-\frac{-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2}{6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}}+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)\theta\right)}$$

$$r\to\frac{2\pi\sqrt{(4\pi-2\pi)\,2\pi}}{(4\pi-2\pi)\,2\pi}$$

$$\mathrm{Solve}\left[\frac{\left(1+\frac{3}{\frac{2x\sqrt{(4x-(2/3)x)\,(2/3)x}}{(4x-(2/3)x)\,(2/3)x}}\right)}{2}==\phi,\ x\right]$$

{}

$$\frac{\left(1+\frac{3}{\frac{2\pi\sqrt{(4\pi-(2/3)\pi)\,(2/3)\pi}}{(4\pi-(2/3)\pi)\,(2/3)\pi}}\right)}{2}=\phi$$

$$\frac{1}{2}\left(1+\sqrt{5}\right)$$

$r=\dfrac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}==\dfrac{3}{\sqrt{5}}$ at $\theta=(2/3)\,\pi$, therefore,

in the case of $\dfrac{\left(1+\sqrt{5}\right)}{2}$, $\sqrt{5}==\dfrac{3}{\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}}$

$$\frac{3}{\sqrt{5}}=\frac{2\pi\sqrt{(4\pi-(2/3)\,\pi)\,(2/3)\,\pi}}{(4\pi-(2/3)\,\pi)\,(2/3)\,\pi}$$

$$\sqrt{5} = \frac{3}{\frac{2\pi\sqrt{(4\pi-(2/3)\pi)(2/3)\pi}}{(4\pi-(2/3)\pi)(2/3)\pi}} = \frac{3}{r}$$

$$\frac{\left(1+\sqrt{5}\right)}{2} == \frac{\left(\frac{2\pi r \,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} + \frac{3}{r}\right)}{2}$$

$$\text{Solve}\left[y == \frac{3}{\frac{2\pi\sqrt{(4x-(2/3)x)(2/3)x}}{(4\pi-(2/3)x)(2/3)x}}, x\right]$$

$$\left\{\left\{x \to 6\pi - \sqrt{5}\,\pi y\right\}, \left\{x \to 6\pi + \sqrt{5}\,\pi y\right\}\right\}$$

$$\pi = 6\pi + \sqrt{5}\,\pi\,\sqrt{5}$$

$$\text{Solve}\left[y == \frac{3}{\frac{2x\sqrt{(4x-(2/3)x)(2/3)x}}{(4x-(2/3)x)(2/3)x}}, x\right]$$

$$\{\}$$

$$\text{Solve}\left[\sqrt{5} == \frac{3}{\frac{2\pi\sqrt{(4x-(2/3)x)(2/3)x}}{(4\pi-(2/3)x)(2/3)x}}, x\right]$$

$$\{\{x \to \pi\}\}$$

$$\frac{\left(1+\sqrt{5}\right)}{2} == \pi\left(3+\sqrt{9-\pi^2}\right)$$

$$\text{N}\left[\pi\left(3+\sqrt{9-\pi^2}\right)\right]$$

$$9.42478 + 2.92962\, i$$

$$\text{Solve}\left[\frac{\left(1+\sqrt{5}\right)}{2} == \frac{\left(\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}} + \frac{3}{r}\right)}{2\,\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}, r\right]$$

$$\left\{\left\{r \to -\frac{\sqrt{\frac{3}{2\pi}}\,((4\pi-\theta)\,\theta)^{1/4}\,\sqrt{\text{Csc}[\beta]}}{5^{1/4}}\right\}, \left\{r \to \frac{\sqrt{\frac{3}{2\pi}}\,((4\pi-\theta)\,\theta)^{1/4}\,\sqrt{\text{Csc}[\beta]}}{5^{1/4}}\right\}\right\}$$

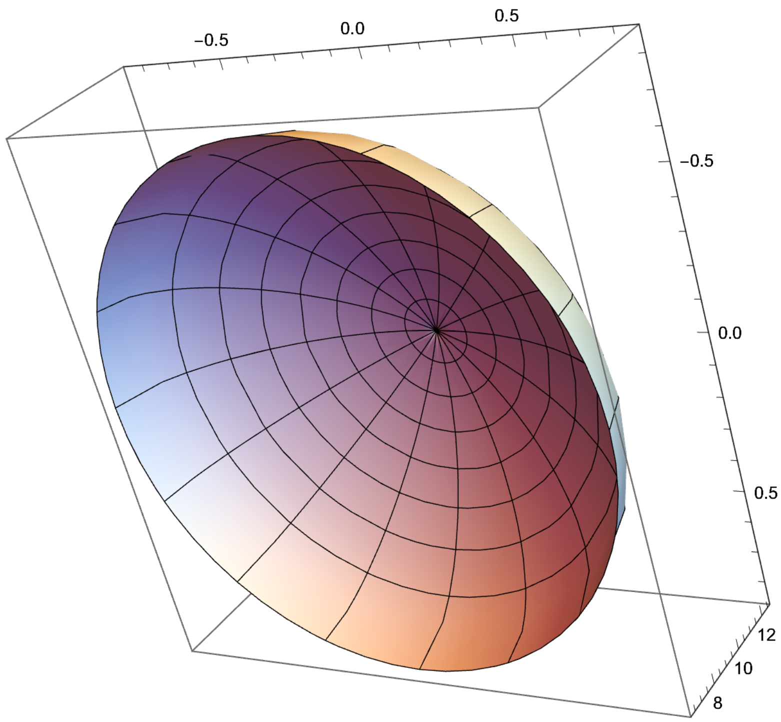
$$\text{Solve}\left[\frac{\sqrt{\frac{3}{2\pi}}\,((4\pi-\theta)\,\theta)^{1/4}\,\sqrt{\text{Csc}[\beta]}}{5^{1/4}} == \frac{2\pi\sqrt{(4\pi-(2/3)\pi)(2/3)\pi}}{(4\pi-(2/3)\pi)(2/3)\pi}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2}{5}\left(5\pi - \sqrt{5}\,\sqrt{5\pi^2 - 9\pi^2\,\text{Sin}[\beta]^2}\right)\right\}, \left\{\theta \to \frac{2}{5}\left(5\pi + \sqrt{5}\,\sqrt{5\pi^2 - 9\pi^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

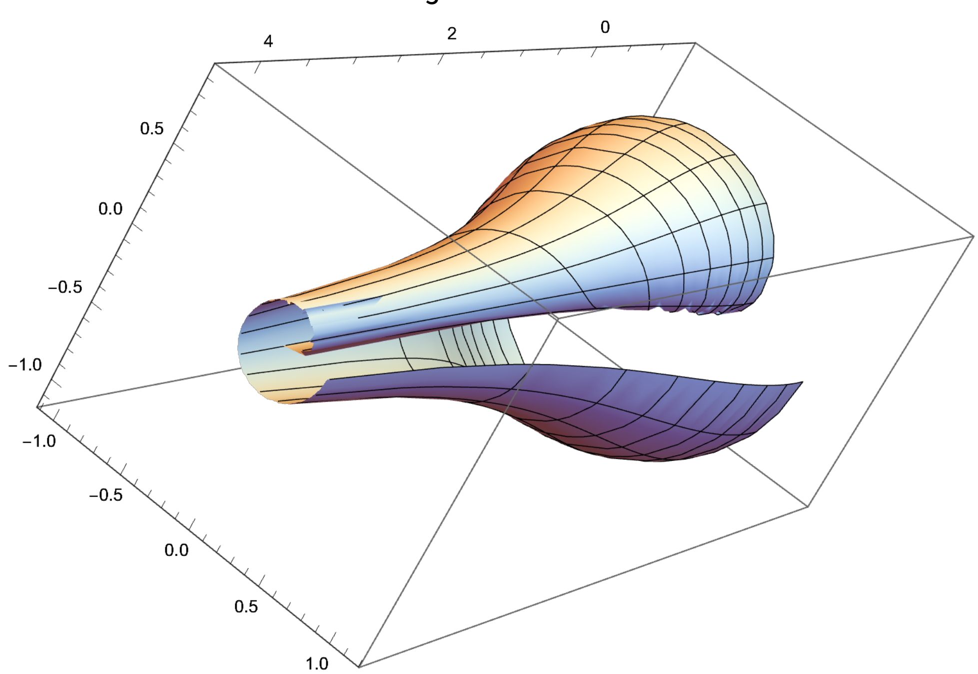
$$\text{Solve}\left[2\left(\pi + \sqrt{\pi^2 - \pi^2\,\text{Sin}[\beta]^2}\right) == \frac{2}{5}\left(5\pi + \sqrt{5}\,\sqrt{5\pi^2 - 9\pi^2\,\text{Sin}[\beta]^2}\right), \beta\right]$$

$$\{\{\beta \to 0\}\}$$

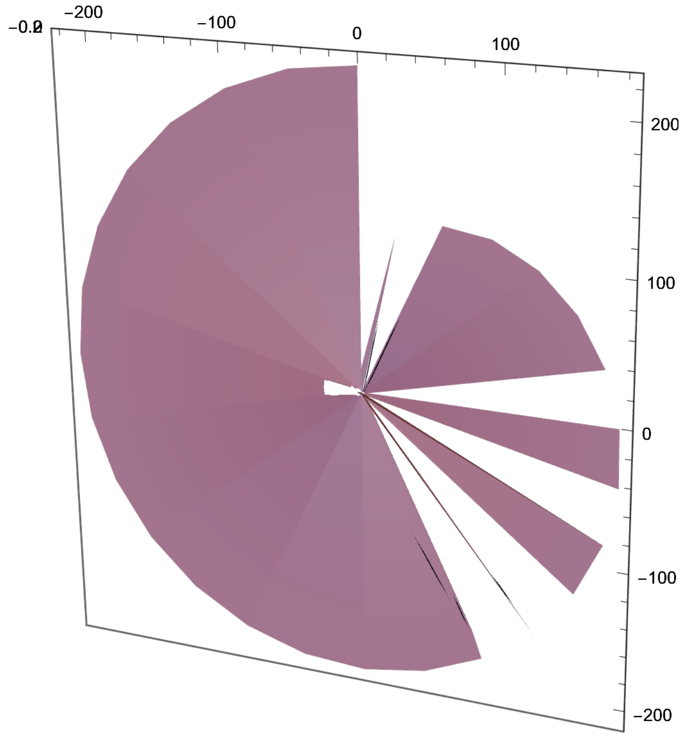
$$\texttt{RevolutionPlot3D}\left[\frac{2}{5}\left(5\,\pi + \sqrt{5}\ \sqrt{5\,\pi^2 - 9\,\pi^2\,\texttt{Sin}[\beta]^2}\right),\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$\texttt{SphericalPlot3D}\left[\frac{\sqrt{\frac{3}{2\,\pi}}\ \left(\left(4\,\pi - \theta\right)\,\theta\right)^{1/4}\ \sqrt{\texttt{Csc}[\beta]}}{5^{1/4}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\frac{\sqrt{\frac{3}{2\pi}}\ ((4\pi-\theta)\ \theta)^{1/4}\ \sqrt{\text{Csc}[\beta]}}{5^{1/4}}, \{\theta, -2\pi, 2\pi\}, \{\beta, -\pi/2, \pi/2\}\right]$$

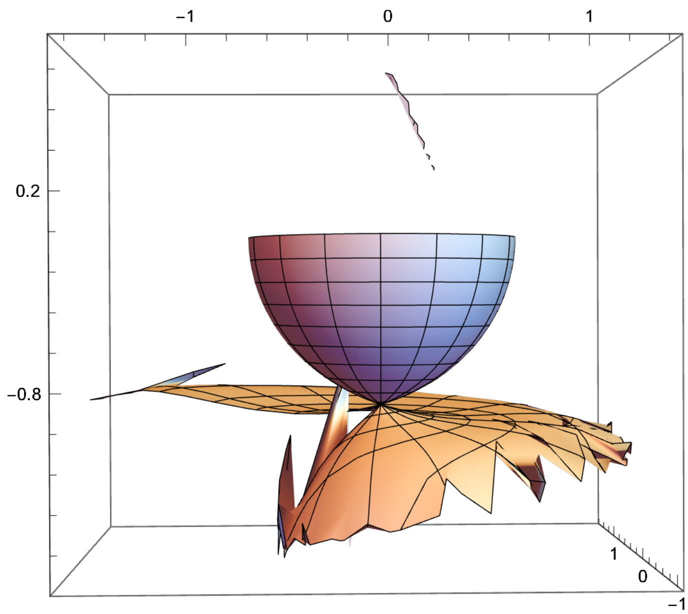


$$\text{Solve}\left[\frac{\left(1+\sqrt{5}\right)}{2} == \frac{\left(\frac{2\pi\, r\, \text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{3}{r}\right)}{2}, r\right]$$

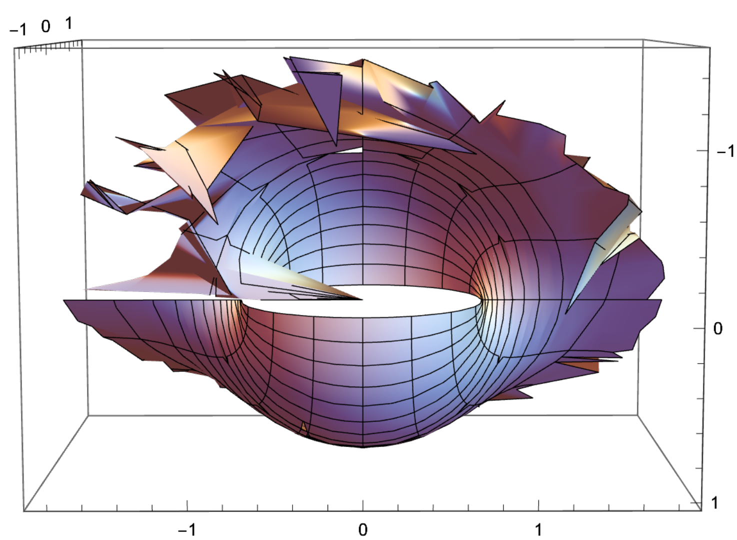
$$\left\{\left\{r \to -\frac{1}{4\pi}\text{Csc}[\beta]\left(-\sqrt{(4\pi-\theta)\ \theta}-\sqrt{5}\ \sqrt{(4\pi-\theta)\ \theta}-\sqrt{6\ (4\pi-\theta)\ \theta+2\ \sqrt{5}\ (4\pi-\theta)\ \theta-24\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]}\right)\right\},\right.$$

$$\left.\left\{r \to -\frac{1}{4\pi}\text{Csc}[\beta]\left(-\sqrt{(4\pi-\theta)\ \theta}-\sqrt{5}\ \sqrt{(4\pi-\theta)\ \theta}+\sqrt{6\ (4\pi-\theta)\ \theta+2\ \sqrt{5}\ (4\pi-\theta)\ \theta-24\pi\ \sqrt{(4\pi-\theta)\ \theta}\ \text{Sin}[\beta]}\right)\right\}\right\}$$

$$\texttt{SphericalPlot3D}\Big[\frac{1}{4\pi}\texttt{Csc}[\beta]\left(-\sqrt{(4\pi-\theta)\,\theta}-\sqrt{5}\,\sqrt{(4\pi-\theta)\,\theta}+\sqrt{6\,(4\pi-\theta)\,\theta+2\,\sqrt{5}\,(4\pi-\theta)\,\theta-24\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}[\beta]}\right),\ \{\beta,-\pi/2,\pi/2\},\{\theta,-2\pi,2\pi\}\Big]$$



$$\texttt{SphericalPlot3D}\Big[\frac{1}{4\pi}\texttt{Csc}[\beta]\left(-\sqrt{(4\pi-\theta)\,\theta}-\sqrt{5}\,\sqrt{(4\pi-\theta)\,\theta}+\sqrt{6\,(4\pi-\theta)\,\theta+2\,\sqrt{5}\,(4\pi-\theta)\,\theta-24\,\pi\,\sqrt{(4\pi-\theta)\,\theta}\,\texttt{Sin}[\beta]}\right),\ \{\theta,-2\pi,2\pi\},\{\beta,-\pi/2,\pi/2\}\Big]$$



$$\text{Solve}\left[\frac{\left(1+\sqrt{5}\right)}{2}==\frac{\left(\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{3}{r}\right)}{2\,\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}},\beta\right]$$

$$\left\{\left\{\beta\to\text{ArcCsc}\left[\frac{2\sqrt{5}\,\pi r^2\sqrt{(4\pi-\theta)\,\theta}}{3\left(4\pi\theta-\theta^2\right)}\right]\right\}\right\}$$

$$\text{Solve}\left[\frac{\left(1+\sqrt{5}\right)}{2}==\frac{\left(\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{3}{r}\right)}{2},\beta\right]$$

$$\left\{\left\{\beta\to\text{ArcSin}\left[\frac{-\frac{3\sqrt{(4\pi-\theta)\,\theta}}{r^2}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{r}+\frac{\sqrt{5}\sqrt{(4\pi-\theta)\,\theta}}{r}}{2\pi}\right]\right\}\right\}$$

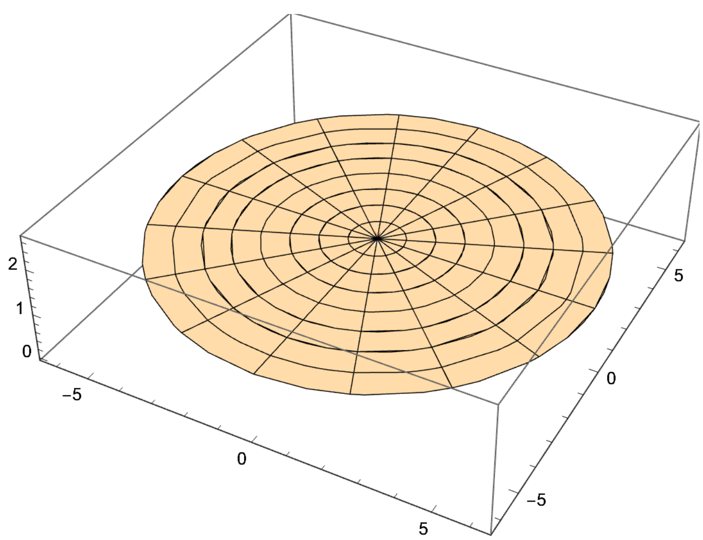
$$\text{Solve}\left[\text{ArcCsc}\left[\frac{2\sqrt{5}\,\pi r^2\sqrt{(4\pi-\theta)\,\theta}}{3\left(4\pi\theta-\theta^2\right)}\right]==\text{ArcSin}\left[\frac{-\frac{3\sqrt{(4\pi-\theta)\,\theta}}{r^2}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{r}+\frac{\sqrt{5}\sqrt{(4\pi-\theta)\,\theta}}{r}}{2\pi}\right],r\right]$$

$$\left\{\left\{r\to-\frac{12\pi}{\sqrt{5}\,(-4\pi+\theta)}+\frac{3\theta}{\sqrt{5}\,(-4\pi+\theta)}\right\}\right\}$$

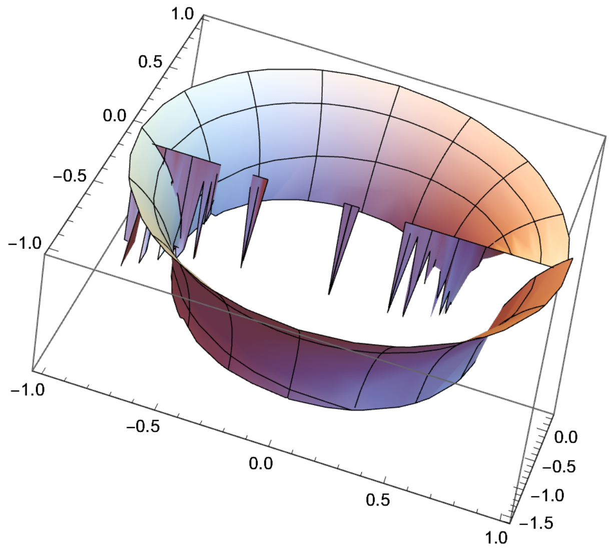
$$\text{Solve}\left[\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}==-\frac{12\pi}{\sqrt{5}\,(-4\pi+\theta)}+\frac{3\theta}{\sqrt{5}\,(-4\pi+\theta)},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2\pi}{3}\right\},\left\{\theta\to\frac{10\pi}{3}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[-\frac{12\pi}{\sqrt{5}\,(-4\pi+\theta)}+\frac{3\theta}{\sqrt{5}\,(-4\pi+\theta)},\{\theta,-2\pi,2\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[\text{ArcSin}\left[\frac{-\frac{3\sqrt{(4\pi-\theta)\,\theta}}{r^2}+\frac{\sqrt{(4\pi-\theta)\,\theta}}{r}+\frac{\sqrt{5}\ \sqrt{(4\pi-\theta)\,\theta}}{r}}{2\pi}\right],\ \{r,-1,1\},\ \{\theta,-2\pi,2\pi\}\right]$$



$$\text{Solve}\left[\frac{2\pi\sqrt{(4\pi-(2/3)\,x)\ (2/3)\,x}}{(4\pi-(2/3)\,x)\ (2/3)\,x}==\frac{3}{\sqrt{5}},\ x\right]$$

$$\{\{x\to\pi\},\ \{x\to 5\pi\}\}$$

$$\frac{2\pi\sqrt{(4\pi-\pi)\,\pi}}{(4\pi-\pi)\,\pi}$$

$$\frac{2}{\sqrt{3}}$$

$$\frac{2\pi\sqrt{(4\pi-(3/2)\,\pi)\ (3/2)\,\pi}}{(4\pi-(3/2)\,\pi)\ (3/2)\,\pi}$$

$$\frac{4}{\sqrt{15}}$$

$$\frac{2\pi\sqrt{(4\pi-2\pi)\,2\pi}}{(4\pi-2\pi)\,2\pi}$$

1

$$\frac{2\pi\sqrt{(4\pi-4\pi)\,4\pi}}{(4\pi-4\pi)\,4\pi}$$

Indeterminate

$$\frac{2\pi\sqrt{(4\pi-5\pi)\,5\pi}}{(4\pi-5\pi)\,5\pi}$$

$$-\frac{2\,i}{\sqrt{5}}$$

$$r\to\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$r\to$

$$r\to\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$r\to\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

$$r\to\frac{2\pi\sqrt{(4\pi-\theta)\,\theta}}{(4\pi-\theta)\,\theta}$$

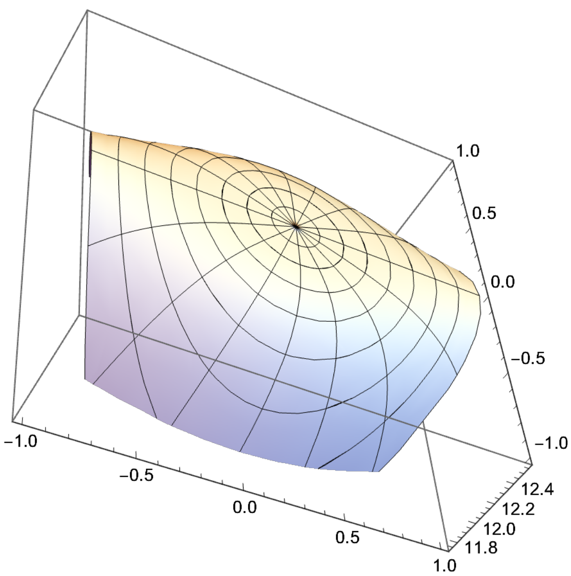
2π

$$\text{Solve}\left[\frac{\left(1+\sqrt{5}\right)}{2}==\frac{\left(\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}+\frac{3}{r}\right)}{2\,\frac{2\pi r\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}},\theta\right]$$

$$\left\{\left\{\theta\to\frac{2}{3}\left(3\pi-\sqrt{9\pi^2-5\pi^2 r^4\,\text{Sin}[\beta]^2}\right)\right\},\left\{\theta\to\frac{2}{3}\left(3\pi+\sqrt{9\pi^2-5\pi^2 r^4\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\frac{2}{3}\left(3\pi+\sqrt{9\pi^2-5\pi^2 r^4\,\text{Sin}[\beta]^2}\right)==$$

$$\text{RevolutionPlot3D}\left[\frac{2}{3}\left(3\,\pi+\sqrt{9\,\pi^2-5\,\pi^2\,r^4\,\text{Sin}[\beta]^2}\right),\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\right]$$



$$\text{Solve}\Big[\Big(\sqrt{}\,\big(-1.1294090667581471\text{`}*\text{^}18\,\theta+8.987551787368176\text{`}*\text{^}16\,\theta^2+3.5481432270250993\text{`}*\text{^}18\,\text{Sin}[\beta]^2\big)\Big)\Big/\left(\sqrt{-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2}\right)==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\ r\Big]$$

$$\left\{\left\{r\to-\frac{1.\ \sqrt{6.91664\times10^{33}-5.50409\times10^{32}\,\theta}\ \sqrt{\theta}}{\sqrt{2.41771\times10^{17}-7.6958\times10^{16}\,\theta+6.12412\times10^{15}\,\theta^2}}\right\},\right.$$

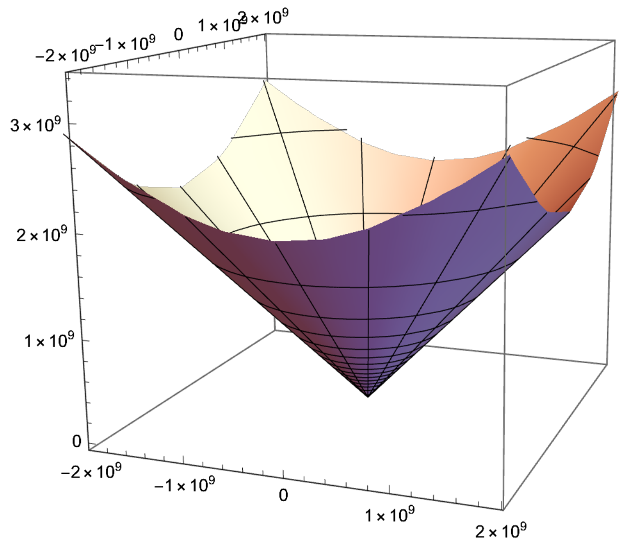
$$\left.\left\{r\to\frac{\sqrt{6.91664\times10^{33}-5.50409\times10^{32}\,\theta}\ \sqrt{\theta}}{\sqrt{2.41771\times10^{17}-7.6958\times10^{16}\,\theta+6.12412\times10^{15}\,\theta^2}}\right\}\right\}$$

RevolutionPlot3D[

$$\left\{-\frac{1.\grave{}\ \sqrt{6.916640561054567\grave{}*\hat{}33-5.504087674408674\grave{}*\hat{}32\,\theta}\ \sqrt{\theta}}{\sqrt{2.4177070339300032\grave{}*\hat{}17-7.695800507960096\grave{}*\hat{}16\,\theta+6.124123459454841\grave{}*\hat{}15\,\theta^2}},\right.$$

$$\left.\frac{\sqrt{6.916640561054567\grave{}*\hat{}33-5.504087674408674\grave{}*\hat{}32\,\theta}\ \sqrt{\theta}}{\sqrt{2.4177070339300032\grave{}*\hat{}17-7.695800507960096\grave{}*\hat{}16\,\theta+6.124123459454841\grave{}*\hat{}15\,\theta^2}}\right\},$$

$\{\theta, -2\,\pi, 2\,\pi\}$]

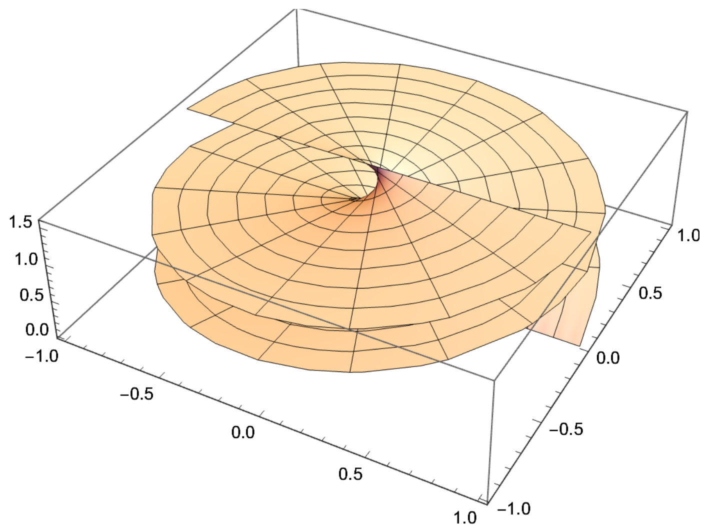


$$\text{Solve}\left[\left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta+8.987551787368176\grave{}*\hat{}16\,\theta^2+3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta+\theta^2+39.47841760435743\grave{}\ \text{Sin}[\beta]^2}\right)==\frac{4\,\pi\,r^2-2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}},\beta\right]$$

$$\Big\{\Big\{\beta\to-1.\ \text{ArcSin}\Big[\Big(\sqrt{\theta}\ \sqrt{\left(1.08487\times10^{33}\,r^2-3.10363\times10^{49}\,\theta-4.31657\times10^{32}\,r^2\,\theta+4.93958\times10^{48}\,\theta^2+5.49602\times10^{31}\,r^2\,\theta^2-1.9654\times10^{47}\,\theta^3-2.1868\times10^{30}\,r^2\,\theta^3\right)}\Big)\Big/\Big(\sqrt{\left(3.40822\times10^{33}\,r^2-9.75034\times10^{49}\,\theta-1.08487\times10^{33}\,r^2\,\theta+7.75907\times10^{48}\,\theta^2+8.63313\times10^{31}\,r^2\,\theta^2\right)}\Big)\Big]\Big\},$$

$$\Big\{\beta\to\text{ArcSin}\Big[\Big(\sqrt{\theta}\ \sqrt{\left(1.08487\times10^{33}\,r^2-3.10363\times10^{49}\,\theta-4.31657\times10^{32}\,r^2\,\theta+4.93958\times10^{48}\,\theta^2+5.49602\times10^{31}\,r^2\,\theta^2-1.9654\times10^{47}\,\theta^3-2.1868\times10^{30}\,r^2\,\theta^3\right)}\Big)\Big/\Big(\sqrt{\left(3.40822\times10^{33}\,r^2-9.75034\times10^{49}\,\theta-1.08487\times10^{33}\,r^2\,\theta+7.75907\times10^{48}\,\theta^2+8.63313\times10^{31}\,r^2\,\theta^2\right)}\Big)\Big]\Big\}\Big\}$$

```
RevolutionPlot3D[ArcSin[(√θ √(1.0848712769677502`*^33 r^2 -
        3.10362859208832`*^49 θ - 4.3165656586958524`*^32 r^2 θ +
        4.9395783195219584`*^48 θ^2 + 5.496022094097345`*^31 r^2 θ^2 -
        1.965395765853693`*^47 θ^3 - 2.186797709044656`*^30 r^2 θ^3)) /
   (√(3.4082236338124617`*^33 r^2 - 9.7503367843759`*^49 θ -
       1.0848712769677502`*^33 r^2 θ + 7.7590714802208`*^48 θ^2 +
       8.633131317391704`*^31 r^2 θ^2))], {r, -1, 1}, {θ, -2 π, 2 π}]
```

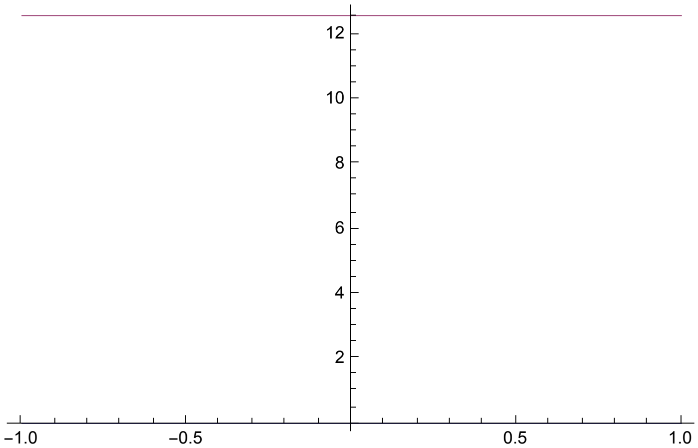



```
Solve[(√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) ==
  (4 π r^2 - 2 r^2 θ)/(2 √(4 π r^2 θ - r^2 θ^2)), θ]
```

$$\left\{\left\{\theta \to \frac{0.5\left(6.91664\times 10^{33}+7.6958\times 10^{16}\, r^2-2.30714\times 10^{25}\sqrt{8.98755\times 10^{16}+1.\, r^2}\right)}{5.50409\times 10^{32}+6.12412\times 10^{15}\, r^2}\right\},\right.$$

$$\left.\left\{\theta \to \frac{0.5\left(6.91664\times 10^{33}+7.6958\times 10^{16}\, r^2+2.30714\times 10^{25}\sqrt{8.98755\times 10^{16}+1.\, r^2}\right)}{5.50409\times 10^{32}+6.12412\times 10^{15}\, r^2}\right\}\right\}$$

```
Plot[{(0.5` (6.916640561054567`*^33 + 7.695800507960096`*^16 r^2 -
        2.3071429505590057`*^25 Sqrt[8.987551787368176`*^16 + 1.` r^2]))/
   (5.504087674408674`*^32 + 6.124123459454841`*^15 r^2),
  (0.5` (6.916640561054567`*^33 + 7.695800507960096`*^16 r^2 +
        2.3071429505590057`*^25 Sqrt[8.987551787368176`*^16 + 1.` r^2]))/
   (5.504087674408674`*^32 + 6.124123459454841`*^15 r^2)}, {r, -1, 1}]
```

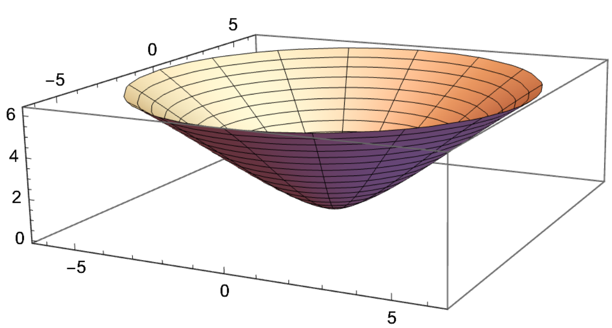


$$\text{D}\left[\left(\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)\Big/\ (\theta\ /\ (2\pi))\right), \theta\right] = \text{D}[v, v]$$

$$\text{Solve}\left[1 == \frac{4\pi r^2 - 2r^2\theta}{2\theta\sqrt{4\pi r^2\theta - r^2\theta^2}} - \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{\theta^2}, r\right]$$

$$\left\{\left\{r \to -\frac{\sqrt{4\pi\theta^3 - \theta^4}}{2\pi}\right\}, \left\{r \to \frac{\sqrt{4\pi\theta^3 - \theta^4}}{2\pi}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{\sqrt{4\pi\theta^3 - \theta^4}}{2\pi}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[1 == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\theta\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}} - \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{\theta^2},\ \theta\right]$$

$$\left\{\left\{\theta \to \pi - \frac{1}{\sqrt{2}}\right.\right.$$

$$\left(\sqrt{\left(2\,\pi^2 + \frac{2\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} + \left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}\right)}\right) -$$

$$\frac{1}{2}\,\sqrt{\left(8\,\pi^2 - \frac{4\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} - 2\,\left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3} -\right.}$$

$$\left(8\,\sqrt{2}\,\pi^3\right) \Big/ \left(\sqrt{\left(2\,\pi^2 + \frac{2\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} +\right.}\right.$$

$$\left.\left.\left.\left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}\right)\right)\right)\right\},\ \left\{\theta \to \pi - \frac{1}{\sqrt{2}}\right.$$

$$\left(\sqrt{\left(2\,\pi^2 + \frac{2\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} + \left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}\right)}\right) +$$

$$\frac{1}{2}\,\sqrt{\left(8\,\pi^2 - \frac{4\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} - 2\,\left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3} -\right.}$$

$$\left(8\,\sqrt{2}\,\pi^3\right) \Big/ \left(\sqrt{\left(2\,\pi^2 + \frac{2\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} +\right.}\right.$$

$$\left.\left.\left.\left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}\right)\right)\right)\right\},\ \left\{\theta \to \pi + \frac{1}{\sqrt{2}}\right.$$

$$\left(\sqrt{\left(2\,\pi^2 + \frac{2\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} + \left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}\right)}\right) -$$

$$\frac{1}{2}\,\sqrt{\left(8\,\pi^2 - \frac{4\,\left(\frac{2}{3}\right)^{1/3}\,\pi\,r^2}{\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3}} - 2\,\left(\frac{2}{3}\right)^{2/3}\,\pi\,\left(9\,\pi\,r^2 + \sqrt{3}\,\sqrt{27\,\pi^2\,r^4 - 4\,r^6}\right)^{1/3} +\right.}$$

$$\left(8\sqrt{2}\,\pi^3\right)\Big/\left(\sqrt{\left(2\pi^2+\frac{2\left(\frac{2}{3}\right)^{1/3}\pi\,r^2}{\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}}+\left(\frac{2}{3}\right)^{2/3}\pi\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}\right)}\right)\Bigg\}\Bigg\},\ \left\{\theta\to\pi+\frac{1}{\sqrt{2}}\right.$$

$$\left(\sqrt{\left(2\pi^2+\frac{2\left(\frac{2}{3}\right)^{1/3}\pi\,r^2}{\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}}+\left(\frac{2}{3}\right)^{2/3}\pi\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}\right)}\right)+$$

$$\frac{1}{2}\sqrt{\left(8\pi^2-\frac{4\left(\frac{2}{3}\right)^{1/3}\pi\,r^2}{\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}}-2\left(\frac{2}{3}\right)^{2/3}\pi\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}+\right.}$$

$$\left(8\sqrt{2}\,\pi^3\right)\Big/\left(\sqrt{\left(2\pi^2+\frac{2\left(\frac{2}{3}\right)^{1/3}\pi\,r^2}{\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}}+\left(\frac{2}{3}\right)^{2/3}\pi\left(9\pi\,r^2+\sqrt{3}\sqrt{27\pi^2 r^4-4r^6}\right)^{1/3}\right)}\right)\Bigg\}\Bigg\}$$

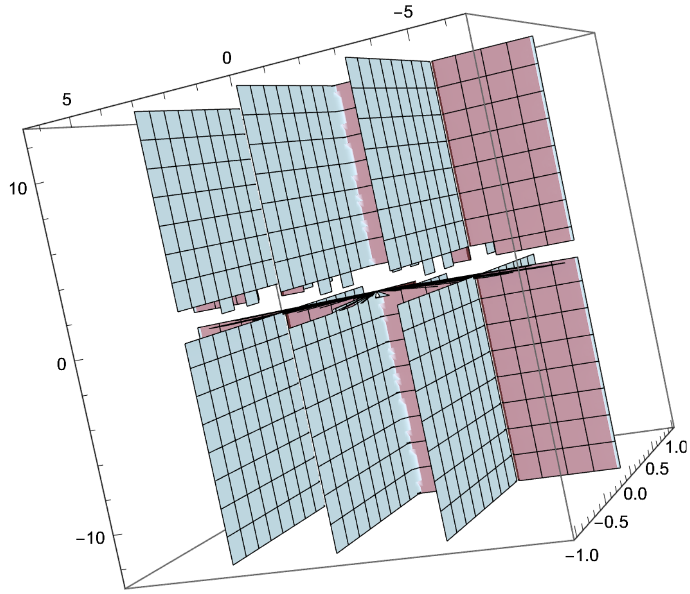
$$\mathbf{D}\left[\left(\left(\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\right)\Big/\ (\theta/(2\pi))\right),\theta\right]=\mathbf{D}[((r\,\mathrm{Sin}[\beta])/(\theta/(2\pi))),\theta]=\mathbf{D}[v,v]$$

D[((r Sin[β]) / (θ / (2 π))), θ]

$$-\frac{2\pi\,r\,\mathrm{Sin}[\beta]}{\theta^2}$$

$$-\frac{2\pi\,r\,\mathrm{Sin}[\beta]}{\theta^2}=1$$

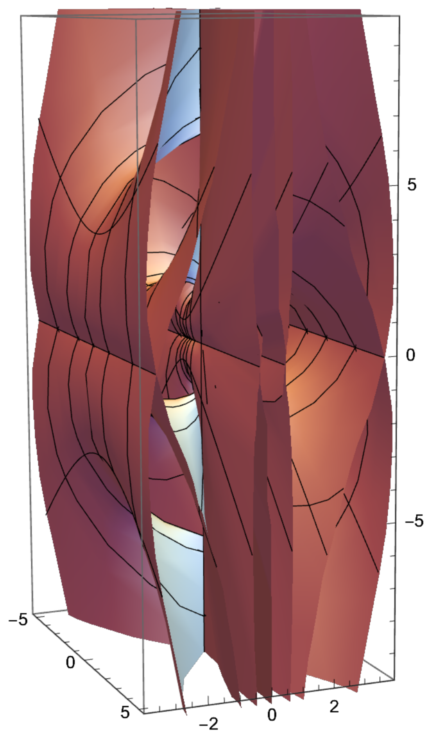
$$\mathrm{ContourPlot3D}\left[-\frac{2\pi\,r\,\mathrm{Sin}[\beta]}{\theta^2},\{r,-1,1\},\{\beta,-2\pi,2\pi\},\{\theta,-4\pi,4\pi\}\right]$$

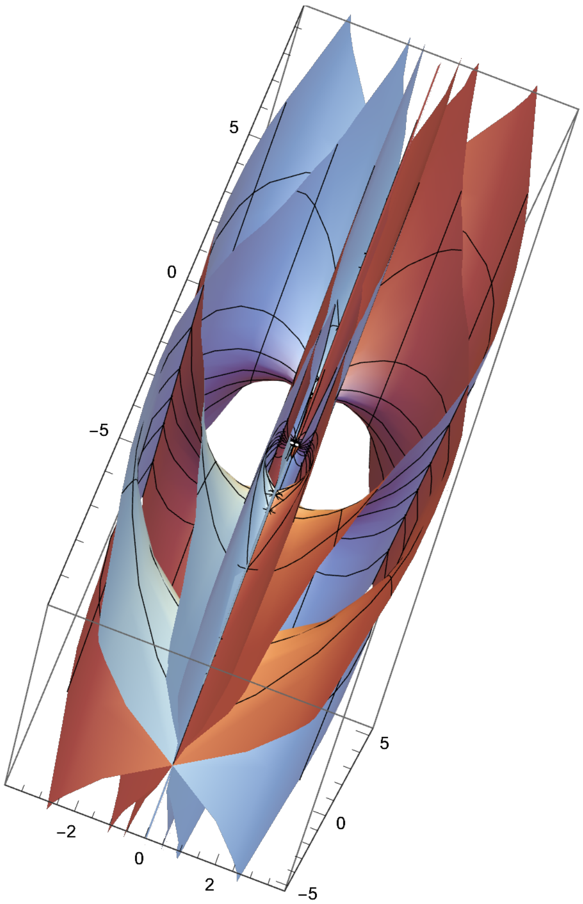


$$\text{Solve}\left[1 == -\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\theta^2},\ r\right]$$

$$\left\{\left\{r \to -\frac{\theta^2\,\text{Csc}[\beta]}{2\,\pi}\right\}\right\}$$

```
SphericalPlot3D[-θ^2 Csc[β]/(2 π), {θ, -2 π, 2 π}, {β, -π, π}]
```

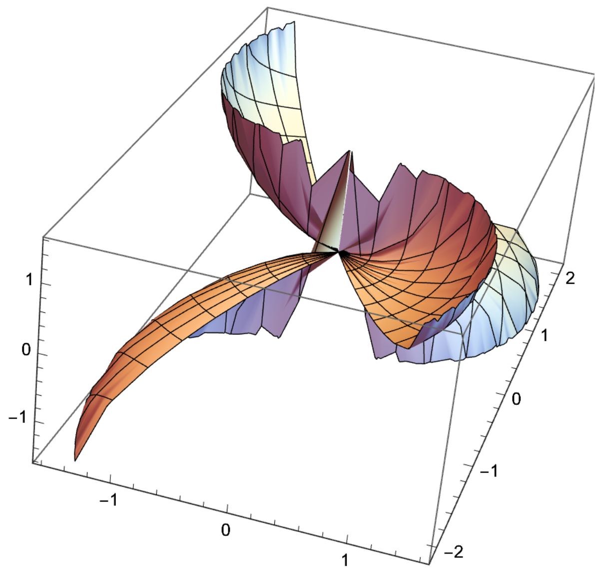




$$\text{Solve}\left[1 == -\frac{2\,\pi\,r\,\text{Sin}[\beta]}{\theta^2},\ \beta\right]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{\theta^2}{2\,\pi\,r}\right]\right\}\right\}$$

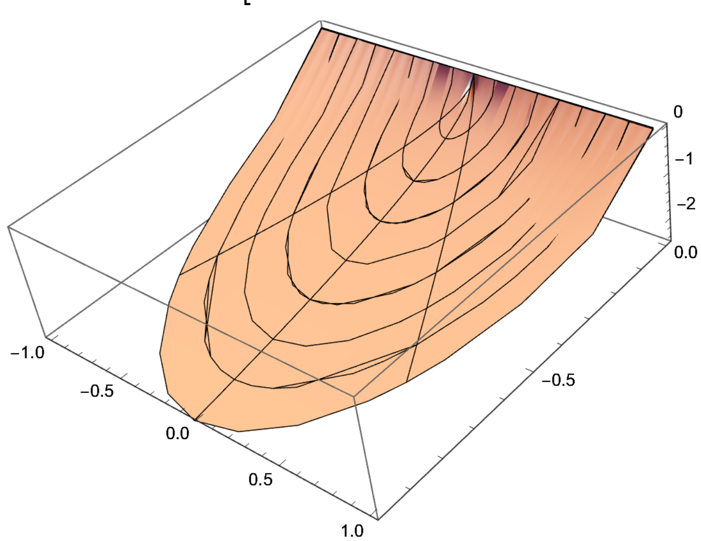
RevolutionPlot3D$\left[-\text{ArcSin}\left[\frac{\theta^2}{2\pi r}\right], \{\theta, -4\pi, 4\pi\}, \{r, -1, 1\}\right]$



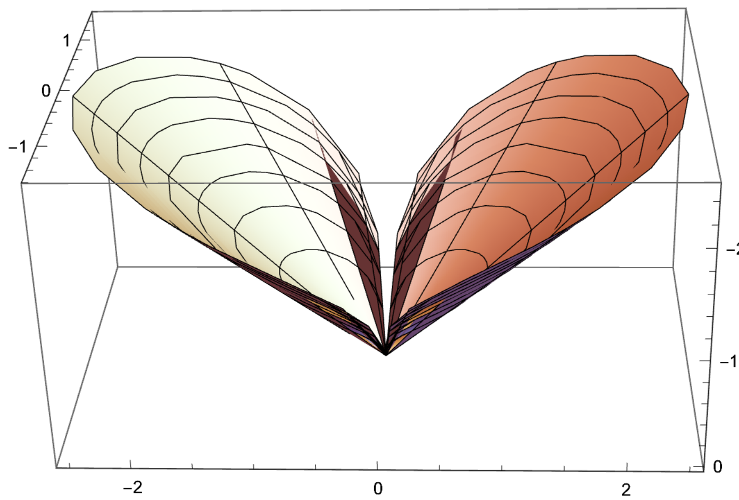
Solve$\left[1 == -\frac{2\pi r \,\text{Sin}[\beta]}{\theta^2}, \theta\right]$

$\left\{\left\{\theta \to -i \sqrt{2\pi} \sqrt{r} \sqrt{\text{Sin}[\beta]}\right\}, \left\{\theta \to i \sqrt{2\pi} \sqrt{r} \sqrt{\text{Sin}[\beta]}\right\}\right\}$

RevolutionPlot3D$\left[i \sqrt{2\pi} \sqrt{r} \sqrt{\text{Sin}[\beta]}, \{r, -1, 1\}, \{\beta, -2\pi, 2\pi\}\right]$

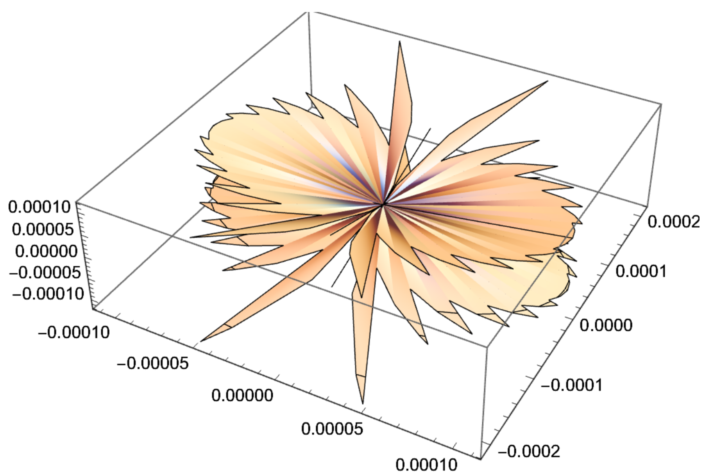


```
RevolutionPlot3D[
 {-ⅈ √(2 π) √r √Sin[β], ⅈ √(2 π) √r √Sin[β]}, {r, -1, 1}, {β, -2 π, 2 π}]
```

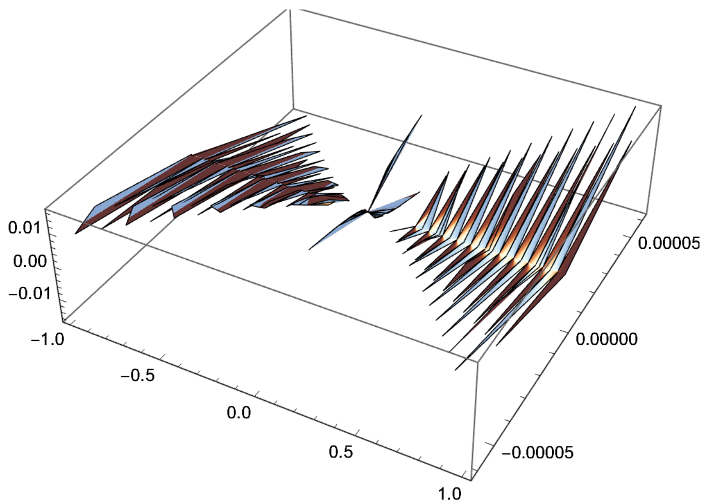


```
ⅇ^ⅈ θ = ⅈ Sin[θ] + Cos[θ]
```

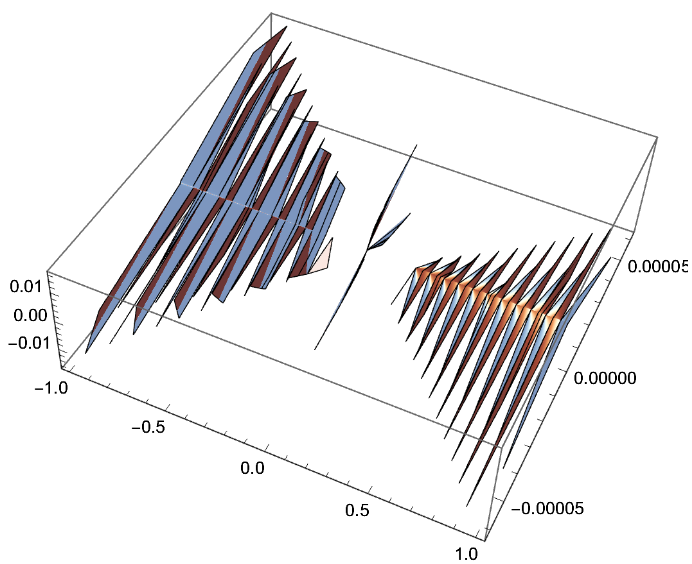
```
RevolutionPlot3D[ⅇ^ⅈ θ, {θ, -2 π, 2 π}]
```



RevolutionPlot3D$\left[e^{\wedge} i \left(-i \sqrt{2\pi}\ \sqrt{r}\ \sqrt{\text{Sin}[\beta]}\right), \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$



RevolutionPlot3D$\left[e^{\wedge} i \left(i \sqrt{2\pi}\ \sqrt{r}\ \sqrt{\text{Sin}[\beta]}\right), \{r, -1, 1\}, \{\beta, -\pi, \pi\}\right]$



$4\pi r^2 - 4\pi\left((r_1)^2\right) = 4\pi\eta^2$

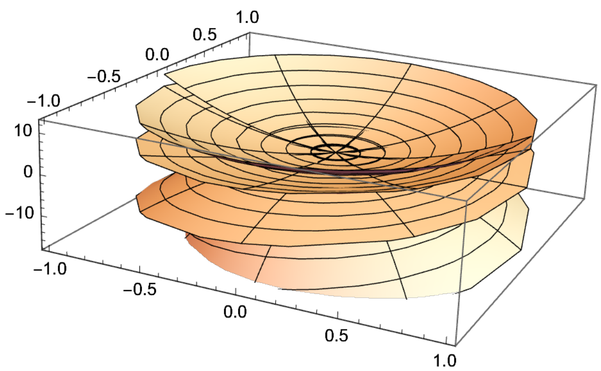
$4\pi r^2 - 4\pi\left((r_1)^2\right) =$

$$4\pi r^2 - 4\pi\left(\left(\sqrt{(r^\wedge 2 - \eta^\wedge 2)}\right)^2\right) = 4\pi\left(\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)^2 = 4\pi\,(r\,\text{Sin}[\beta])^2$$

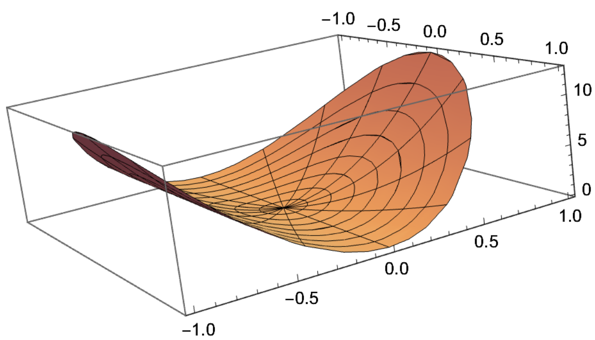
Solve$\left[4\pi r^2 - 4\pi\left(\left(\sqrt{(r^\wedge 2 - (r\,\text{Sin}[\beta])^\wedge 2)}\right)^2\right) == 4\pi(\eta)^2, \beta\right]$

$\left\{\left\{\beta \to -\text{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\sqrt{\frac{\eta^2}{r^2}}\right]\right\}\right\}$

$$\text{RevolutionPlot3D}\left[4\,\pi\,r^2-4\,\pi\left(\left(\sqrt{\left(r\wedge 2-\left(\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}\right)\wedge 2\right)}\right)^2\right),\ \{r,-1,1\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{RevolutionPlot3D}\left[4\,\pi\,r^2-4\,\pi\left(\left(\sqrt{(r\wedge 2-(r\,\text{Sin}[\beta])\wedge 2)}\right)^2\right),\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\right]$$



$$\frac{4\,\pi}{3}-\frac{-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2}{6\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}}+$$
$$\frac{2}{3}\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\frac{4\,\pi}{3}+\left(\left(1+\mathbb{i}\,\sqrt{3}\right)\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\right)\Big/$$
$$\left(12\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-$$
$$\frac{1}{3}\left(1-\mathbb{i}\,\sqrt{3}\right)\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}$$

$$\frac{4\,\pi}{3}+\left(\left(1-\mathbb{i}\,\sqrt{3}\right)\left(-4\,\pi^2+12\,\pi^2\,\text{Sin}[\beta]^2\right)\right)\Big/$$
$$\left(12\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)-$$
$$\frac{1}{3}\left(1+\mathbb{i}\,\sqrt{3}\right)\left(-\pi^3+18\,\pi^3\,\text{Sin}[\beta]^2+3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\,\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\}$$

$(e^{\wedge}(i\pi)) + 1 = 0$

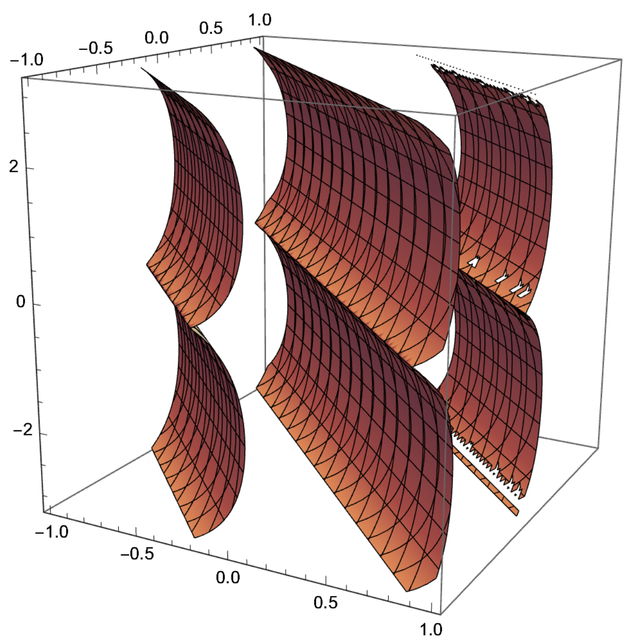
$\left(e^{\wedge}\left(((i + j + k)\,\pi) \middle/ \sqrt{3}\right)\right) + 1 = 0$

if $\theta = 0$, then

$$\text{Solve}\left[\left(e^{\wedge}\left(((i + j + k)\,\pi) \middle/ \sqrt{3}\right)\right) + 1 == \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}, i\right]$$

$$\left\{\left\{i \to -\frac{1}{\sqrt{3}\,\pi}\left(\sqrt{3}\,j\,\pi + \sqrt{3}\,k\,\pi - 3\,\text{Log}\left[-1 + \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right]\right)\right\}\right\}$$

$$\text{ContourPlot3D}\left[-\frac{1}{\sqrt{3}\,\pi}\left(\sqrt{3}\,j\,\pi + \sqrt{3}\,k\,\pi - 3\,\text{Log}\left[-1 + \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2 \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3 \text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6 \text{Sin}[\beta]^2 + 11\pi^6 \text{Sin}[\beta]^4 + \pi^6 \text{Sin}[\beta]^6}\right)^{1/3}\right]\right), \{k, -1, 1\}, \{j, -1, 1\}, \{\beta, -\pi, \pi\}\right]$$

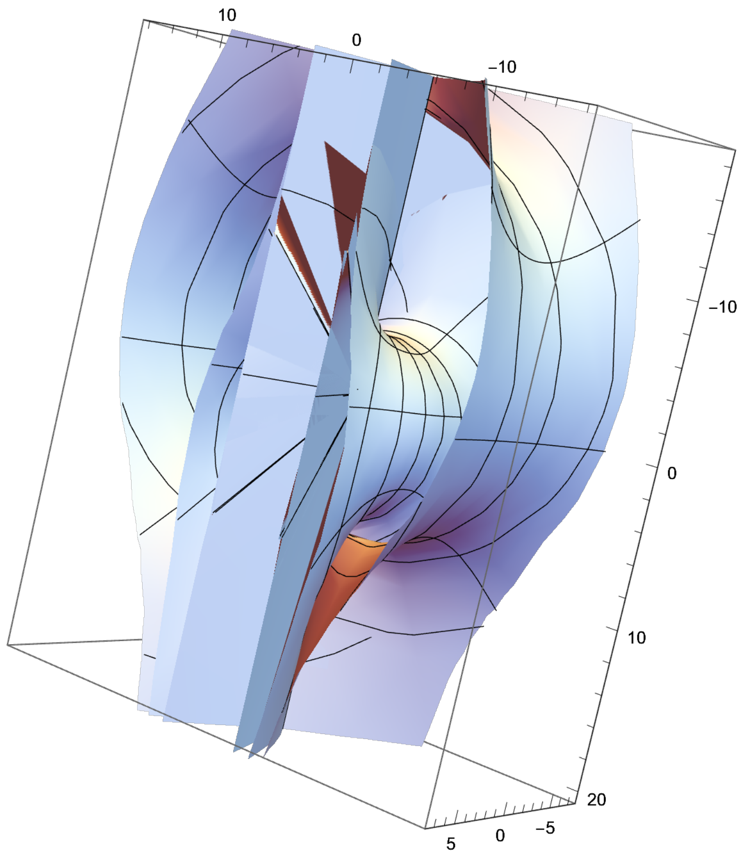


$$\mathrm{Solve}\Big[\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\mathrm{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3x\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\mathrm{Sin}[\beta]^2+3x\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2+11\pi^6\,\mathrm{Sin}[\beta]^4+\pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}==\theta,\ x\Big]$$

$$\Big\{\Big\{x\to\Big(36\pi^2\theta\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-36\pi\theta^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+9\theta^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-144\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+36\pi^2\theta\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-\sqrt{\Big(-4\left(12\pi^2\theta-12\pi\theta^2+3\theta^3-24\pi^3\,\mathrm{Sin}[\beta]^2-204\pi^2\theta\,\mathrm{Sin}[\beta]^2+216\pi\theta^2\,\mathrm{Sin}[\beta]^2-54\theta^3\,\mathrm{Sin}[\beta]^2+600\pi^3\,\mathrm{Sin}[\beta]^4-216\pi^2\theta\,\mathrm{Sin}[\beta]^4-24\pi^3\,\mathrm{Sin}[\beta]^6\right)\left(-8\pi^3\,\mathrm{Sin}[\beta]^2+88\pi^3\,\mathrm{Sin}[\beta]^4+8\pi^3\,\mathrm{Sin}[\beta]^6\right)+\Big(-36\pi^2\theta\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+36\pi\theta^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-9\theta^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+144\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-36\pi^2\theta\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^2\Big)}\Big)\Big/\left(2\left(-8\pi^3\,\mathrm{Sin}[\beta]^2+88\pi^3\,\mathrm{Sin}[\beta]^4+8\pi^3\,\mathrm{Sin}[\beta]^6\right)\right)\Big\},$$

$$\Big\{x\to\Big(36\pi^2\theta\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-36\pi\theta^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+9\theta^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-144\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+36\pi^2\theta\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+\sqrt{\Big(-4\left(12\pi^2\theta-12\pi\theta^2+3\theta^3-24\pi^3\,\mathrm{Sin}[\beta]^2-204\pi^2\theta\,\mathrm{Sin}[\beta]^2+216\pi\theta^2\,\mathrm{Sin}[\beta]^2-54\theta^3\,\mathrm{Sin}[\beta]^2+600\pi^3\,\mathrm{Sin}[\beta]^4-216\pi^2\theta\,\mathrm{Sin}[\beta]^4-24\pi^3\,\mathrm{Sin}[\beta]^6\right)\left(-8\pi^3\,\mathrm{Sin}[\beta]^2+88\pi^3\,\mathrm{Sin}[\beta]^4+8\pi^3\,\mathrm{Sin}[\beta]^6\right)+\Big(-36\pi^2\theta\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+36\pi\theta^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-9\theta^3\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}+144\pi^3\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}-36\pi^2\theta\,\mathrm{Sin}[\beta]^2\sqrt{\mathrm{Sin}[\beta]^2\left(-1+11\,\mathrm{Sin}[\beta]^2+\mathrm{Sin}[\beta]^4\right)}\Big)^2\Big)}\Big)\Big/\left(2\left(-8\pi^3\,\mathrm{Sin}[\beta]^2+88\pi^3\,\mathrm{Sin}[\beta]^4+8\pi^3\,\mathrm{Sin}[\beta]^6\right)\right)\Big\}\Big\}$$

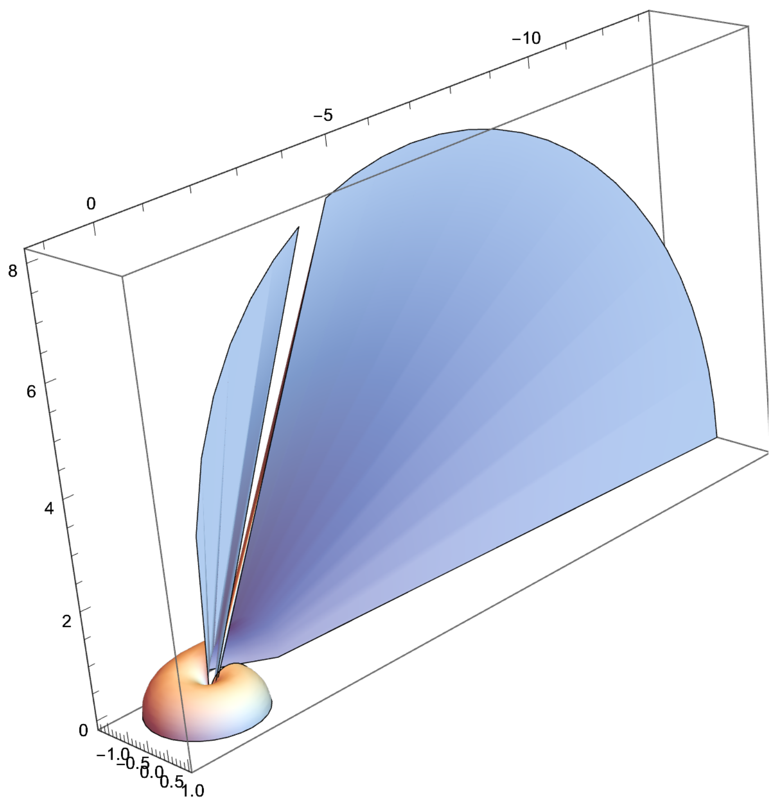
$$\text{SphericalPlot3D}\Big[\Big(36\,\pi^2\,\theta\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-36\,\pi\,\theta^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+9\,\theta^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-144\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+36\,\pi^2\,\theta\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-\sqrt{\Big(-4\,\left(12\,\pi^2\,\theta-12\,\pi\,\theta^2+3\,\theta^3-24\,\pi^3\,\text{Sin}[\beta]^2-204\,\pi^2\,\theta\,\text{Sin}[\beta]^2+216\,\pi\,\theta^2\,\text{Sin}[\beta]^2-54\,\theta^3\,\text{Sin}[\beta]^2+600\,\pi^3\,\text{Sin}[\beta]^4-216\,\pi^2\,\theta\,\text{Sin}[\beta]^4-24\,\pi^3\,\text{Sin}[\beta]^6\right)\,\left(-8\,\pi^3\,\text{Sin}[\beta]^2+88\,\pi^3\,\text{Sin}[\beta]^4+8\,\pi^3\,\text{Sin}[\beta]^6\right)+\Big(-36\,\pi^2\,\theta\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+36\,\pi\,\theta^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-9\,\theta^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}+144\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}-36\,\pi^2\,\theta\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^2\Big)}\Big)\Big/\left(2\,\left(-8\,\pi^3\,\text{Sin}[\beta]^2+88\,\pi^3\,\text{Sin}[\beta]^4+8\,\pi^3\,\text{Sin}[\beta]^6\right)\right),\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi,\ \pi\}\Big]$$



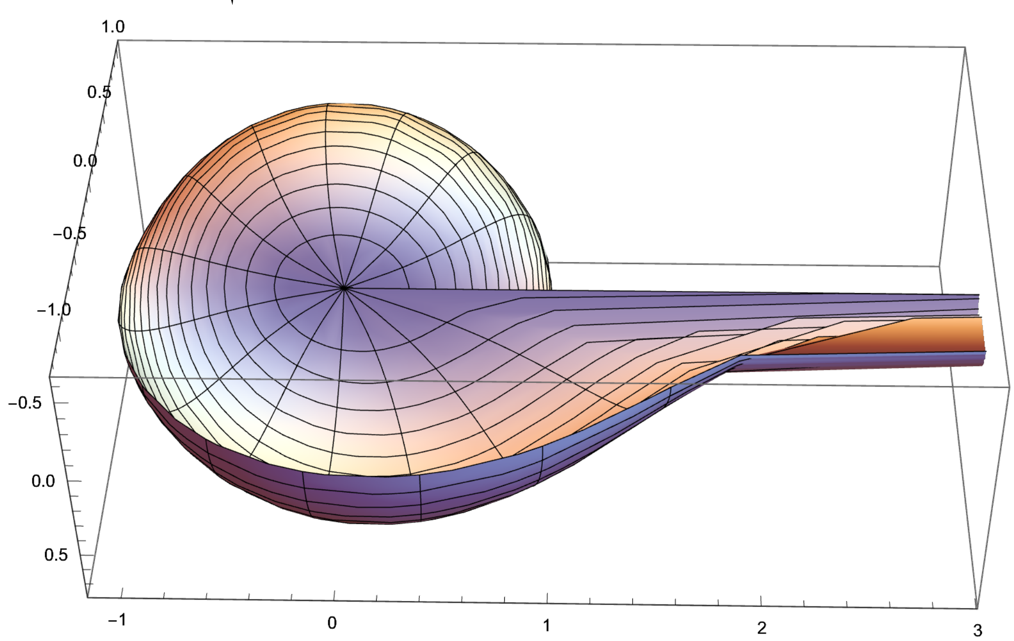

```
Solve[(ⅇ^(((i + j + k) π) / x)) + 1 == 0, x]
{{x → - ⅈ (i + j + k)}}
```

$$\text{Solve}\Big[-i\,(i+j+k) == \Big(36\,\pi^2\,\theta\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 36\,\pi\,\theta^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 9\,\theta^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 144\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 36\,\pi^2\,\theta\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - \sqrt{\Big(-4\,\left(12\,\pi^2\,\theta - 12\,\pi\,\theta^2 + 3\,\theta^3 - 24\,\pi^3\,\text{Sin}[\beta]^2 - 204\,\pi^2\,\theta\,\text{Sin}[\beta]^2 + 216\,\pi\,\theta^2\,\text{Sin}[\beta]^2 - 54\,\theta^3\,\text{Sin}[\beta]^2 + 600\,\pi^3\,\text{Sin}[\beta]^4 - 216\,\pi^2\,\theta\,\text{Sin}[\beta]^4 - 24\,\pi^3\,\text{Sin}[\beta]^6\right)\,\left(-8\,\pi^3\,\text{Sin}[\beta]^2 + 88\,\pi^3\,\text{Sin}[\beta]^4 + 8\,\pi^3\,\text{Sin}[\beta]^6\right) + \Big(-36\,\pi^2\,\theta\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 36\,\pi\,\theta^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 9\,\theta^3\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} + 144\,\pi^3\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)} - 36\,\pi^2\,\theta\,\text{Sin}[\beta]^2\,\sqrt{\text{Sin}[\beta]^2\,\left(-1+11\,\text{Sin}[\beta]^2+\text{Sin}[\beta]^4\right)}\Big)^2\Big)}\Big) \Big/ \left(2\,\left(-8\,\pi^3\,\text{Sin}[\beta]^2 + 88\,\pi^3\,\text{Sin}[\beta]^4 + 8\,\pi^3\,\text{Sin}[\beta]^6\right)\right),\ \beta\Big]$$

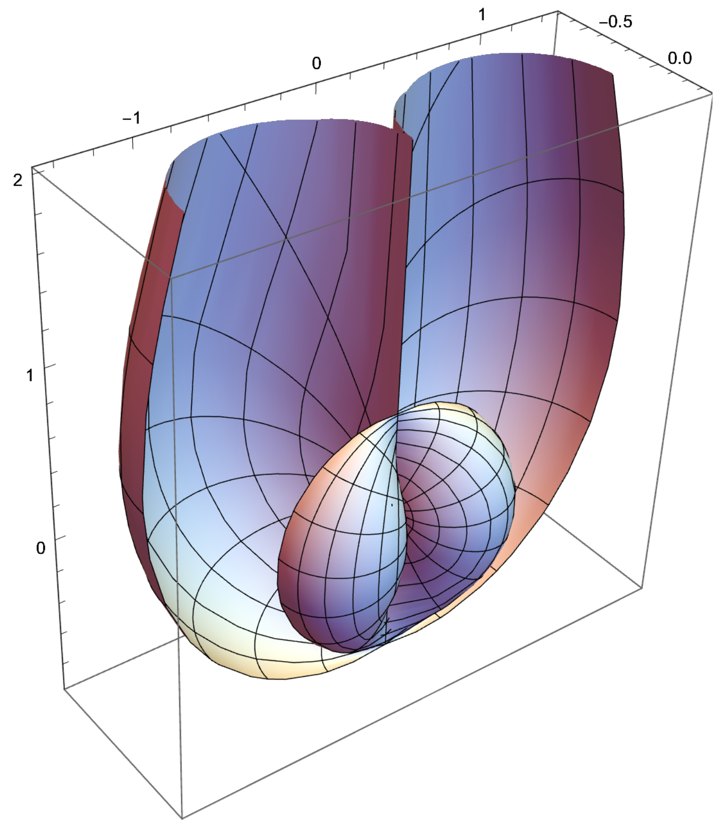
$$\texttt{SphericalPlot3D}\left[\sqrt{-\frac{2\,\pi\,\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



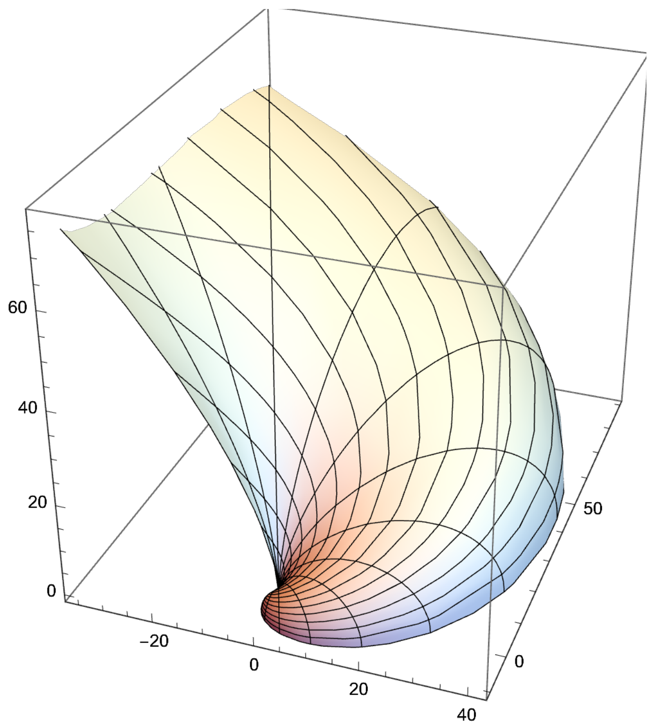
$$\texttt{SphericalPlot3D}\left[\sqrt{-\frac{2\,\pi\,\texttt{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^{2}}}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



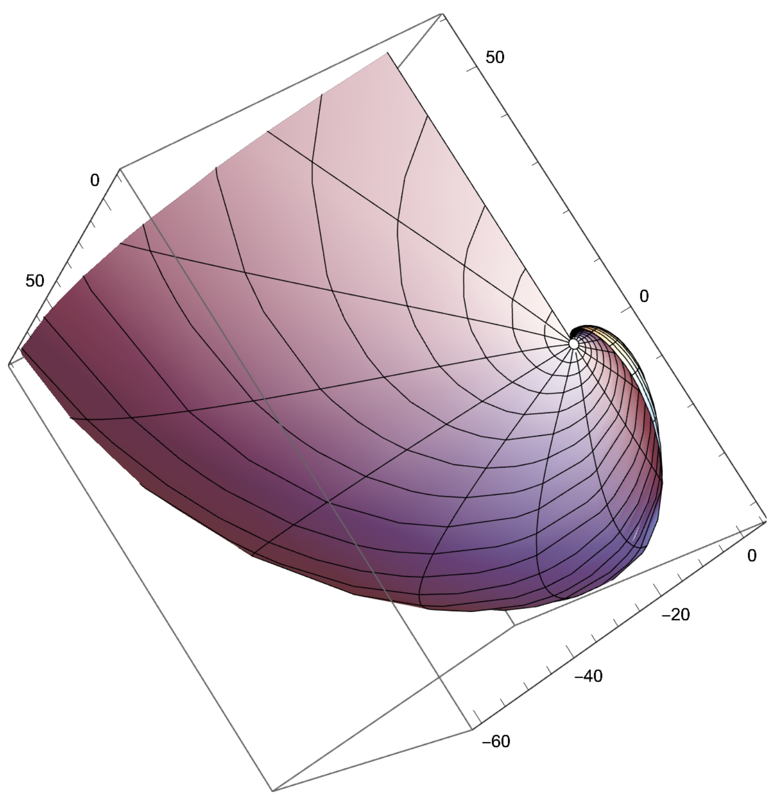
$$\texttt{SphericalPlot3D}\left[\sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\;\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}},\ \{\theta,\ -2\,\pi,\ 2\,\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



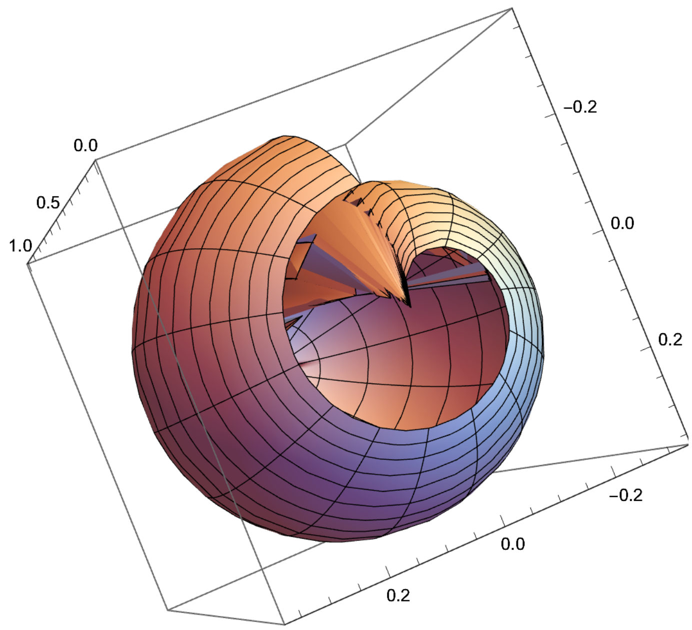
$$\text{SphericalPlot3D}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\theta},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\pi,\ 2\pi\}\right]$$



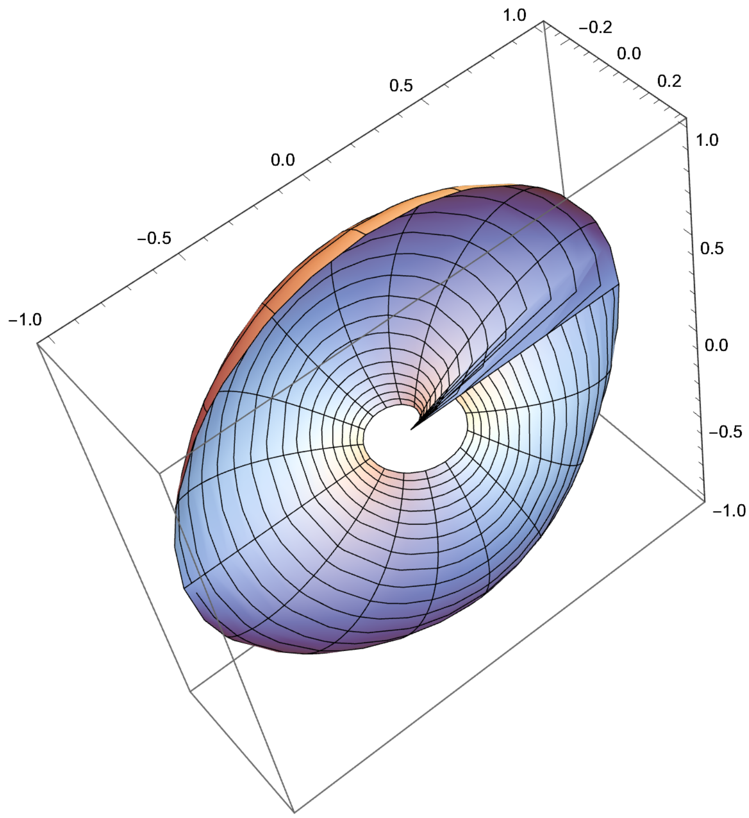
$$\text{SphericalPlot3D}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\theta},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$\text{SphericalPlot3D}\left[e^{\sqrt{-\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}}\,\beta}},\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\,\pi,\ 2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\beta},\ \{\theta,\ -2\pi,\ 2\pi\},\ \{\beta,\ -\pi/2,\ \pi/2\}\right]$$



$$e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\beta}$$

$$e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\beta}$$

$$\text{Solve}\left[e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\theta} == e^{\sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\,\beta},\ \theta\right]$$

$\{\{\theta \to \beta\}\}$

$$\text{SphericalPlot3D}\left[\left(\text{Cos}\left[\left(\frac{4\pi}{3} + \left(\left(1 + \sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\ \sqrt{3}\right)\left(-4\pi^2 + 12\pi^2\,\text{Sin}[\beta]^2\right)\right) \Big/ \left(12\left(-\pi^3 + 18\pi^3\,\text{Sin}[\beta]^2 + 3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\pi^6\,\text{Sin}[\beta]^4 + \pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}\left(1 - \sqrt{-\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}}\ \sqrt{3}\right)\right.\right.\right.$$

$$\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg] +$$

$$\mathrm{i}\,\mathrm{Sin}\Bigg[\left(\frac{4\,\pi}{3} + \left(\left(1 + \sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}}\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\right.$$

$$\left(12\,\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}$$

$$\left(1 - \mathrm{i}\,\sqrt{3}\right)$$

$$\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg]\Bigg)$$

$$\Bigg(\mathrm{Cos}\Bigg[\left(\frac{4\,\pi}{3} + \left(\left(1 - \sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}}\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\right.$$

$$\left(12\,\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}$$

$$\left(1 + \mathrm{i}\,\sqrt{3}\right)$$

$$\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg] +$$

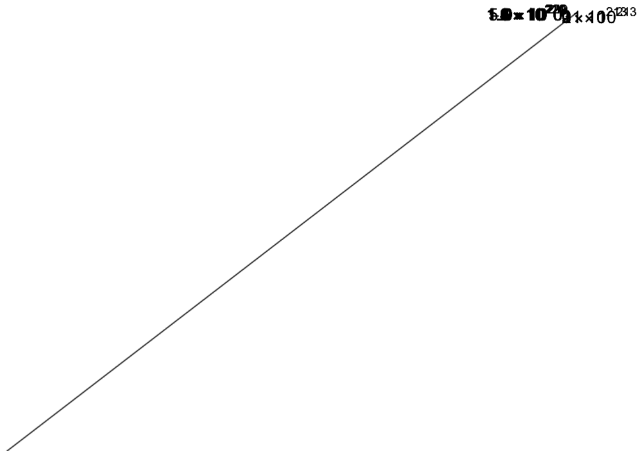
$$\sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}}\,\mathrm{Sin}\Bigg[\left(\frac{4\,\pi}{3} + \left(\left(1 - \sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}}\,\sqrt{3}\right)\left(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2\right)\right)\Big/\right.$$

$$\left(12\,\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\right) - \frac{1}{3}$$

$$\left(1 + \sqrt{-\frac{2\,\pi\,\mathrm{Sin}[\beta]}{\sqrt{4\,\pi\,\theta - \theta^2}}}\,\sqrt{3}\right)$$

$$\left(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\right)^{1/3}\Bigg)\Bigg]\Bigg),$$

$$\{\beta, -\pi, \pi\}, \{\theta, -4\,\pi, 4\,\pi\}\Big]$$



Purely Geometric Mass from Kinetic Energy

$\text{Kinetic Energy} = \frac{1}{2}\, m\, v^2$

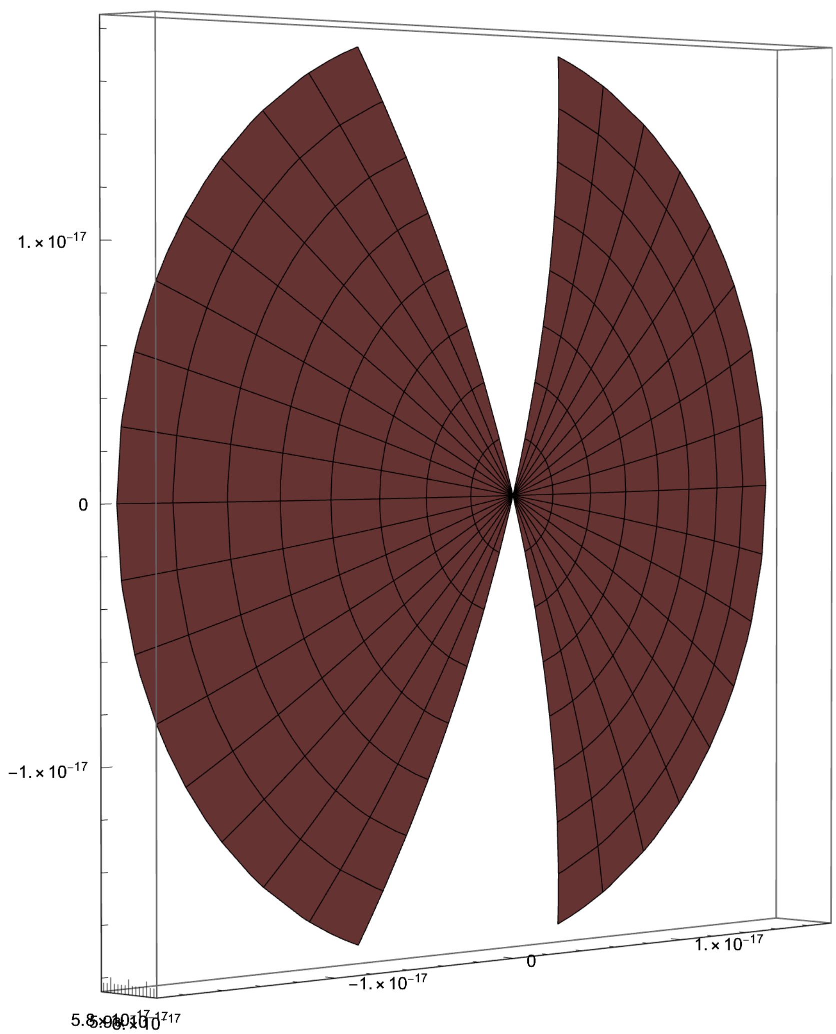
$$\left\{v \to \frac{\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\}\}$$

```
Solve[KE == 1/2 m ((√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
     (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) ^2, m]
```

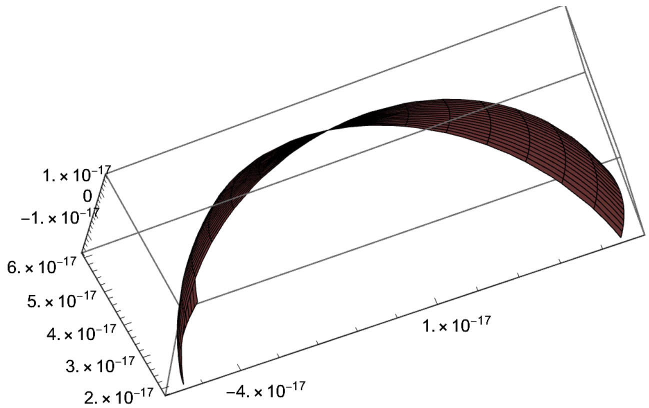
$$\left\{\left\{m \to \frac{2.\ \text{KE}\left(-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2\right)}{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}\right\}\right\}$$

```
ContourPlot3D[(2.` E (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) /
   (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
     3.5481432270250993`*^18 Sin[β]^2), {β, -.1 π, .1 π}, {θ, -.4 π, .4 π}, {E, -1, 1}]
```

```
SphericalPlot3D[
 (5.43656365691809` (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) /
  (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
    3.5481432270250993`*^18 Sin[β]^2), {β, -.1 π, .1 π}, {θ, -.4 π, .4 π}]
```



```
SphericalPlot3D[
 (5.43656365691809` (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) /
  (-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
    3.5481432270250993`*^18 Sin[β]^2), {θ, -.4 π, .4 π}, {β, -.1 π, .1 π}]
```



Theory on the Process of Tachyon Emulsion

In this paper, I will outline a few of the possibilities for transferring information contained within light via frequency, patterns, and digital signals to tachyons traveling faster than light. First, we set up the equation for the energy of a tachyon.

The term emulsion is used to describe this, because it is similar to the mixing of two things that are unblendable. Light energy cannot travel faster than light, and tachyon energy must always travel faster than light. We are trying to imprint the information of the energy of light into the information in the energy of a tachyon, which is traveling faster than light. Information, traveling at the speed of light, impresses itself onto the tachyon, and then the tachyon transfers that information at faster than light speed.

E = (z c^2) / $\sqrt{(u^2/c^2) - 1}$, where E is energy, z is imaginary mass, c is the speed of light, and u is the velocity of the mass.

Then, we note that z is imaginary mass, defining it to be :

Non - tachyon, or regular energy is equal to
E = (m c^2) / $\sqrt{1 - v^2/c^2}$

(z c^2) / $\sqrt{(u^2/c^2) - 1}$ = (m c^2) / $\sqrt{1 - v^2/c^2}$ = h ν

```
c := (2.99792458 * 10^8)
```

`h := 6.626068 * 10 ^ - 34`

`z := ⅈ m`

We then set up a relativistic equation where we can solve for the intrinsic velocity of a wavelength of light.

From a difference in circumferences applied to the Pythagorean Theorem it can be shown that : Solve$\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == r\,\mathrm{Sin}[\beta],\ v\right]$

$$\left\{\left\{v \to -\left(1.\grave{}\ \sqrt{\left(-1.1294090667581471\grave{}*^{\wedge}18\,\theta + 8.987551787368176\grave{}*^{\wedge}16\,\theta^2 + 3.5481432270250993\grave{}*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right)\right\},\right.$$
$$\left.\left\{v \to \left(\sqrt{\left(-1.1294090667581471\grave{}*^{\wedge}18\,\theta + 8.987551787368176\grave{}*^{\wedge}16\,\theta^2 + 3.5481432270250993\grave{}*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

because the equation rearranges to :

Solve$\left[r\left(1-\frac{(v)^2}{c^2}\right)\theta\,4\pi r == (2\pi r\,\mathrm{Sin}[\beta])^{\wedge}2 + r\theta\sqrt{1-\frac{(v)^2}{c^2}},\ v\right]$,

yielding even more solutions.

We will use the mathematica generated positive solution,

$$v := \left(\sqrt{\left(-1.1294090667581471\grave{}*^{\wedge}18\,\theta + 8.987551787368176\grave{}*^{\wedge}16\,\theta^2 + 3.5481432270250993\grave{}*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right)$$

$E = m\,c^{\wedge}2 = h\,\nu$

$v = \lambda\,\nu = \eta\,\nu$

We solve for the

$$\mathrm{Solve}\left[\left(\sqrt{\left(-1.1294090667581471\grave{}*^{\wedge}18\,\theta + 8.987551787368176\grave{}*^{\wedge}16\,\theta^2 + 3.5481432270250993\grave{}*^{\wedge}18\,\mathrm{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{-12.566370614359172\grave{}\ \theta + \theta^2 + 39.47841760435743\grave{}\ \mathrm{Sin}[\beta]^2}\right) == \eta\,\nu,\ \nu\right]$$

$$\left\{\left\{\nu \to \frac{1.\ \sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\mathrm{Sin}[\beta]^2}}{\eta\,\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}}\right\}\right\}$$

$$\nu = \text{Solve}\left[(1/(\theta/2\pi)) == \left(1.\grave{}\ \sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\eta\,\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right), \eta\right]$$

$$v = \left(\sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right) = \eta\,\nu = \eta\,(1/(\theta/(2\pi)))$$

So, I pull together the equation for Energy of a photon from the geometry of a transformation of a circle into a cone, and then I set that equal to the energy of of the tachyon, because the geometry necessitates that something traveling at constant velocity (light) is at the thirty - sixty - ninety triangle position within the cone formed by the Pythagorean theorem applied to the change in circumferences of two circles, however positions below the 30 - 60 - 90 triangle exist, but necessitate acceleration. The geometry of time, or cyclicality, defines the velocity through the aforementioned transformation for positions above and below the 30 - 60 - 90 position of the cone. The innate geometry of the ontology of spacetime specifies both positive and negative solutions to the time element.

$$E = h\,(1/(\theta/2\pi))$$

$$E = m\,c\hat{}2 = h\,\nu = (z\,c\hat{}2) \Big/ \sqrt{(u\hat{}2/c\hat{}2) - 1} \text{ where } z = i\,m$$

$$h\,\nu = h\left(1.\grave{}\ \sqrt{\left(-1.1294090667581471\grave{}*\hat{}18\,\theta + 8.987551787368176\grave{}*\hat{}16\,\theta^2 + 3.5481432270250993\grave{}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right) \Big/ \left(\eta\,\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\right) = h\,(1/(\theta/2\pi)) = (z\,c\hat{}2) \Big/ \sqrt{(u\hat{}2/c\hat{}2) - 1}$$

Solve[h (1.` √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) / (η √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)) == (z c^2) / √((u^2 / c^2) - 1), u]

$$\left\{\left\{u \to -4.76445\times10^{-8}\sqrt{\left(3.95928\times10^{31}+8.10486\times10^{114}\,z^2\,\eta^2-\frac{5.07954\times10^{16}\,\theta}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}+\frac{1.0261\times10^{99}\,z^2\,\eta^2\,\theta}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}+\frac{3.23424\times10^{15}\,\theta^2}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}-\frac{6.59759\times10^{97}\,z^2\,\eta^2\,\theta^2}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}\right)}\right\},\right.$$

$$\left.\left\{u \to 4.76445\times10^{-8}\sqrt{\left(3.95928\times10^{31}+8.10486\times10^{114}\,z^2\,\eta^2-\frac{5.07954\times10^{16}\,\theta}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}+\frac{1.0261\times10^{99}\,z^2\,\eta^2\,\theta}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}+\frac{3.23424\times10^{15}\,\theta^2}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}-\frac{6.59759\times10^{97}\,z^2\,\eta^2\,\theta^2}{12.5664\,\theta-1.\,\theta^2-39.4784\,\mathrm{Sin}[\beta]^2}\right)}\right\}\right\}$$

To get rid of z and have m in terms of the velocity, we solve the equation :

E = (m c^2) / √(1 - v^2 / c^2) = h ν, where v has been shown to equal :

v = (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) / (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))

and ν =

(1 / (θ / 2 π)) {{ν → (1.` √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) / (η √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))}}

Thus, we set up the equation :

```
(m c^2) / √(1 - (√(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
      (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))^2 / c^2) =
  h (1 / (θ / 2 π)) = h (1.` √(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (η √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), and solve for m
```

```
Solve[(m c^2) / √(1 - (√(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))^2 / c^2) ==
   h (1.` √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
          3.5481432270250993`*^18 Sin[β]^2)) /
     (η √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)), m]
```

$$\left\{\left\{m \to \left(7.37249 \times 10^{-51} \sqrt{-1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2 + 3.54814 \times 10^{18}\, \text{Sin}[\beta]^2}\; \sqrt{\left(1. - \left(1.11265 \times 10^{-17} \sqrt{\left(-1.12941 \times 10^{18}\, \theta + 8.98755 \times 10^{16}\, \theta^2 + 3.54814 \times 10^{18}\, \text{Sin}[\beta]^2\right)}\right) \middle/ \left(-12.5664\, \theta + \theta^2 + 39.4784\, \text{Sin}[\beta]^2\right)\right)}\right) \middle/ \left(\eta \sqrt{-12.5664\, \theta + \theta^2 + 39.4784\, \text{Sin}[\beta]^2}\right)\right\}\right\}$$

```
Solve[(m c^2) / √(1 - (√(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
        (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))^2 / c^
       2) == h (1 / (θ / 2 π)), m]
```

$$\left\{\left\{m \to \frac{0.63662\, h \sqrt{1. - \frac{1.\, \sqrt{-1.12941\times 10^{18}\, \theta + 8.98755\times 10^{16}\, (12.5664 - 1.\, \theta)\, \theta + 8.98755\times 10^{16}\, \theta^2}}{c^2 \left(-12.5664\, \theta + 1.\, (12.5664 - 1.\, \theta)\, \theta + \theta^2\right)}}}{c^2\, \theta}\right\}\right\}$$

```
c := (2.99792458 * 10^8)
```

```
h := (6.626068 * 10^-34)
```

We are now ready to return to the Tachyon energy expression that equals the energy of a photon.

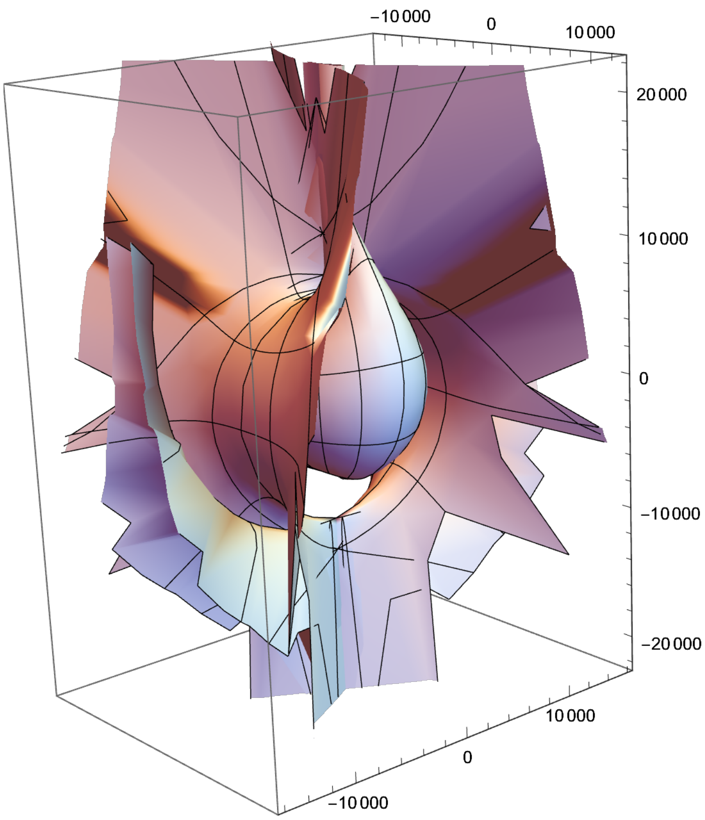
```
h ν = h (1.` √(-1.1294090667581471`*^18 θ +
        8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
    (η Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) =
  (ⅈ m c^2) / Sqrt[(u^2 / c^2) - 1]
```

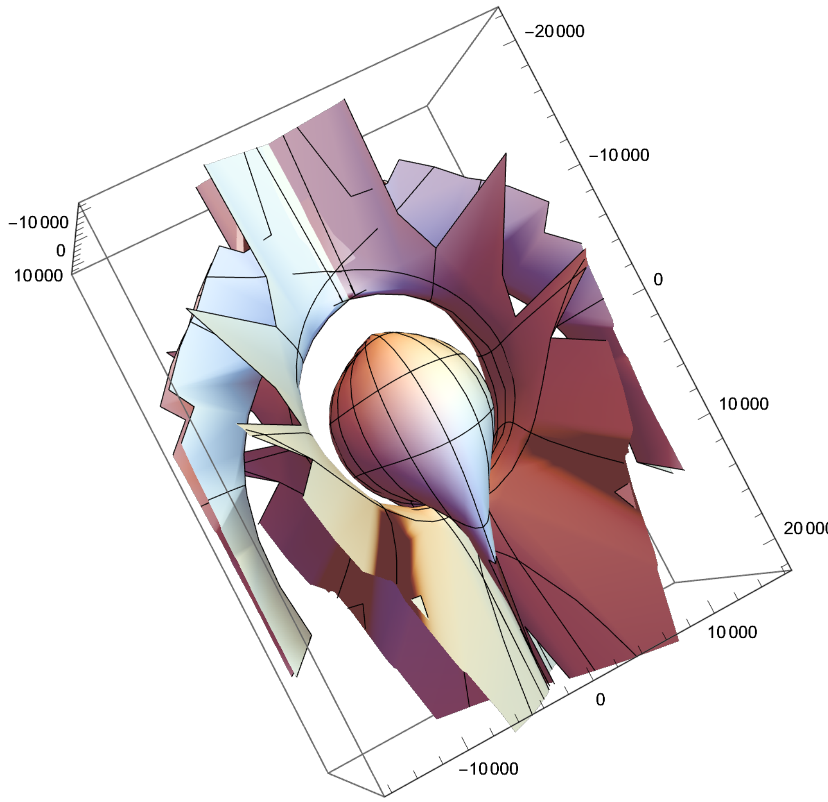
```
(ⅈ m c^2) / Sqrt[(u^2 / c^2) - 1] =
 (ⅈ (7.372494931615088`*^-51 √(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)
        √(1.`- (1.1126500560536185`*^-17 √(-1.1294090667581471`*^18 θ +
                8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
           (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) /
      (η Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) c^
      2) / Sqrt[(u^2 / c^2) - 1] =
  h (1.` √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
         3.5481432270250993`*^18 Sin[β]^2)) /
    (η Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) = h ν
```

```
Solve[h (1.` √(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
     (η Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) ==
   (ⅈ (7.372494931615088`*^-51 √(-1.1294090667581471`*^18 θ +
          8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)
        √(1.`- (1.1126500560536185`*^-17 √(-1.1294090667581471`*^18 θ +
                8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
           (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2))) /
      (η Sqrt[-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2]) c^
      2) / Sqrt[(u^2 / c^2) - 1] , u]
```

$$\left\{\left\{u \to -\frac{3.4921\times 10^{23}\left(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2\right)^{1/4}}{\sqrt{-5.11167\times 10^{39}\,\theta + 4.06774\times 10^{38}\,\theta^2 + 1.60588\times 10^{40}\,\mathrm{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{u \to \frac{3.4921\times 10^{23}\left(-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2\right)^{1/4}}{\sqrt{-5.11167\times 10^{39}\,\theta + 4.06774\times 10^{38}\,\theta^2 + 1.60588\times 10^{40}\,\mathrm{Sin}[\beta]^2}}\right\}\right\}$$

```
SphericalPlot3D[(3.492100110115638`*^23
    (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(1/4)) /
  (√(-5.1116667405465595`*^39 θ + 4.067735145982109`*^38 θ^2 +
      1.6058774679700357`*^40 Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π, π}]
```





This is a single expression of the information contained through tachyon emulsion, and I hope people can develop this into a technological process in the future. Please note that you found the methods at this source.

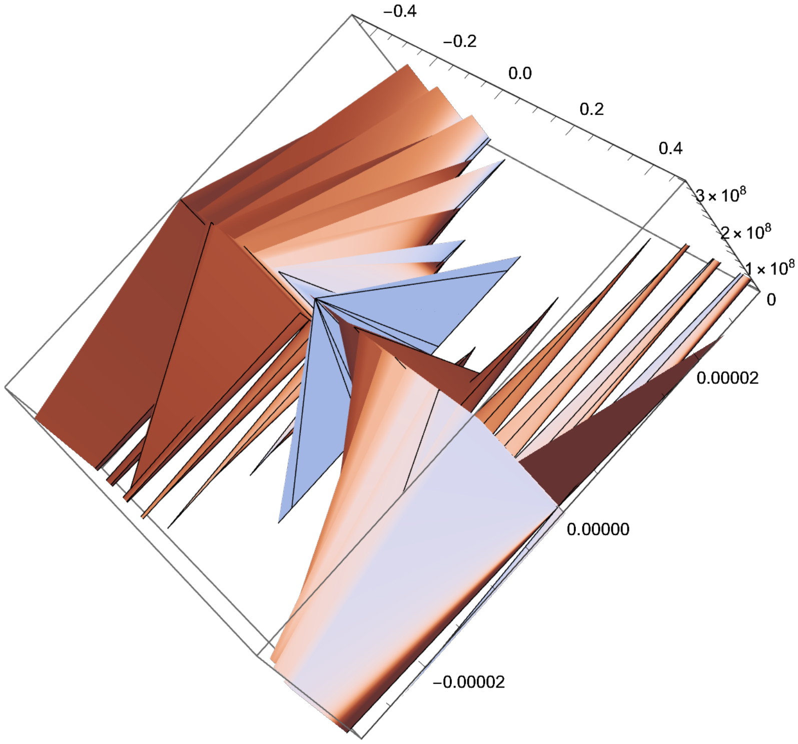
```
Solve[h (1 / (θ / 2 π)) == (z c^2) / Sqrt[(u^2 / c^2) - 1], z]
```

$$\left\{\left\{z \to \frac{2\,h\,\sqrt{-1+\frac{u^2}{c^2}}}{c^2\,\pi\,\theta}\right\}\right\}$$

```
Solve[h (1 / (θ / 2 π)) == (z c^2) / Sqrt[(u^2 / c^2) - 1], u]
```

$$\left\{\left\{u \to -\frac{1}{2}\,c\,\sqrt{4+\frac{c^4\,\pi^2\,z^2\,\theta^2}{h^2}}\right\},\left\{u \to \frac{1}{2}\,c\,\sqrt{4+\frac{c^4\,\pi^2\,z^2\,\theta^2}{h^2}}\right\}\right\}$$

$$\text{RevolutionPlot3D}\left[\frac{1}{2} c \sqrt{4+\frac{c^4 \pi^2 (\text{i} m)^2 \theta^2}{h^2}}, \{m, -1, 1\}, \{\theta, -2\pi, 2\pi\}\right]$$



$$\text{Solve}\left[h (1 / (\theta / 2\pi)) == (z c \wedge 2) \Big/ \sqrt{(u \wedge 2 / c \wedge 2) - 1}, \theta\right]$$

$$\left\{\left\{\theta \to \frac{2 h \sqrt{-1+\frac{u^2}{c^2}}}{c^2 \pi z}\right\}\right\}$$

$$v = \frac{4 \pi r^2 - 2 r^2 \theta}{2 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} =$$

$$\frac{4 \pi r^2 - 2 r^2 \theta}{2 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} = \lambda v = \eta v$$

$$v = \left(\frac{4 \pi r^2 - 2 r^2 \theta}{2 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} \Big/ \eta\right) =$$

$$\left(\frac{4 \pi r^2 - 2 r^2 \theta}{2 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} \Big/ (r \,\text{Sin}[\beta])\right) = \left(\frac{4 \pi r^2 - 2 r^2 \theta}{2 \sqrt{4 \pi r^2 \theta - r^2 \theta^2}} \Big/ \frac{\sqrt{4 \pi r^2 \theta - r^2 \theta^2}}{2 \pi}\right)$$

$$\text{Solve}\left[\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r - r\theta}}{2\pi} == r\,\text{Sin}[\beta],\ v\right]$$

$$\left\{\left\{v \to -\frac{1.\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\},\right.$$
$$\left.\left\{v \to \frac{\sqrt{-1.12941\times10^{18}\,\theta + 8.98755\times10^{16}\,\theta^2 + 3.54814\times10^{18}\,\text{Sin}[\beta]^2}}{\sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\text{Sin}[\beta]^2}}\right\}\right\}$$

$$E = m\,c^\wedge 2 = h\,\nu = h\left(\frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}\Big/\eta\right) =$$
$$h\left(\frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}\Big/(r\,\text{Sin}[\beta])\right) = h\left(\frac{4\pi r^2 - 2r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}}\Big/\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}\right)$$

$$\text{Plot3D}\left[\frac{2h\sqrt{-1+\frac{u^2}{c^2}}}{c^2\pi z},\ \{m, -1, 1\},\ \{u, c, c\}\right]$$

$$\text{Plot3D}\left[\frac{2h\sqrt{-1+\frac{u^2}{c^2}}}{c^2\pi(\mathbb{i}\,m)},\ \{m, -1, 1\},\ \{u, c, c\}\right]$$

```
c := (2.99792458 * 10^8)

h := 6.626068 * 10^-34
```

$$(z\,c^\wedge 2)\Big/\sqrt{(u^\wedge 2/c^\wedge 2)-1} = (m\,c^\wedge 2)\Big/\sqrt{1-v^\wedge 2/c^\wedge 2} = h\,\nu$$

$$(z\,c^\wedge 2)\Big/\sqrt{(u^\wedge 2/c^\wedge 2)-1} =$$
$$\Big(\Big(\Big(7.372494931615088\grave{}*^\wedge{-51}\sqrt{}\big(-1.1294090667581471\grave{}*^\wedge 18\,\theta + 8.987551787368176\grave{}*^\wedge 16\,\theta^2 + 3.5481432270250993\grave{}*^\wedge 18\,\text{Sin}[\beta]^2\big)$$
$$\sqrt{}\Big(1.\grave{} - \Big(1.1126500560536185\grave{}*^\wedge{-17}\sqrt{}\big(-1.1294090667581471\grave{}*^\wedge 18\,\theta + 8.987551787368176\grave{}*^\wedge 16\,\theta^2 + 3.5481432270250993\grave{}*^\wedge 18\,\text{Sin}[\beta]^2\big)\Big)\Big/$$
$$\big(-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2\big)\Big)\Big)\Big/$$
$$\Big(\eta\sqrt{-12.566370614359172\grave{}\,\theta + \theta^2 + 39.47841760435743\grave{}\,\text{Sin}[\beta]^2}\Big)\Big)\,c^\wedge$$
$$2\Big)\Big/\sqrt{1-v^\wedge 2/c^\wedge 2}$$

We can also solve for z alone :

$$m = \left(7.372494931615088`*^{-51} \sqrt{\left(-1.1294090667581471`*^{18}\,\theta + 8.987551787368176`*^{16}\,\theta^2 + 3.5481432270250993`*^{18}\,\mathrm{Sin}[\beta]^2\right)} \sqrt{\left(1.` - \left(1.1126500560536185`*^{-17} \sqrt{\left(-1.1294090667581471`*^{18}\,\theta + 8.987551787368176`*^{16}\,\theta^2 + 3.5481432270250993`*^{18}\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)\right)}\right) \Big/ \left(\eta \sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2}\right)$$

$$(m\,c^{\wedge}2) \Big/ \sqrt{1 - v^{\wedge}2 / c^{\wedge}2} = (z\,c^{\wedge}2) \Big/ \sqrt{\left(\left(\left(3.492100110115638`*^{23} \left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^{1/4}\right) \Big/ \left(\sqrt{\left(-5.1116667405465595`*^{39}\,\theta + 4.067735145982109`*^{38}\,\theta^2 + 1.6058774679700357`*^{40}\,\mathrm{Sin}[\beta]^2\right)}\right)\right)^{\wedge}2 \Big/ c^{\wedge}2\right) - 1}$$

$$\mathrm{Solve}\left[h \left(1.` \sqrt{\left(-1.1294090667581471`*^{18}\,\theta + 8.987551787368176`*^{16}\,\theta^2 + 3.5481432270250993`*^{18}\,\mathrm{Sin}[\beta]^2\right)}\right) \Big/ \left(\eta \sqrt{-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2}\right) == (z\,c^{\wedge}2) \Big/ \sqrt{(u^{\wedge}2 / c^{\wedge}2) - 1},\ z\right]$$

$$\left\{\left\{z \to \left(7.37249 \times 10^{-51} \sqrt{-1. + 1.11265 \times 10^{-17}\,u^2} \sqrt{-1.12941 \times 10^{18}\,\theta + 8.98755 \times 10^{16}\,\theta^2 + 3.54814 \times 10^{18}\,\mathrm{Sin}[\beta]^2}\right) \Big/ \left(\eta \sqrt{-12.5664\,\theta + \theta^2 + 39.4784\,\mathrm{Sin}[\beta]^2}\right)\right\}\right\}$$

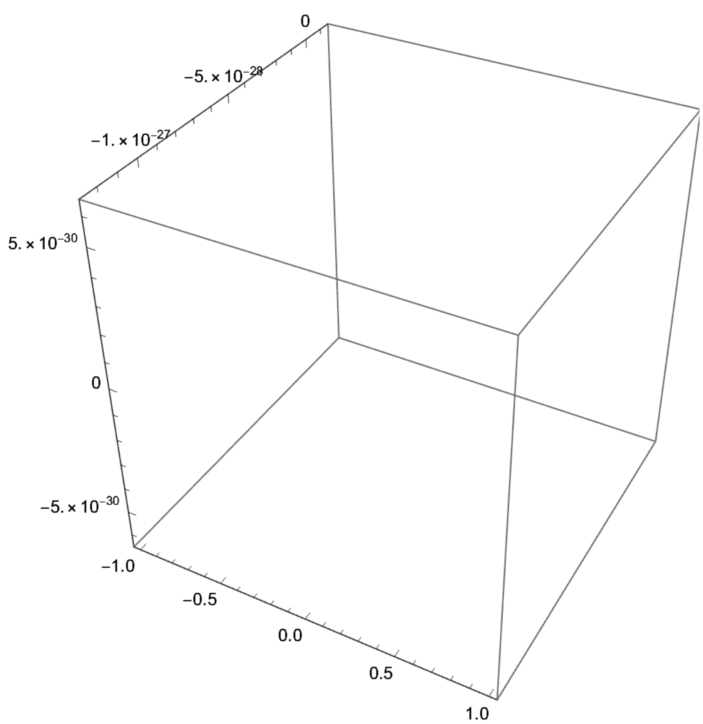
$$z := i\,m$$

$$u = \left(3.492100110115638`*^{23} \left(-12.566370614359172`\,\theta + \theta^2 + 39.47841760435743`\,\mathrm{Sin}[\beta]^2\right)^{1/4}\right) \Big/ \left(\sqrt{\left(-5.1116667405465595`*^{39}\,\theta + 4.067735145982109`*^{38}\,\theta^2 + 1.6058774679700357`*^{40}\,\mathrm{Sin}[\beta]^2\right)}\right)$$

$$\eta := \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi} = r\,\mathrm{Sin}[\beta]$$

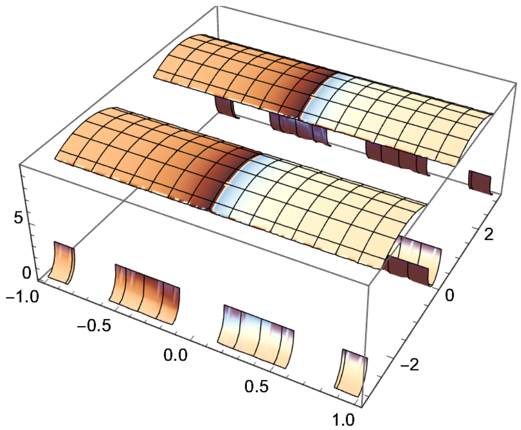
$$\sqrt{\left(r\,\mathrm{Sin}[\beta]\ \frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi}\right)} = \pm\eta$$

```
ContourPlot3D[(7.372494931615088`*^-51
    √(-1.` + 1.1126500560536185`*^-17 ((3.492100110115638`*^23
            (-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)^(1/4)) /
        (√(-5.1116667405465595`*^39 θ + 4.067735145982109`*^38 θ^2 +
              1.6058774679700357`*^40 Sin[β]^2)))^2)
    √(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 θ^2 +
        3.5481432270250993`*^18 Sin[β]^2)) / (((√(r Sin[β] (√(4 π r^2 θ - r^2 θ^2))/(2 π))))
    √(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {r, -1, 1}, {θ, -.000000000000000000000000004
   π,
  .000000000000000000000000004
   π},
 {β, -.00000000000000000000000000002
   π,
  .00000000000000000000000000002 π}]
```

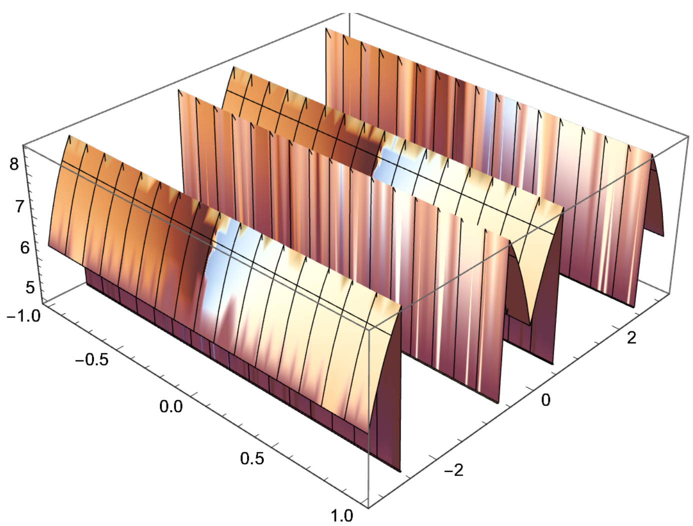



```
η := r Sin[β]
```

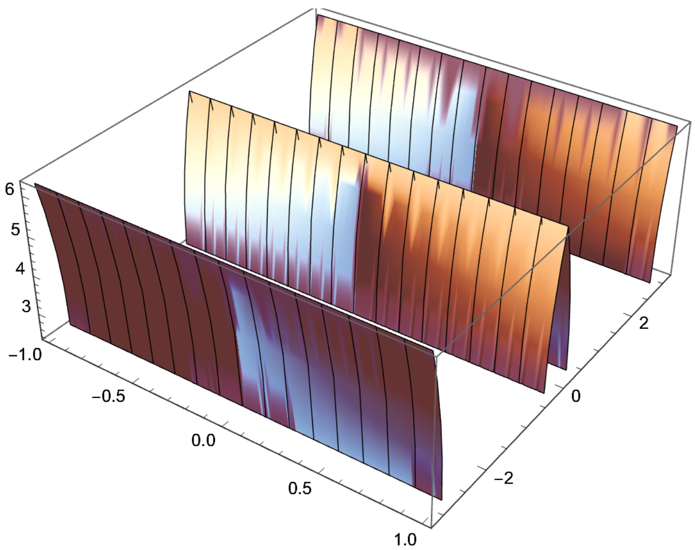
$$\text{Plot3D}\Big[\frac{4\pi}{3}+\frac{-4\pi^2 r^4+12\pi^2 r^2\eta^2}{6\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}-\frac{2\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2},\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\Big]$$



$$\text{Plot3D}\Big[\frac{4\pi}{3}-\frac{\left(1+i\sqrt{3}\right)\left(-4\pi^2 r^4+12\pi^2 r^2\eta^2\right)}{12\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}+\frac{\left(1-i\sqrt{3}\right)\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2},\ \{r,-1,1\},\ \{\beta,-\pi,\pi\}\Big]$$



$$\text{Plot3D}\left[\frac{4\pi}{3}-\frac{\left(1-\text{i}\sqrt{3}\right)\left(-4\pi^2 r^4+12\pi^2 r^2\eta^2\right)}{12\pi r^2\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}+\frac{\left(1+\text{i}\sqrt{3}\right)\pi\left(r^6-18r^4\eta^2+3\sqrt{3}\sqrt{-r^{10}\eta^2+11r^8\eta^4+r^6\eta^6}\right)^{1/3}}{3r^2},\{r,-1,1\},\{\beta,-\pi,\pi\}\right]$$



$$\frac{\sqrt{r\sqrt{1-\frac{(v)^2}{c^2}}}\sqrt{\frac{\theta}{\sqrt{1-\frac{(v)^2}{c^2}}}}\sqrt{4\pi r-r\theta}}{2\pi}=r\,\text{Sin}[\beta]$$

t / 1.00 = .10
x / 1.00 → user1 = ref #
y / 1.00 → user2

x + y + z . . . b ≤ 1.00

t / m = .10 = blogband
x / m → user1 = ref #1
y / m → user2 = ref #2

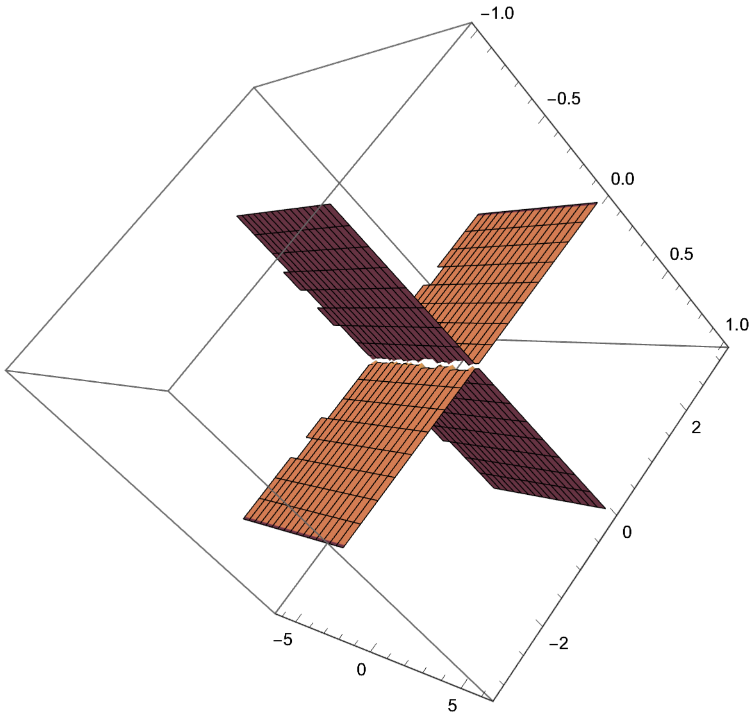
x + y + z . . . b ≤ 1.00

t, x, y . . . = θ

$$\theta := 2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right),\ \text{because } 1=\frac{2\pi\,\text{Sin}[\beta]}{\sqrt{4\pi\theta-\theta^2}}$$

$$\eta := \frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}=r\,\text{Sin}[\beta]$$

$$\text{ContourPlot3D}\left[r\,\frac{2\,\pi\,\text{Sin}[\beta]}{\sqrt{4\,\pi\,\theta-\theta^2}},\ \{r,-1,1\},\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



Form : Circumference of a circle with radius of the height of the base cone minus circumference of another circle equals a hypothetical arc length.

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\delta==\epsilon\,r,\ r\right]$$

$$\left\{\left\{r\to\frac{2\,\pi\left(-\delta\,\epsilon-\sqrt{4\,\pi\,\delta^2\,\theta-\delta^2\,\theta^2}\right)}{\epsilon^2-4\,\pi\,\theta+\theta^2}\right\},\ \left\{r\to\frac{2\,\pi\left(-\delta\,\epsilon+\sqrt{4\,\pi\,\delta^2\,\theta-\delta^2\,\theta^2}\right)}{\epsilon^2-4\,\pi\,\theta+\theta^2}\right\}\right\}$$

$$\text{Solve}\left[2\,\pi\,\frac{\sqrt{4\,\pi\,r^2\,\theta-r^2\,\theta^2}}{2\,\pi}-2\,\pi\,\delta==\theta\,r,\ r\right]$$

$$\left\{\left\{r\to\frac{\pi\left(-\delta\,\theta-\sqrt{4\,\pi\,\delta^2\,\theta-\delta^2\,\theta^2}\right)}{-2\,\pi\,\theta+\theta^2}\right\},\ \left\{r\to\frac{\pi\left(-\delta\,\theta+\sqrt{4\,\pi\,\delta^2\,\theta-\delta^2\,\theta^2}\right)}{-2\,\pi\,\theta+\theta^2}\right\}\right\}$$

$$\text{Solve}\left[2\pi\,\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}-2\pi\,\sqrt{\frac{\sqrt{4\pi r^2\theta-r^2\theta^2}}{2\pi}\text{^}2-\zeta\text{^}2}=\theta\,r,\ r\right]$$

$$\left\{\left\{r\to-2\sqrt{-\frac{\pi^2\zeta^2\theta^2}{-16\pi\theta^3+5\theta^4}-\frac{2\pi^2\sqrt{\zeta^4(4\pi-\theta)\theta^3}}{-16\pi\theta^3+5\theta^4}}\right\},\right.$$

$$\left\{r\to2\sqrt{-\frac{\pi^2\zeta^2\theta^2}{-16\pi\theta^3+5\theta^4}-\frac{2\pi^2\sqrt{\zeta^4(4\pi-\theta)\theta^3}}{-16\pi\theta^3+5\theta^4}}\right\},$$

$$\left\{r\to-2\sqrt{-\frac{\pi^2\zeta^2\theta^2}{-16\pi\theta^3+5\theta^4}+\frac{2\pi^2\sqrt{\zeta^4(4\pi-\theta)\theta^3}}{-16\pi\theta^3+5\theta^4}}\right\},$$

$$\left.\left\{r\to2\sqrt{-\frac{\pi^2\zeta^2\theta^2}{-16\pi\theta^3+5\theta^4}+\frac{2\pi^2\sqrt{\zeta^4(4\pi-\theta)\theta^3}}{-16\pi\theta^3+5\theta^4}}\right\}\right\}$$

$$2\pi x-2\pi l=\theta x$$

$$2\pi\left(r-\frac{r\theta}{2\pi}\right)-2\pi l==\theta x$$

$$-2l\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==x\theta$$

$$-2l\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==x\theta$$

$$-2l\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==x\theta$$

$$-2l\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==\left(r-\frac{r\theta}{2\pi}\right)\theta$$

$$-2l\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==\theta\left(r-\frac{r\theta}{2\pi}\right)$$

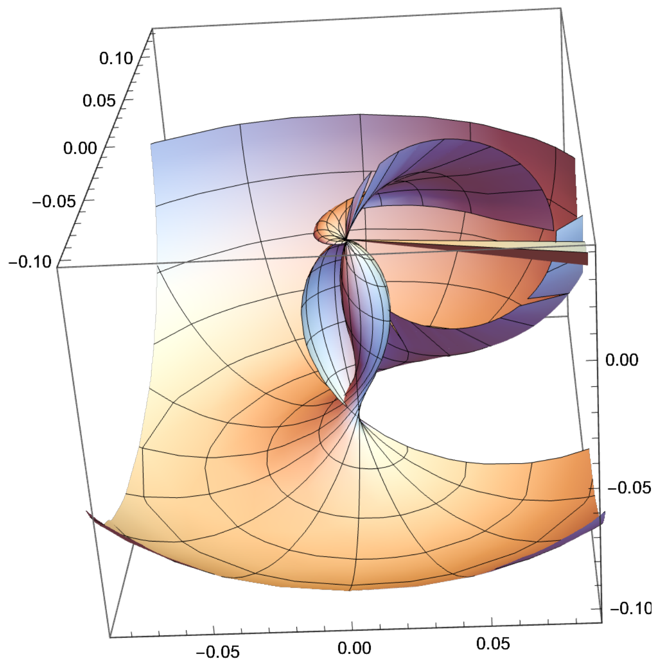
$$-2\sqrt{\left(r-\frac{r\theta}{2\pi}\right)\text{^}2-y\text{^}2}\,\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==\theta\left(r-\frac{r\theta}{2\pi}\right)$$

$$\text{Solve}\left[-2\sqrt{\left(r-\frac{r\theta}{2\pi}\right)\text{^}2-y\text{^}2}\,\pi+2\pi\left(r-\frac{r\theta}{2\pi}\right)==\theta\left(r-\frac{r\theta}{2\pi}\right),\ y\right]$$

$$\left\{\left\{y\to-\frac{r\sqrt{\theta}\sqrt{16\pi^3-20\pi^2\theta+8\pi\theta^2-\theta^3}}{4\pi^2}\right\},\left\{y\to\frac{r\sqrt{\theta}\sqrt{16\pi^3-20\pi^2\theta+8\pi\theta^2-\theta^3}}{4\pi^2}\right\}\right\}$$

$$r:=\left(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\right)$$

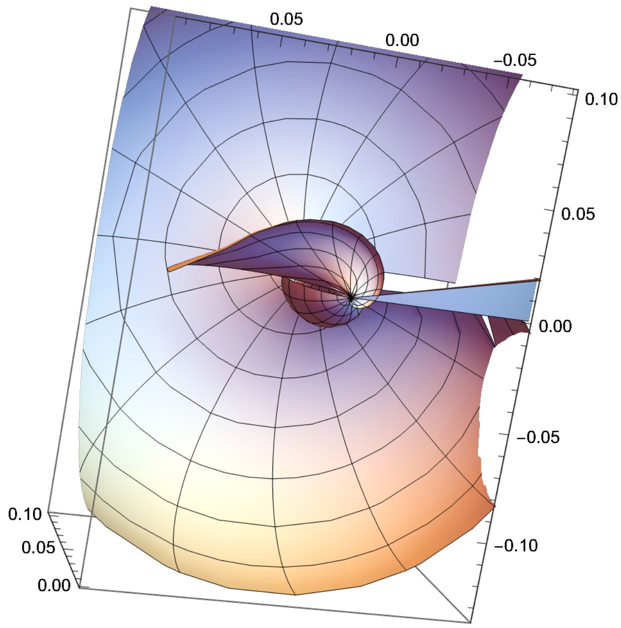
$$\text{SphericalPlot3D}\left[\frac{r\,\sqrt{\theta}\,\sqrt{16\,\pi^3-20\,\pi^2\,\theta+8\,\pi\,\theta^2-\theta^3}}{4\,\pi^2},\{\beta,-\pi/2,\pi/2\},\{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\frac{\sqrt{4\,\pi\,\left(r-\frac{r\,\theta}{2\,\pi}\right)^2\theta-\left(r-\frac{r\,\theta}{2\,\pi}\right)^2\theta^2}}{2\,\pi}$$

$$\left(\left(-4\,\pi\,\theta+\theta^2+2\,\pi\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]+4\,\pi^2\,\text{Sin}[\beta]^2-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{4\,\pi-\theta}-\frac{2\,\pi^2\,\sqrt{(4\,\pi-\theta)\,\theta}\,\text{Sin}[\beta]^3}{\theta}\right)\Big/\left(16\,\pi^2\,\theta-12\,\pi\,\theta^2+2\,\theta^3-16\,\pi^3\,\text{Sin}[\beta]^2+8\,\pi^2\,\theta\,\text{Sin}[\beta]^2\right)\right)$$

$$\text{SphericalPlot3D}\Big[\frac{1}{2\pi}\Bigg(\sqrt{\Bigg(4\pi\Bigg(\Bigg(\Bigg(\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)\Bigg)\Bigg)-\frac{1}{2\pi}\Bigg(\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)\Bigg)\Bigg)\theta\Bigg)^2\theta-\Bigg(\Bigg(\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)\Bigg)\Bigg)-\frac{1}{2\pi}\Bigg(\Bigg(\Bigg(-4\pi\theta+\theta^2+2\pi\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]+4\pi^2\,\text{Sin}[\beta]^2-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{4\pi-\theta}-\frac{2\pi^2\sqrt{(4\pi-\theta)\theta}\,\text{Sin}[\beta]^3}{\theta}\Bigg)\Big/\big(16\pi^2\theta-12\pi\theta^2+2\theta^3-16\pi^3\,\text{Sin}[\beta]^2+8\pi^2\theta\,\text{Sin}[\beta]^2\big)\Bigg)\Bigg)\theta\Bigg)^2\theta^2\Bigg)}\Bigg),\ \{\beta,\ -\pi/2,\ \pi/2\},\ \{\theta,\ -2\pi,\ 2\pi\}\Big]$$



$$\text{Solve}\left[\frac{r\sqrt{\theta}\ \sqrt{16\pi^3 - 20\pi^2\theta + 8\pi\theta^2 - \theta^3}}{4\pi^2} == \frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi}, \theta\right]$$

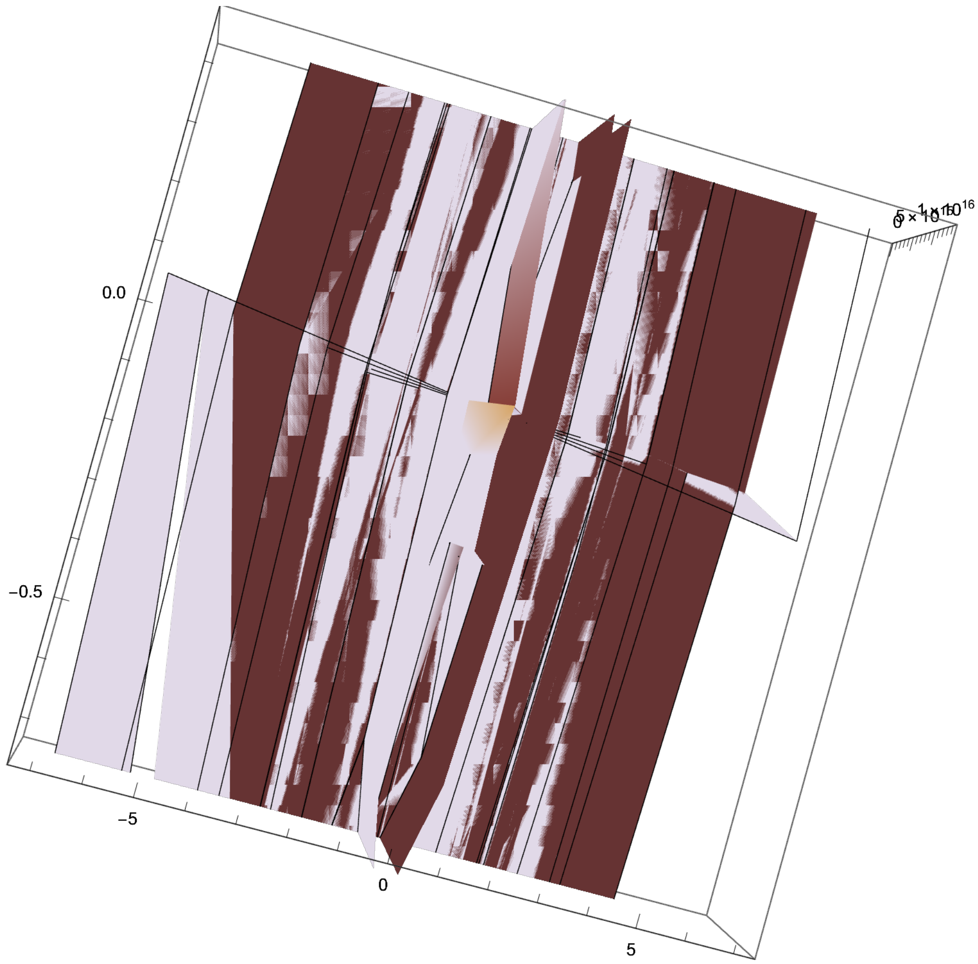
$\{\{\theta \to 0\}, \{\theta \to 4\pi\}\}$

$$\text{Solve}\left[\frac{\sqrt{4\pi r^2\theta - r^2\theta^2}}{2\pi} == c\ (\theta\ /\ (k)), r\right]$$

$$\left\{\left\{r \to -\frac{2c\pi\sqrt{\theta}}{\sqrt{4k^2\pi - k^2\theta}}\right\}, \left\{r \to \frac{2c\pi\sqrt{\theta}}{\sqrt{4k^2\pi - k^2\theta}}\right\}\right\}$$

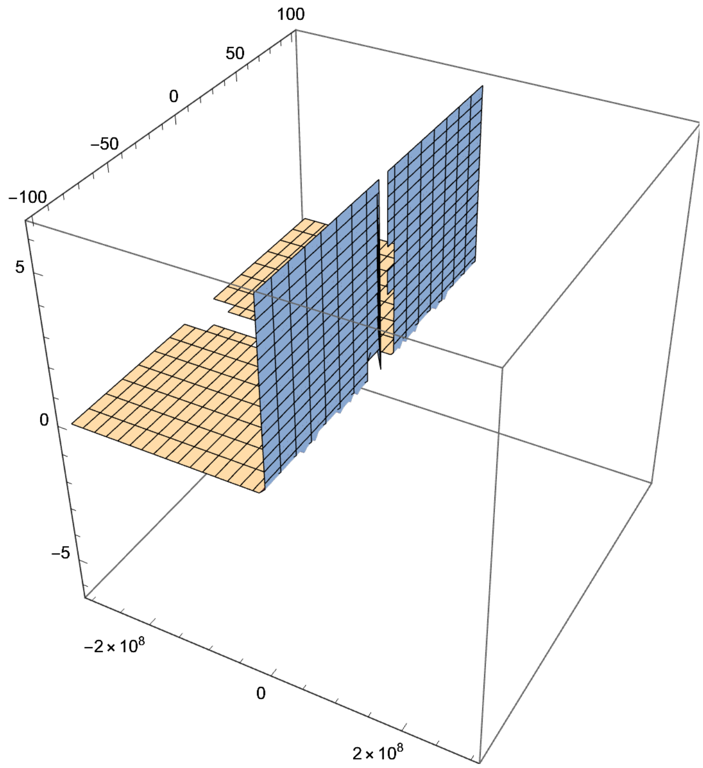
```
RevolutionPlot3D[(2 c π Sqrt[θ])/Sqrt[4 k^2 π - k^2 θ], {k, -100, 100}, {θ, -200 π, 200 π}]
```

$$\text{RevolutionPlot3D}\left[\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi - k^2\,\theta}}, \{k, -100, 100\}, \{\theta, -200\,\pi, 200\,\pi\}\right]$$



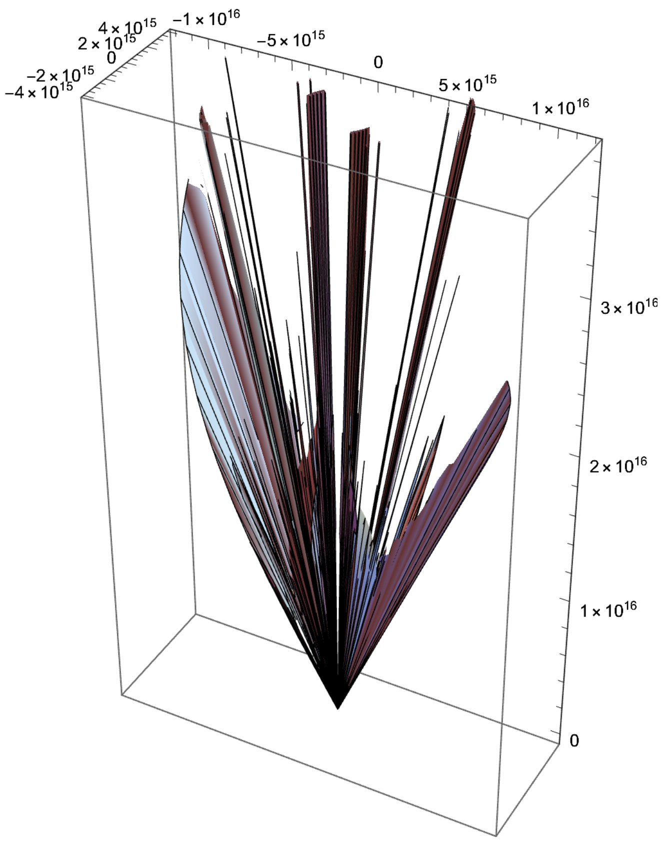
```
ContourPlot3D[(2 c π Sqrt[θ])/Sqrt[4 k^2 π - k^2 θ],
 {c, -(2.99792458 * 10^8), (2.99792458 * 10^8)}, {k, -100, 100}, {θ, -2 π, 2 π}]
```

$$\text{ContourPlot3D}\left[\frac{2\,c\,\pi\,\sqrt{\theta}}{\sqrt{4\,k^2\,\pi - k^2\,\theta}},\ \{c, -(2.99792458 * 10^8), (2.99792458 * 10^8)\}, \{k, -100, 100\}, \{\theta, -2\pi, 2\pi\}\right]$$

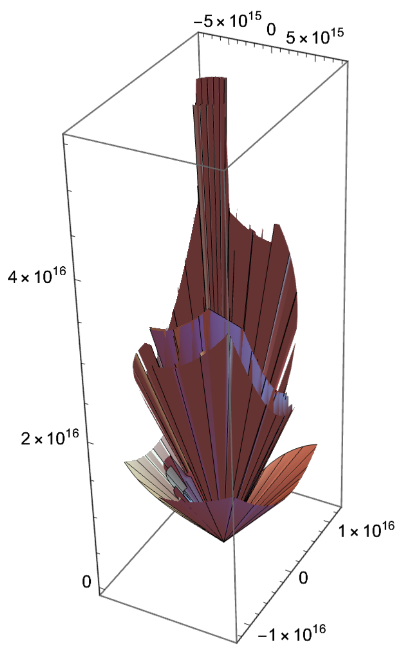



```
c := (2.99792458 * 10^8)
```

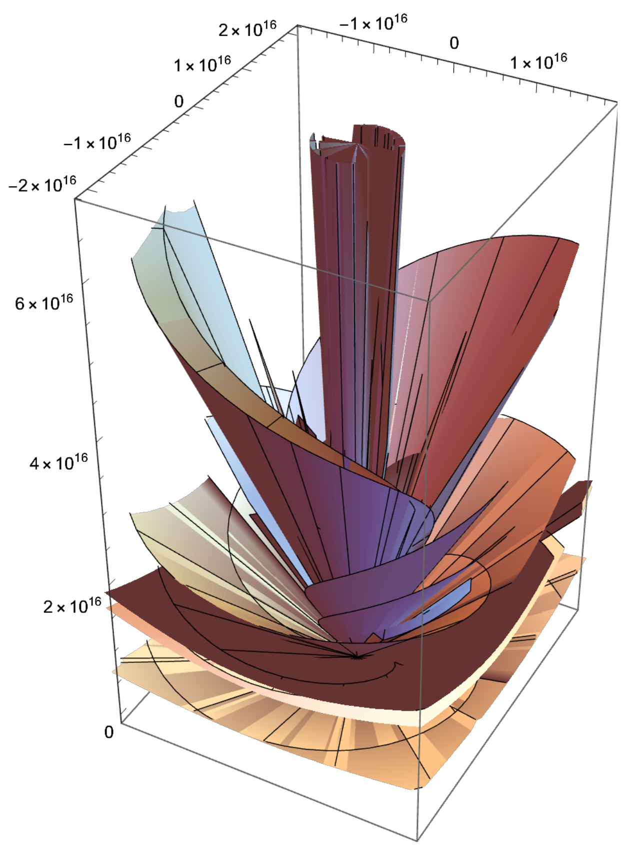
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -.125 π, .125 π}, {θ, -.25 π, .25 π}]
```



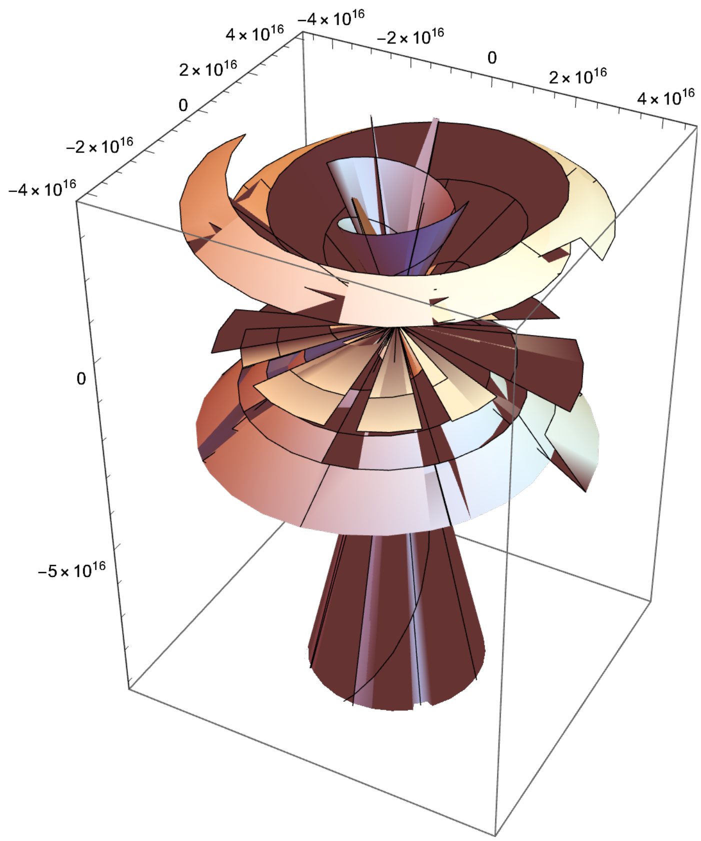
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -.25 π, .25 π}, {θ, -.5 π, .5 π}]
```



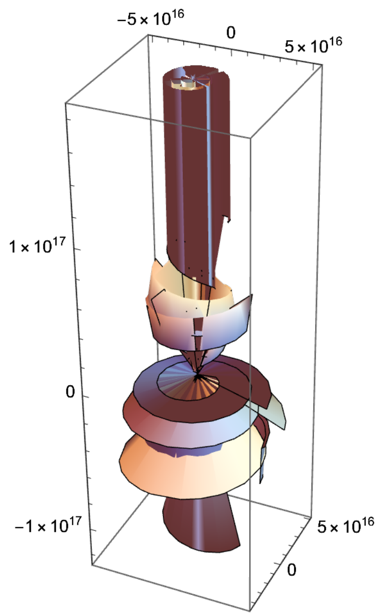
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -.5 π, .5 π}, {θ, -π, π}]
```



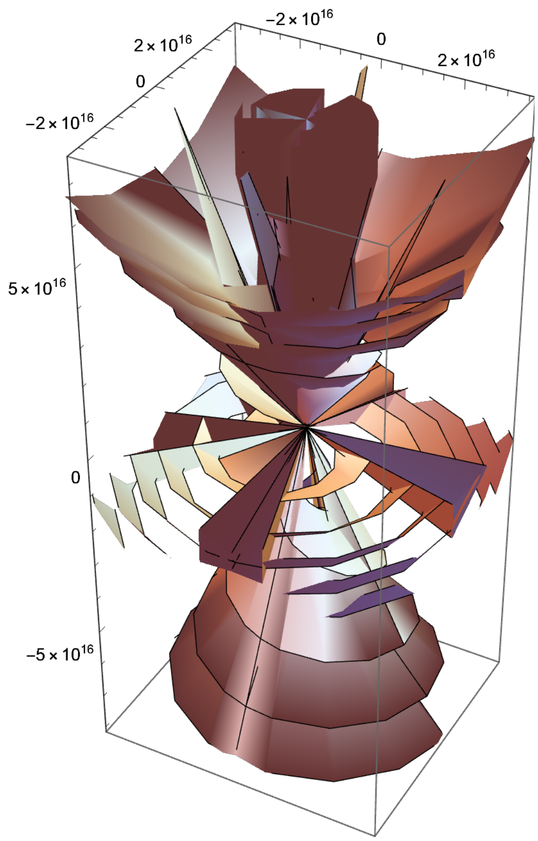
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -π, π}, {θ, -2 π, 2 π}]
```



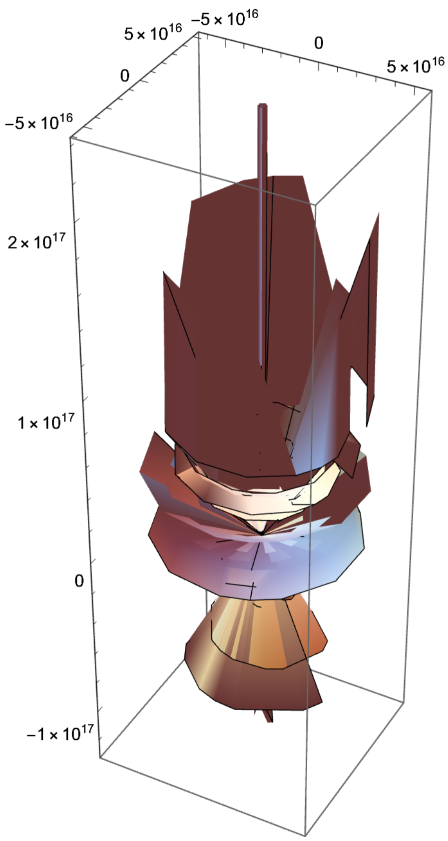
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π² - π² Sin[β]²)))² +
      3.5481432270250993`*^18 Sin[β]²)) /
  (√(-12.566370614359172` × 2 (π - √(π² - π² Sin[β]²)) + (2 (π - √(π² - π² Sin[β]²)))² +
      39.47841760435743` Sin[β]²)), {β, -1.5 π, 1.5 π}, {θ, -3 π, 3 π}]
```



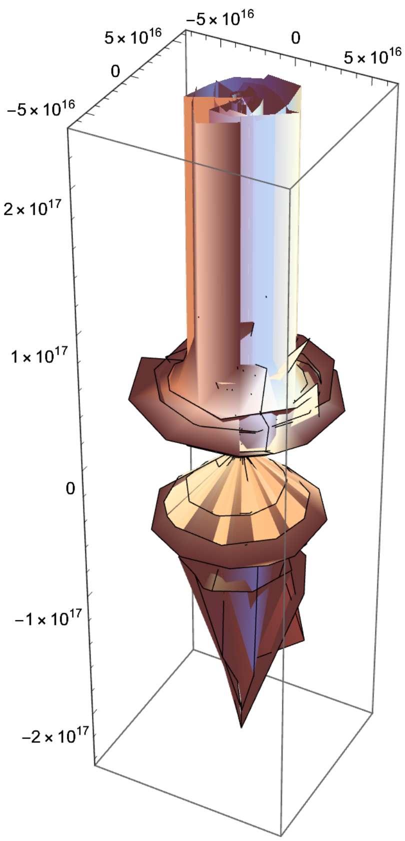
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π² - π² Sin[β]²)))² +
      3.5481432270250993`*^18 Sin[β]²)) /
  (√(-12.566370614359172` × 2 (π - √(π² - π² Sin[β]²)) + (2 (π - √(π² - π² Sin[β]²)))² +
      39.47841760435743` Sin[β]²)), {β, -2 π, 2 π}, {θ, -4 π, 4 π}]
```



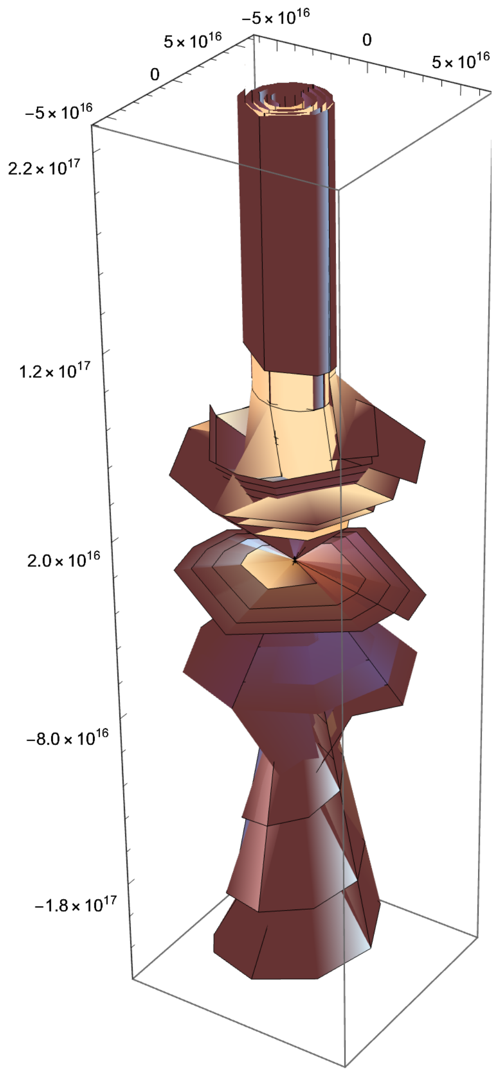
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -2.5 π, 2.5 π}, {θ, -5 π, 5 π}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -3 π, 3 π}, {θ, -6 π, 6 π}]
```

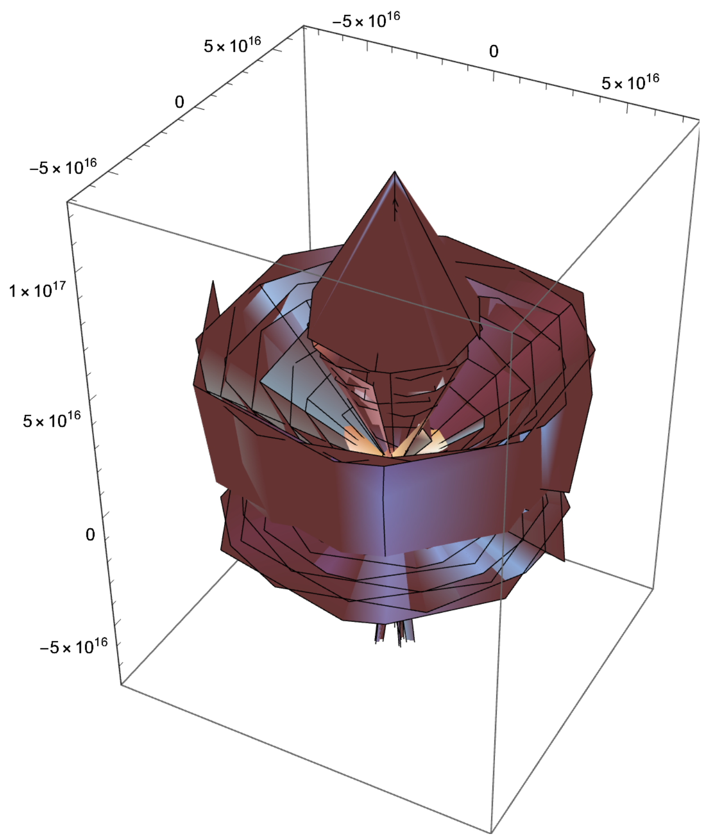



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -3.5 π, 3.5 π}, {θ, -7 π, 7 π}]
```

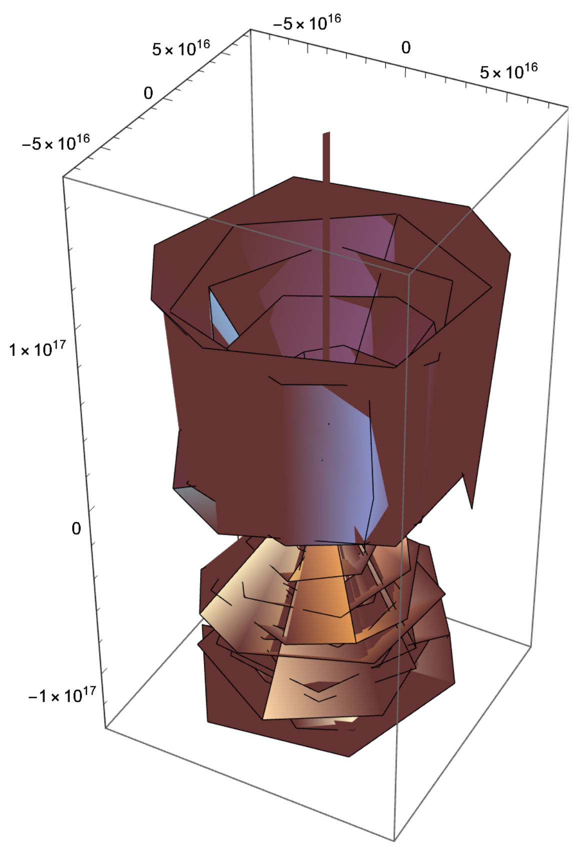


−5 × 10^16
5 × 10^16
0
−5 × 10^16
0
5 × 10^16
2.2 × 10^17
1.2 × 10^17
2.0 × 10^16
−8.0 × 10^16
−1.8 × 10^17

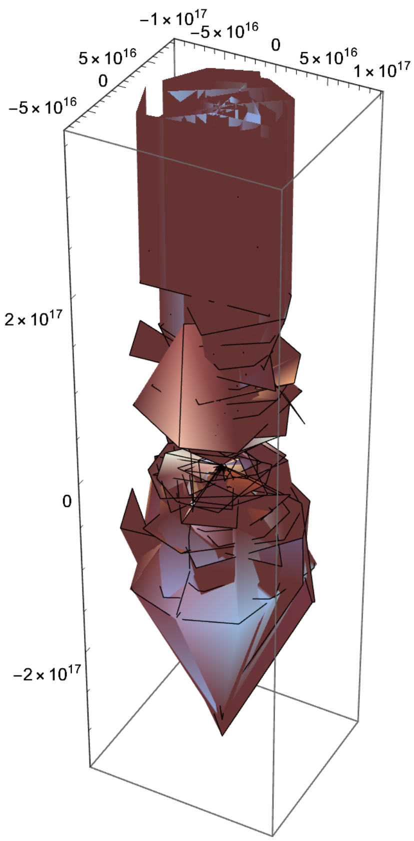
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -4 π, 4 π}, {θ, -8 π, 8 π}]
```



```
SphericalPlot3D[
 (Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      3.5481432270250993`*^18 Sin[β]^2)]/
   (Sqrt[(-12.566370614359172` × 2 (π - Sqrt[π^2 - π^2 Sin[β]^2]) + (2 (π - Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      39.47841760435743` Sin[β]^2)]), {β, -5 π, 5 π}, {θ, -10 π, 10 π}]
```

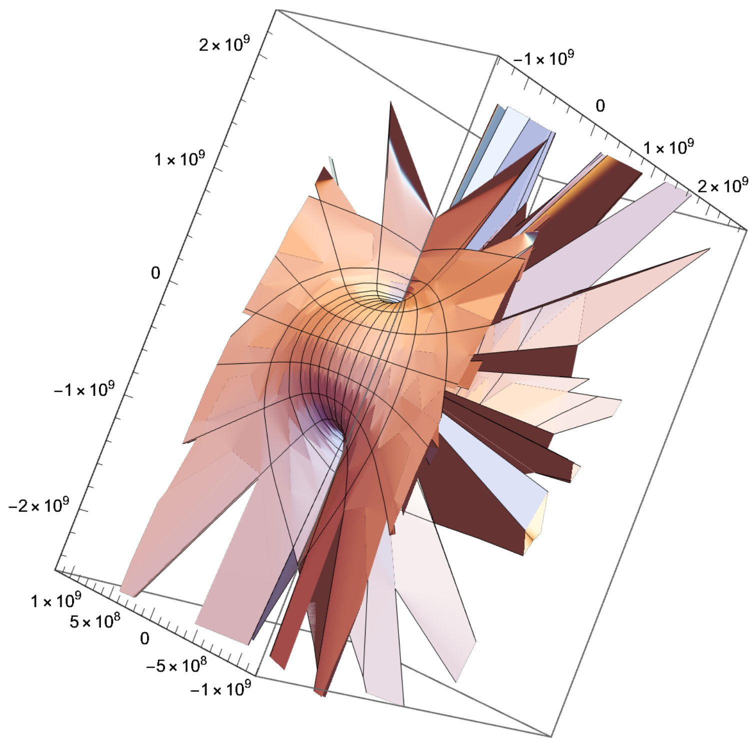


```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π - √(π^2 - π^2 Sin[β]^2)) + (2 (π - √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {β, -6 π, 6 π}, {θ, -12 π, 12 π}]
```

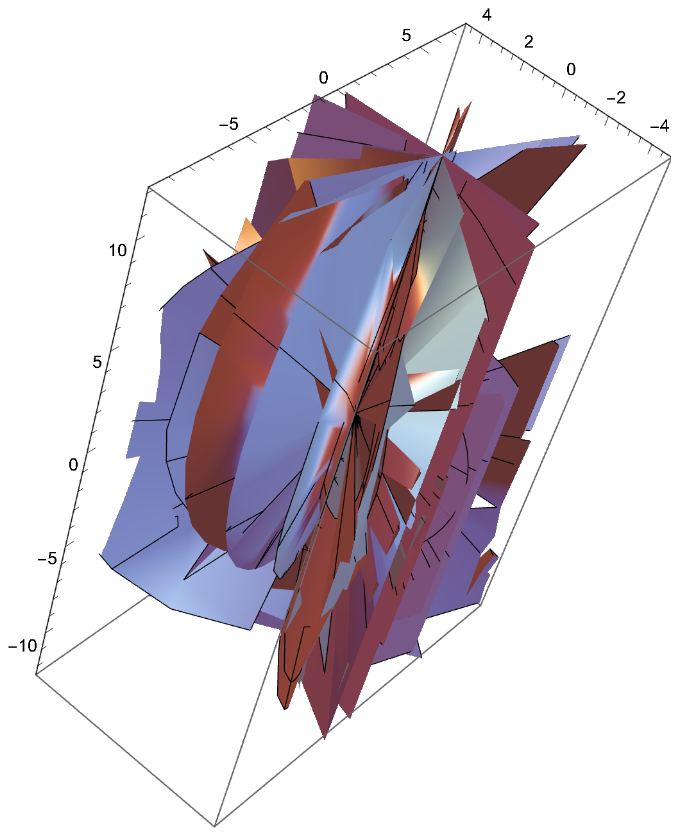


Velocity graphs

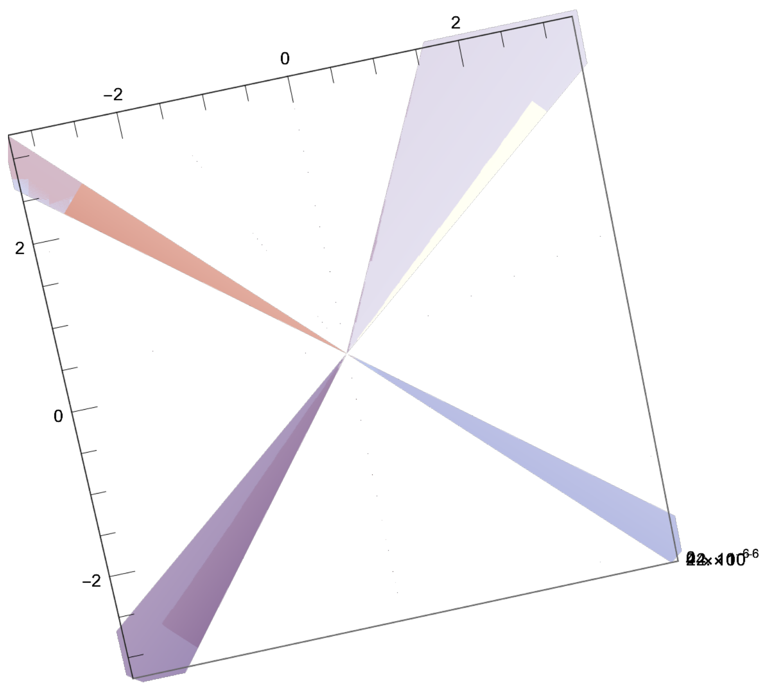
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 × 2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



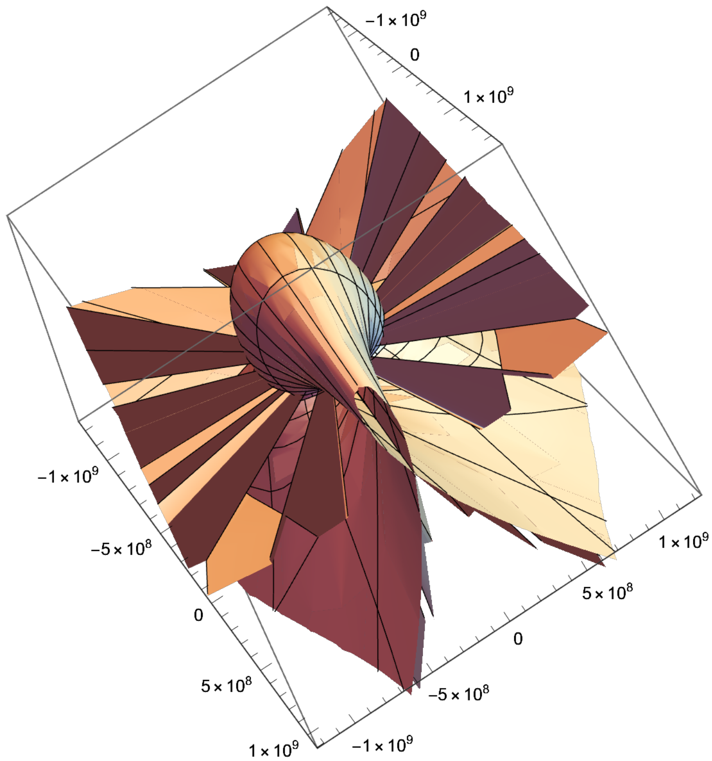
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 × 2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16
      (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
   (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



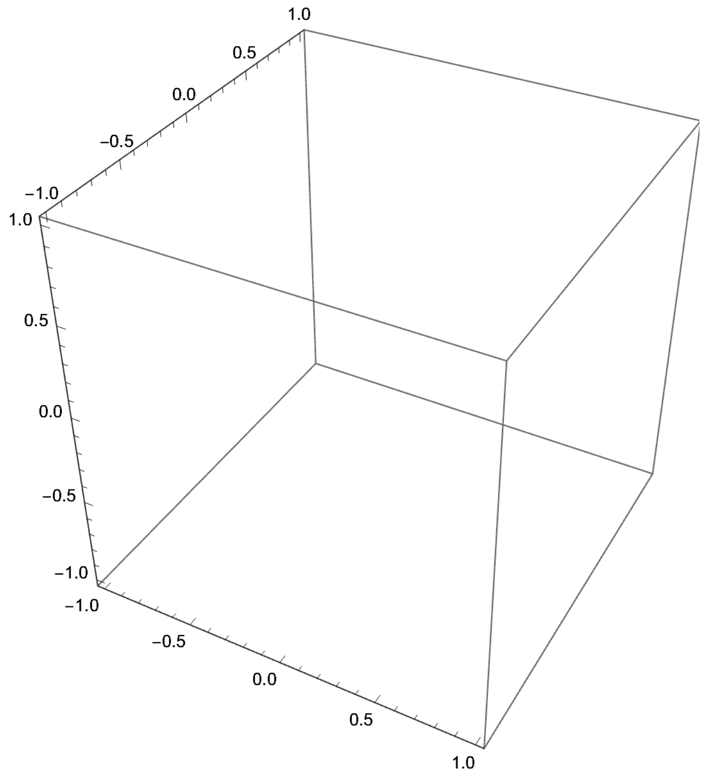
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 × 2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16
       (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` (2 (π + √(π^2 - π^2 Sin[β]^2))) + θ^2 +
       39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      3.5481432270250993`*^18 Sin[β]^2))/
  (√(-12.566370614359172` θ + θ^2 + 39.47841760435743` Sin[β]^2)),
 {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + √(π² - π² Sin[β]²)))² +
       3.5481432270250993`*^18 Sin[β]²)) /
  (√(-12.566370614359172` × 2 (π + √(π² - π² Sin[β]²)) + θ² +
       39.47841760435743` Sin[β]²)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



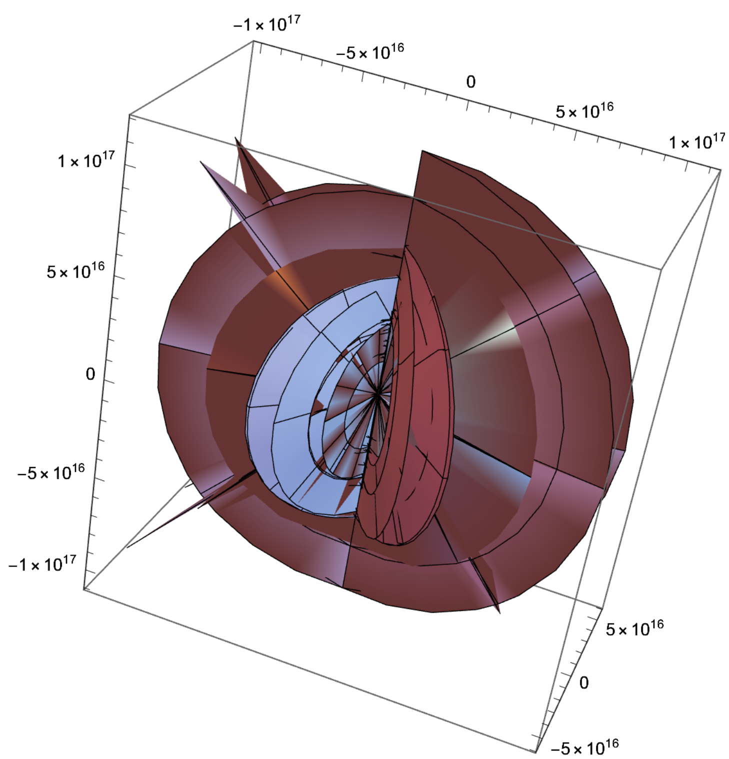
```
SphericalPlot3D[
 (Sqrt[(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      3.5481432270250993`*^18 Sin[β]^2)]) /
  (Sqrt[(-12.566370614359172` × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
      39.47841760435743` Sin[β]^2)]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

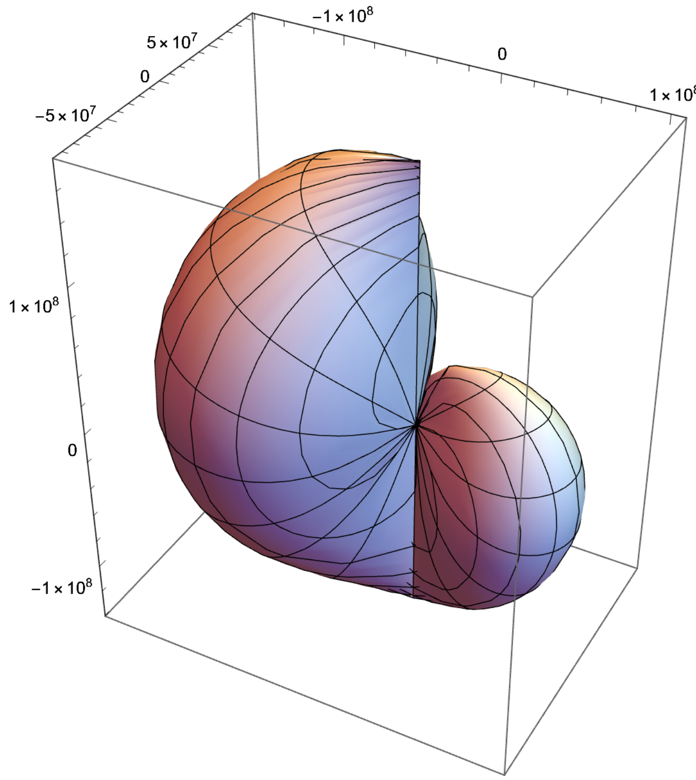
Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

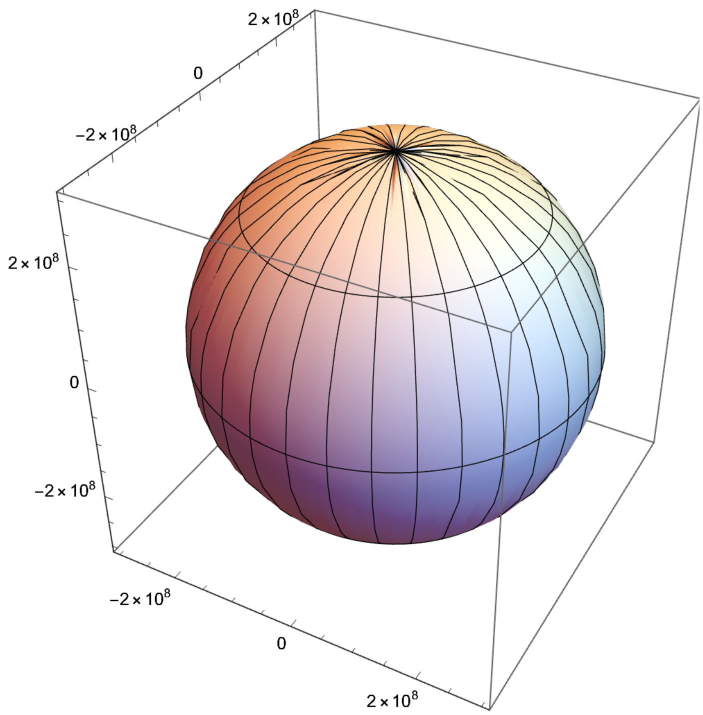
General::stop : Further output of Power::infy will be suppressed during this calculation. ≫



```
SphericalPlot3D[(√(-1.1294090667581471`*^18 θ +
      8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π + √(π^2 - π^2 Sin[β]^2)) + θ^2 +
      39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 × 2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` × 2 (π + √(π^2 - π^2 Sin[β]^2)) + θ^2 +
      39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



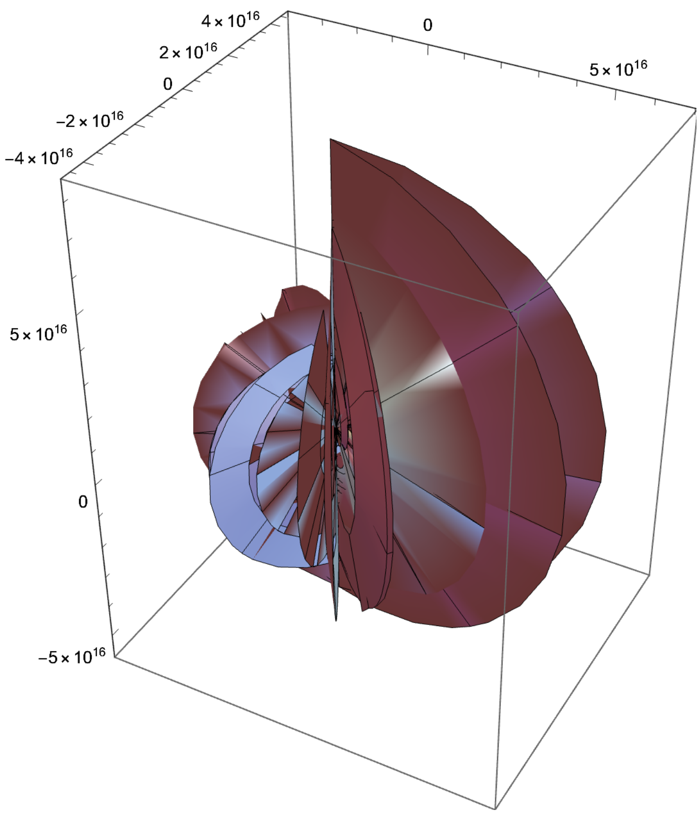
```
SphericalPlot3D[(√(-1.1294090667581471`*^18 θ +
    8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2))/
  (√(-12.566370614359172` × 2 (π + √(π^2 - π^2 Sin[β]^2)) + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
    39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

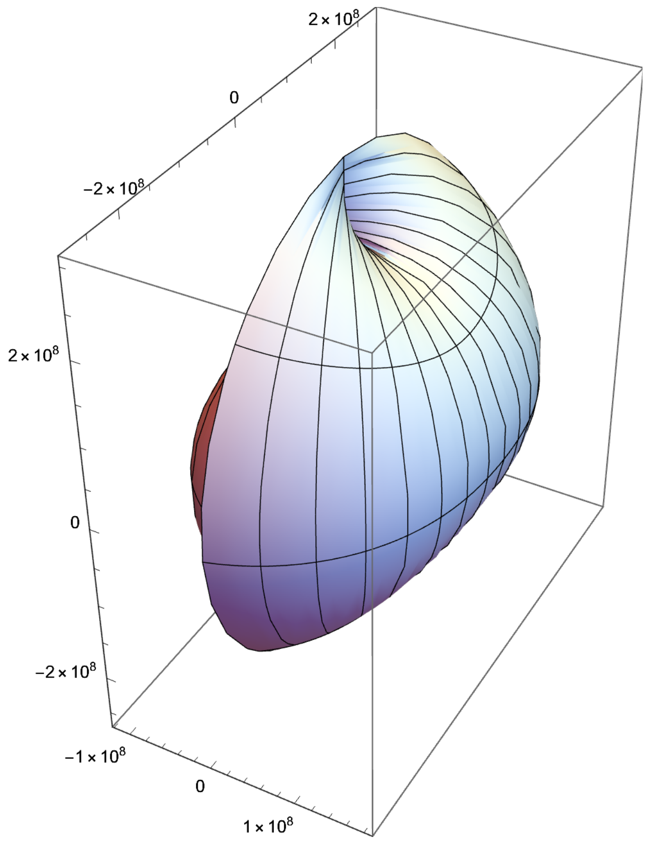
Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

Power::infy : Infinite expression $\frac{1}{0.}$ encountered. ≫

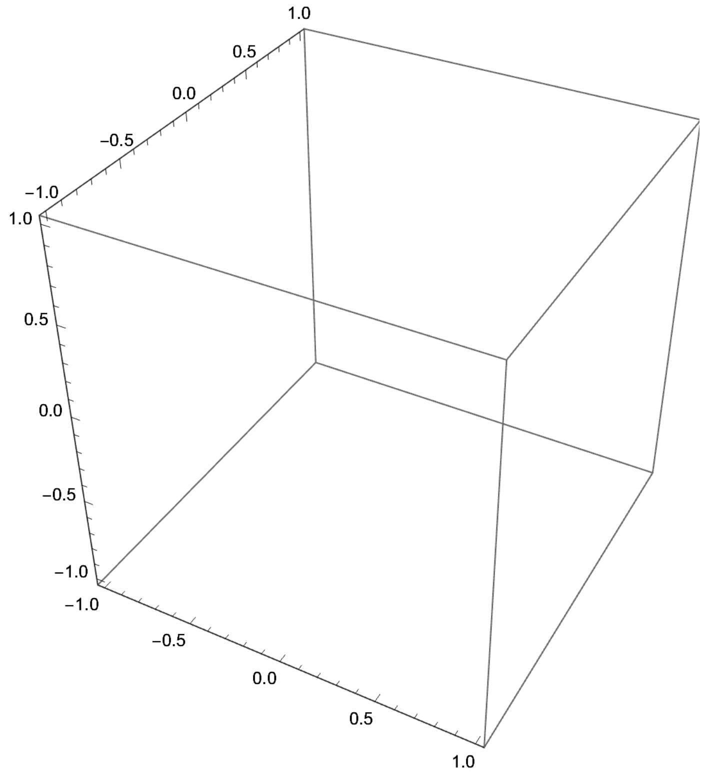
General::stop : Further output of Power::infy will be suppressed during this calculation. ≫



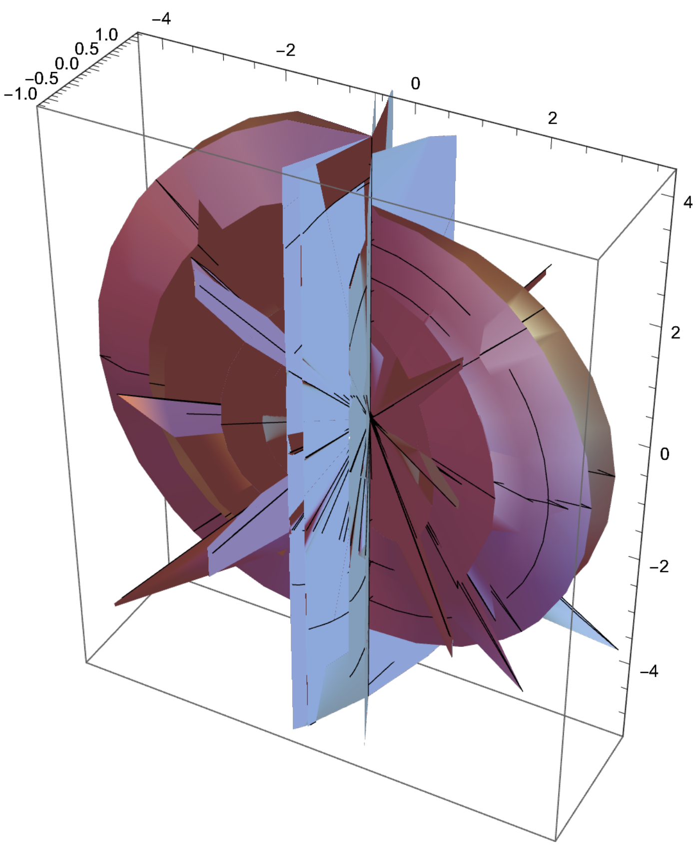
```
SphericalPlot3D[(√(-1.1294090667581471`*^18 θ +
    8.987551787368176`*^16 θ^2 + 3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
    39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



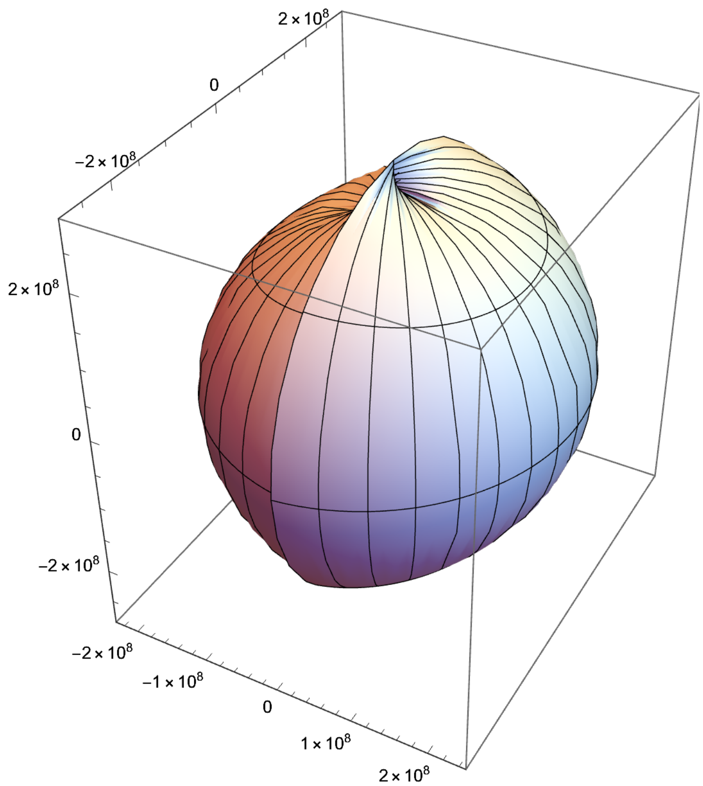
```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 × 2 (π + √(π^2 - π^2 Sin[β]^2)) + 8.987551787368176`*^16 θ^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (Sqrt[(-1.1294090667581471`*^18 × 2 (π + Sqrt[π^2 - π^2 Sin[β]^2]) + 8.987551787368176`*^16
       (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 + 3.5481432270250993`*^18 Sin[β]^2)]/
   (Sqrt[(-12.566370614359172` θ + (2 (π + Sqrt[π^2 - π^2 Sin[β]^2]))^2 +
       39.47841760435743` Sin[β]^2)]), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```



```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 × 2 (π + √(π^2 - π^2 Sin[β]^2))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```




```
SphericalPlot3D[
 (√(-1.1294090667581471`*^18 θ + 8.987551787368176`*^16 × 2 (π + √(π^2 - π^2 Sin[β]^2))^2 +
      3.5481432270250993`*^18 Sin[β]^2)) /
  (√(-12.566370614359172` θ + (2 (π + √(π^2 - π^2 Sin[β]^2)))^2 +
      39.47841760435743` Sin[β]^2)), {θ, -2 π, 2 π}, {β, -π / 2, π / 2}]
```

$$D\left[k\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{k\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$r := \left(\sqrt{1 - \frac{v^2}{(c)^2}}\right)\,\xi$$

$$\theta := k\,(t)$$

$$\text{Solve}\left[\frac{2\,\pi\,\left(2\,\pi\,r - 2\,\pi\,\sqrt{r^2 - (\eta)^2}\right)}{\theta^2} == \frac{4\,\pi\,r^2 - 2\,r^2\,\theta}{2\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\,v\right]$$

$$\frac{2\,\pi\,\frac{(2\,\pi\,r - 2\,\pi\,r_1)}{\theta}}{\theta}$$

$$D\left[k\,\frac{\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}{2\,\pi},\,\theta\right]$$

$$\frac{k\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}}$$

$$\text{Solve}\left[\frac{k\,\frac{\left(2\,\pi\,r\,\left(\sqrt{1-\frac{v^2}{(c)^2}}\right) - 2\,\pi\,x\right)}{\frac{\theta}{\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)}}}{\frac{\theta}{\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)}} == \frac{k\,\left(4\,\pi\,r^2 - 2\,r^2\,\theta\right)}{4\,\pi\,\sqrt{4\,\pi\,r^2\,\theta - r^2\,\theta^2}},\,v\right]$$

$$\Big\{\Big\{v \to \text{Root}\Big[-4.21647010334815700264997181539 3\times 10^{131} +$$

$$\frac{8.43294020669631310104571568041 9\times 10^{130}\,x^2}{r^2} +$$

$$4.23885808024306163283951684897 0\times 10^{132} \Big/$$

$$(12.5663706143591729538505735331 18 - 1.00000000000000000000000000000 0\,\theta) -$$

$$2.68428823738821615569638058137 7\times 10^{130}\,\theta -$$

$$2.13608870831882790003395933677 6\times 10^{129}\,\theta^2 - 1.69204412431095\times 10^{112}\,\theta^3 -$$

$$5.41077590729740084352275068714 81\times 10^{127}\,\theta^4 +$$

$$\frac{1}{r^2}\,2.68428823738821587956855214830 5\times 10^{130}$$

$$x\,\sqrt{}\,(12.5663706143591729538505735331 18\,r^2\,\theta -$$

$$1.00000000000000000000000000000 0\,r^2\,\theta^2) -$$

$$\Big(3.37317608267852558741074917498 4\times 10^{131}\,x$$

$$\sqrt{}\,(12.5663706143591729538505735331 18\,r^2\,\theta -$$

$$1.00000000000000000000000000000\, r^2\, \theta^2)\Big)\Big/$$
$$\Big(r^2\, (12.5663706143591729538505735331\mathrm{18} - 1.00000000000000000000000000000$$
$$\theta)\Big) + \frac{1}{r^2}\, 4.27217741663765525428256266030 82 \times 10^{129}$$
$$x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - \right.}$$
$$\left. 1.00000000000000000000000000000\, r^2\, \theta^2\right) +$$
$$\Big(2.8148734181032390479027151232292 \times 10^{114} -$$
$$\frac{1.8765822787354933772571250979976 \times 10^{114}\, x^2}{r^2} -$$
$$\frac{1}{r^2}\, 2.9866734577940674985993480476 34 \times 10^{113}\, x$$
$$\sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - \right.}$$
$$\left. 1.00000000000000000000000000000\, r^2\, \theta^2\right) +$$
$$\Big(3.7531645574709871405954334949 97 \times 10^{114}\, x$$
$$\sqrt{\left(12.566370614359172953850573533118\, r^2\right.}$$
$$\left.\theta - 1.00000000000000000000000000000\, r^2\, \theta^2\right)\Big)\Big/\Big(r^2$$
$$(12.566370614359172953850573533118 - 1.00000000000000000000000000000$$
$$\theta)\Big) - \frac{1}{r^2}\, 4.7534384420928906688467313657196 \times 10^{112}$$
$$x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - \right.}$$
$$\left. 1.00000000000000000000000000000\, r^2\, \theta^2\right)\Big)$$
$$\#1^2 + \Big(-3.1319690664364097084714540587558 \times 10^{97} +$$
$$\frac{1.0439896888121370251787709015348 \times 10^{97}\, x^2}{r^2}\Big)\, \#1^4 +$$
$$1.1615951857762235174602622821929 \times 10^{80}\, \#1^6\ \&,\ 1\Big]\Big\},$$
$$\Big\{v \to \mathrm{Root}\Big[-4.2164701033481570026499718153 93 \times 10^{131} +$$
$$\frac{8.4329402066963131010457156804 19 \times 10^{130}\, x^2}{r^2} +$$
$$4.2388580802430616328395168489 70 \times 10^{132}\Big/$$
$$(12.566370614359172953850573533118 - 1.00000000000000000000000000000\, \theta) -$$
$$2.6842882373882161556963805813 77 \times 10^{130}\, \theta -$$
$$2.1360887083188279000339593367 76 \times 10^{129}\, \theta^2 -$$
$$1.69204412431095 \times 10^{112}\, \theta^3 -$$
$$5.4107759072974008435227506871481 \times 10^{127}\, \theta^4 +$$

$$\frac{1}{r^2} 2.6842882373882158795685521483 05\times 10^{130}$$

$$x \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)} - \left(3.3731760826785255874107491749 84\times 10^{131}\, x \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)}\right) \Big/ \left(r^2\, (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta)\right) + \frac{1}{r^2} 4.2721774166376552542825626603082\times 10^{129}$$

$$x\, \theta \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)} +$$

$$\left(2.8148734181032390479027151232292\times 10^{114} - \frac{1.8765822787354933772571250979976\times 10^{114}\, x^2}{r^2} - \frac{1}{r^2} 2.9866734577940674985993480476 34\times 10^{113}\, x \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)} + \left(3.7531645574709871405954334949 97\times 10^{114}\, x \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)}\right) \Big/ \left(r^2\, (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta)\right) - \frac{1}{r^2} 4.7534384420928906688467313657196\times 10^{112}\, x\, \theta \sqrt{(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2)}\right)$$

$$\#1^2 + \left(-3.1319690664364097084714540587558\times 10^{97} + \frac{1.0439896888121370251787709015348\times 10^{97}\, x^2}{r^2}\right) \#1^4 +$$

$$1.1615951857762235174602622821929\times 10^{80}\, \#1^6\, \&,\, 2\Big]\Big\},$$

$$\Big\{v \to \mathrm{Root}\Big[-4.2164701033481570026499718153 93\times 10^{131} + \frac{8.4329402066963131010457156804 19\times 10^{130}\, x^2}{r^2} +$$

$$4.2388580802430616328395168489 70\times 10^{132} \Big/ (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\,\theta) -$$
$$2.6842882373882161556963805813 77\times 10^{130}\,\theta -$$
$$2.1360887083188279000339593367 76\times 10^{129}\,\theta^2 -$$
$$1.69204412431095\times 10^{112}\,\theta^3 -$$
$$5.4107759072974008435227506871481\times 10^{127}\,\theta^4 +$$
$$\frac{1}{r^2}\,2.6842882373882158795685521483 05\times 10^{130}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)} -$$
$$\left(3.3731760826785255874107491749 84\times 10^{131}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\right) \Big/ \left(r^2\,(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\,\theta)\right) + \frac{1}{r^2}\,4.2721774166376552542825626603082\times 10^{129}\,x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)} +$$
$$\left(2.8148734181032390479027151232292\times 10^{114} - \frac{1.8765822787354933772571250979976\times 10^{114}\,x^2}{r^2} - \frac{1}{r^2}\,2.9866734577940674985993480476 34\times 10^{113}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)} + \left(3.7531645574709871405954334949 97\times 10^{114}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\right) \Big/ \left(r^2\,(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\,\theta)\right) - \frac{1}{r^2}\,4.7534384420928906688467313657196\times 10^{112}\,x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta - 1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\right)$$
$$\sharp 1^2 + \left(-3.1319690664364097084714540587558\times 10^{97} +\right.$$

$$\frac{1.0439896888121370251787709015348\times 10^{97}\,x^2}{r^2}\Bigg)\,\sharp 1^4+$$

$$1.1615951857762235174602622821929\times 10^{80}\,\sharp 1^6\,\&,\,3\Big]\Big\},$$

$$\Big\{v\to \text{Root}\Big[-4.2164701033481570026499718153 93\times 10^{131}+$$

$$\frac{8.4329402066963131010457156804 19\times 10^{130}\,x^2}{r^2}+$$

$$4.2388580802430616328395168489 70\times 10^{132}\Big/$$

$$(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)-$$

$$2.6842882373882161556963805813 77\times 10^{130}\,\theta-$$

$$2.1360887083188279000339593367 76\times 10^{129}\,\theta^2-$$

$$1.69204412431095\times 10^{112}\,\theta^3-$$

$$5.4107759072974008435227506871481\times 10^{127}\,\theta^4+$$

$$\frac{1}{r^2}\,2.6842882373882158795685521483 05\times 10^{130}$$

$$x\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\qquad 1.0000000000000000000000000000000\,r^2\,\theta^2\big)-$$

$$\Big(3.3731760826785255874107491749 84\times 10^{131}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\qquad 1.0000000000000000000000000000000\,r^2\,\theta^2\big)}\Big)\Big/$$

$$\Big(r^2\;(12.566370614359172953850573533118-1.0000000000000000000000000000000$$

$$\theta)\Big)+\frac{1}{r^2}\,4.2721774166376552542825626603082\times 10^{129}$$

$$x\,\theta\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\qquad 1.0000000000000000000000000000000\,r^2\,\theta^2\big)+$$

$$\Bigg(2.8148734181032390479027151232292\times 10^{114}-$$

$$\frac{1.8765822787354933772571250979976\times 10^{114}\,x^2}{r^2}-$$

$$\frac{1}{r^2}\,2.9866734577940674985993480476 34\times 10^{113}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\qquad 1.0000000000000000000000000000000\,r^2\,\theta^2\big)+$$

$$\Big(3.7531645574709871405954334949 97\times 10^{114}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2}$$

$$\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\big)}\Big)\Big/\Big(r^2$$

$$(12.566370614359172953850573533118-1.0000000000000000000000000000000$$

$$\theta)\Big)-\frac{1}{r^2}\,4.7534384420928906688467313657196\times 10^{112}$$

$$x\,\theta\,\sqrt{\left(12.566370614359172953850573533118\,r^{2}\,\theta-1.0000000000000000000000000000000\,r^{2}\,\theta^{2}\right)}\Bigg)$$

$$\#1^{2}+\left(-3.1319690664364097084714540587558\times10^{97}+\frac{1.0439896888121370251787709015348\times10^{97}\,x^{2}}{r^{2}}\right)\#1^{4}+$$

$$1.1615951857762235174602622821929\times10^{80}\,\#1^{6}\,\&,\,4\Big]\Big\},$$

$$\Big\{v\to\text{Root}\Big[-4.2164701033481570026499718153930\times10^{131}+$$

$$\frac{8.4329402066963131010457156804190\times10^{130}\,x^{2}}{r^{2}}+$$

$$4.2388580802430616328395168489700\times10^{132}\Big/$$

$$\left(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta\right)-$$

$$2.6842882373882161556963805813770\times10^{130}\,\theta-$$

$$2.1360887083188279000339593367760\times10^{129}\,\theta^{2}-$$

$$1.69204412431095\times10^{112}\,\theta^{3}-$$

$$5.4107759072974008435227506871481\times10^{127}\,\theta^{4}+$$

$$\frac{1}{r^{2}}\,2.6842882373882158795685521483050\times10^{130}$$

$$x\,\sqrt{\left(12.566370614359172953850573533118\,r^{2}\,\theta-1.0000000000000000000000000000000\,r^{2}\,\theta^{2}\right)}-$$

$$\Big(3.3731760826785255874107491749840\times10^{131}\,x$$

$$\sqrt{\left(12.566370614359172953850573533118\,r^{2}\,\theta-1.0000000000000000000000000000000\,r^{2}\,\theta^{2}\right)}\Big)\Big/$$

$$\left(r^{2}\,\left(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta\right)\right)+\frac{1}{r^{2}}\,4.2721774166376552542825626603082\times10^{129}$$

$$x\,\theta\,\sqrt{\left(12.566370614359172953850573533118\,r^{2}\,\theta-1.0000000000000000000000000000000\,r^{2}\,\theta^{2}\right)}+$$

$$\Bigg(2.8148734181032390479027151232292\times10^{114}-$$

$$\frac{1.8765822787354933772571250979976\times10^{114}\,x^{2}}{r^{2}}-$$

$$\frac{1}{r^{2}}\,2.9866734577940674985993480476340\times10^{113}\,x$$

$$\sqrt{\left(12.566370614359172953850573533118\,r^{2}\,\theta-1.0000000000000000000000000000000\,r^{2}\,\theta^{2}\right)}+$$

$$\Big(3.7531645574709871405954334949970\times10^{114}\,x$$

$$\sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)} \Big/ \left(r^2 \left(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta\right)\right) - \frac{1}{r^2}\, 4.7534384420928906688467313657196 \times 10^{112}\, x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)} \Bigg)$$

$$\sharp 1^2 + \left(-3.1319690664364097084714540587558 \times 10^{97} + \frac{1.0439896888121370251787709015348 \times 10^{97}\, x^2}{r^2}\right) \sharp 1^4 + 1.1615951857762235174602622821929 \times 10^{80}\, \sharp 1^6\, \&,\, 5\Big]\Big\},$$

$$\Big\{v \to \text{Root}\Big[-4.2164701033481570026499718153893 \times 10^{131} + \frac{8.4329402066963131010457156804419 \times 10^{130}\, x^2}{r^2} + 4.2388580802430616328395168489 70 \times 10^{132} \Big/ \left(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta\right) - 2.6842882373882161556963805813 77 \times 10^{130}\, \theta - 2.1360887083188279000339593367 76 \times 10^{129}\, \theta^2 - 1.69204412431095 \times 10^{112}\, \theta^3 - 5.4107759072974008435227506871481 \times 10^{127}\, \theta^4 + \frac{1}{r^2}\, 2.6842882373882158795685521483 05 \times 10^{130}\, x \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)} - \left(3.3731760826785255874107491749 84 \times 10^{131}\, x \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)}\right) \Big/ \left(r^2 \left(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta\right)\right) + \frac{1}{r^2}\, 4.2721774166376552542825626603082 \times 10^{129}\, x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)} + \Big(2.8148734181032390479027151232292 \times 10^{114} - \frac{1.8765822787354933772571250979976 \times 10^{114}\, x^2}{r^2} -$$

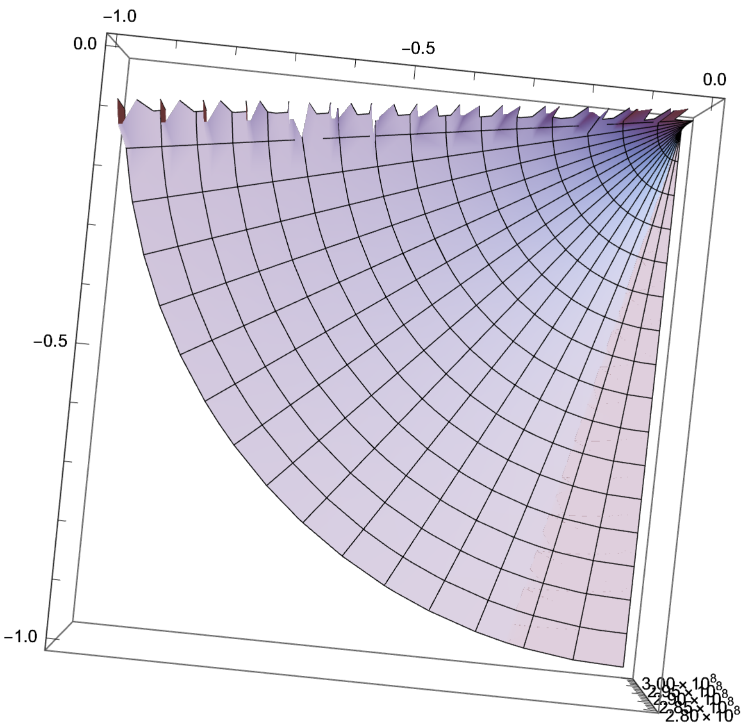
$$\frac{1}{r^2}\, 2.98667345779406749859934804763 4 \times 10^{113}\, x$$
$$\sqrt{(12.5663706143591729538505735331 18\, r^2\, \theta - 1.00000000000000000000000000000 0\, r^2\, \theta^2)} +$$
$$\Big(3.75316455747098714059543349499 7 \times 10^{114}\, x \sqrt{(12.5663706143591729538505735331 18\, r^2\, \theta - 1.00000000000000000000000000000 0\, r^2\, \theta^2)}\Big) \Big/ \big(r^2\, (12.5663706143591729538505735331 18 - 1.00000000000000000000000000000 0\, \theta)\big) -$$
$$\frac{1}{r^2}\, 4.75343844209289066884673136571 96 \times 10^{112}\, x\, \theta \sqrt{(12.5663706143591729538505735331 18\, r^2\, \theta - 1.00000000000000000000000000000 0\, r^2\, \theta^2)}\Bigg)$$
$$\sharp 1^2 + \left(-3.13196906643640970847145405875 58 \times 10^{97} + \frac{1.04398968881213702517877090153 48 \times 10^{97}\, x^2}{r^2}\right) \sharp 1^4 +$$
$$1.16159518577622351746026228219 29 \times 10^{80}\, \sharp 1^6\ \&,\ 6\Big]\Big\}\Big\}$$

$$x := r - \frac{r\,\theta}{2\,\pi}$$

```
RevolutionPlot3D[Root[
  -4.21647010334815700264997181539348253021191869093890165`31.039947820651026*^131
    + 1/r^2
     8.43294020669631310104571568041853996480888272572410532`31.90917954038201*^
      130
     x^2 +
    4.2388580802430616328395168489698310541847495871681420192`30.653907035278717*
     ^132 /
    (12.566370614359172953850573533118011536788677597500423283 8998`31.909179540
      38201 - 1.`31.90917954038201 θ) -
    2.684288237388216155696380581376987944281931500152827 69`30.653907035278717*^1
     30
    θ -
    2.13608870831882790003395933677558639756756774219872 76`30.678730619003755*^129
     θ^2 - 1.692044124310952563969428060758679 1`14.828000558248899*^112 θ^3 -
    5.410775907297400843522750687148061274448586061633469676696799341148595`31.90
     917954038201*^127 θ^4 + 1/r^2
```

```
2.684288237388215879568552148305233963297913174216308 74`31.210209536046005*\
  ^130
x
√(12.5663706143591729538505735331180115367886775975004232838998`31.90917954\
     038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2) -
(3.37317608267852558741074917498380056731522153667370724`31.1310282899983 9*^1\
   31 x
  √(12.5663706143591729538505735331180115367886775975004232838998`31.909179\
       54038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2)) / (r^2
  (12.5663706143591729538505735331180115367886775975004232838998`31.9091795\
     4038201 - 1.`31.90917954038201 θ)) + 1/r^2
4.27217741663765525428256266030817387645878722865066 08`31.90917954038201*^1\
  29
x
θ
√(12.5663706143591729538505735331180115367886775975004232838998`31.90917954\
     038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2) +
(2.81487341810323904790271512322916459769206163016662605819`31.90917954038201\
   *^114 - 1/r^2
   1.87658227873549337725712509799758878149376167997057124208`31.9091795403\
     82027*^114 x^2 - 1/r^2
   2.98667345779406749859934804763439258298530577920736 46239`31.21020953604\
    6023*^113 x
   √(12.5663706143591729538505735331180115367886775975004232838998`31.9091\
       7954038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2) +
   (3.75316455747098714059543349499700426760740839308096603667`31.1310282899\
      9839*^114 x
     √(12.5663706143591729538505735331180115367886775975004232838998`31.90\
         917954038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2)) / (r^2
     (12.5663706143591729538505735331180115367886775975004232838998`31.9091\
        7954038201 - 1.`31.90917954038201 θ)) - 1/r^2
   4.75343844209289066884673136571962377138369765208041 6222`31.909179540382\
    01*^112 x θ
   √(12.5663706143591729538505735331180115367886775975004232838998`31.9091\
       7954038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2)) #1^2 +
```

```
(-3.1319690664364097084714540587558007467522249217109027264 16`31.90917954038201*^97 + 1/r^2
    1.0439896888121370251787709015348424061239037863640419974924`31.90917954038201*^97 x^2) #1^4 +
  1.1615951857762235174602622821929494233422786880592713061219311`31.90917954038201*^80 #1^6 &, 6], {r, -1, 1}, {θ, -2 π, 2 π}]
```



$$\text{Solve}\left[\frac{2\pi\,\dfrac{\left(2\pi r\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)-2\pi x\right)}{\dfrac{\theta}{\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)}}}{\dfrac{\theta}{\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)}} == \frac{4\pi r^2 - 2 r^2\theta}{2\sqrt{4\pi r^2\theta - r^2\theta^2}},\ v\right]$$

$$\{\{v \to \text{Root}[-4.2164701033481570026499718153 93\times 10^{131} + \frac{8.4329402066963131010457156804 19\times 10^{130}\,x^2}{r^2} +$$
$$4.2388580802430616328395168489 70\times 10^{132} \big/ (12.566370614359172953850573533118 - 1.000000000000000000000000000000\,\theta) -$$
$$2.6842882373882161556963805813 77\times 10^{130}\,\theta -$$
$$2.1360887083188279000339593367 76\times 10^{129}\,\theta^2 - 1.69204412431095\times 10^{112}\,\theta^3 -$$
$$5.4107759072974008435227506871 481\times 10^{127}\,\theta^4 +$$

$$\frac{1}{r^2}\,2.684288237388215879568552148305\times10^{130}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}-$$

$$\left(3.373176082678525587410749174984\times10^{131}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\right)\Big/$$

$$\left(r^2\,(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)\right)+\frac{1}{r^2}\,4.272177416637655254282562660308 2\times10^{129}$$

$$x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}+$$

$$\Bigg(2.814873418103239047902715123229 2\times10^{114}-\frac{1.876582278735493377257125097997 6\times10^{114}\,x^2}{r^2}-$$

$$\frac{1}{r^2}\,2.986673457794067498599348047634\times10^{113}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}+$$

$$\left(3.753164557470987140595433494997\times10^{114}\,x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\right)\Big/\left(r^2\right.$$

$$\left.(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)\right)-\frac{1}{r^2}\,4.753438442092890668846731365719 6\times10^{112}$$

$$x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\Bigg)$$

$$\#1^2+\left(-3.131969066436409708471454058755 8\times10^{97}+\frac{1.043989688812137025178770901534 8\times10^{97}\,x^2}{r^2}\right)\#1^4+$$

$$1.161595185776223517460262282192 9\times10^{80}\,\#1^6\ \&,\ 1\Big]\Big\},$$

$$\Big\{v\to\mathrm{Root}\Big[-4.216470103348157002649971815393\times10^{131}+\frac{8.432940206696313101045715680419\times10^{130}\,x^2}{r^2}+$$

$4.23885808024306163283951684897 0\times 10^{132} \Big/$
$(12.5663706143591729538505735331 18 - 1.00000000000000000000000000000 0\,\theta) -$
$2.68428823738821615569638058137 7\times 10^{130}\,\theta -$
$2.13608870831882790003395933677 6\times 10^{129}\,\theta^2 -$
$1.69204412431095\times 10^{112}\,\theta^3 -$
$5.41077590729740084352275068714 81\times 10^{127}\,\theta^4 +$
$\frac{1}{r^2}\, 2.68428823738821587956855214830 5\times 10^{130}$
$x\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)} -$
$\left(3.37317608267852558741074917498 4\times 10^{131}\, x\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)}\right) \Big/$
$\left(r^2\,(12.5663706143591729538505735331 18 - 1.00000000000000000000000000000 0\,\theta)\right) + \frac{1}{r^2}\, 4.27217741663765525428256266030 82\times 10^{129}$
$x\,\theta\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)} +$
$\Bigg(2.81487341810323904790271512322 92\times 10^{114} -$
$\frac{1.87658227873549337725712509799 76\times 10^{114}\, x^2}{r^2} -$
$\frac{1}{r^2}\, 2.98667345779406749859934804763 4\times 10^{113}\, x$
$\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)} +$
$\left(3.75316455747098714059543349499 7\times 10^{114}\, x\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)}\right) \Big/ \left(r^2\right.$
$\left.(12.5663706143591729538505735331 18 - 1.00000000000000000000000000000 0\,\theta)\right) - \frac{1}{r^2}\, 4.75343844209289066884673136571 96\times 10^{112}$
$x\,\theta\sqrt{\left(12.5663706143591729538505735331 18\, r^2\,\theta - 1.00000000000000000000000000000 0\, r^2\,\theta^2\right)}\Bigg)$

$\sharp 1^2 + \Big(-3.13196906643640970847145405875 58\times 10^{97} +$

$$\frac{1.0439896888121370251787709015348\times 10^{97}\,x^2}{r^2}\Bigg)\,\#1^4+$$

$$1.1615951857762235174602622821929\times 10^{80}\,\#1^6\ \&,\ 2\Big]\Big\},$$

$$\Big\{v\to \text{Root}\Big[-4.2164701033481570026499718153393\times 10^{131}+$$

$$\frac{8.432940206696313101045715680419\times 10^{130}\,x^2}{r^2}+$$

$$4.2388580802430616328395168489 70\times 10^{132}\Big/$$

$$(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)-$$

$$2.684288237388216155696380581377\times 10^{130}\,\theta-$$

$$2.136088708318827900033959336776\times 10^{129}\,\theta^2-$$

$$1.69204412431095\times 10^{112}\,\theta^3-$$

$$5.4107759072974008435227506871481\times 10^{127}\,\theta^4+$$

$$\frac{1}{r^2}\,2.684288237388215879568552148305\times 10^{130}$$

$$x\,\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\overline{1.0000000000000000000000000000000\,r^2\,\theta^2\big)}-$$

$$\Big(3.373176082678525587410749174984\times 10^{131}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\overline{1.0000000000000000000000000000000\,r^2\,\theta^2\big)}\Big)\Big/$$

$$\Big(r^2\,(12.566370614359172953850573533118-1.0000000000000000000000000000000$$

$$\theta)\Big)+\frac{1}{r^2}\,4.2721774166376552542825626603082\times 10^{129}$$

$$x\,\theta\,\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\overline{1.0000000000000000000000000000000\,r^2\,\theta^2\big)}+$$

$$\Bigg(2.8148734181032390479027151232292\times 10^{114}-$$

$$\frac{1.8765822787354933772571250979976\times 10^{114}\,x^2}{r^2}-$$

$$\frac{1}{r^2}\,2.986673457794067498599348047634\times 10^{113}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2\,\theta-}$$

$$\overline{1.0000000000000000000000000000000\,r^2\,\theta^2\big)}+$$

$$\Big(3.753164557470987140595433494997\times 10^{114}\,x$$

$$\sqrt{\big(12.566370614359172953850573533118\,r^2}$$

$$\overline{\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\big)}\Big)\Big/\ \Big(r^2$$

$$(12.566370614359172953850573533118-1.0000000000000000000000000000000$$

$$\theta)\Big)-\frac{1}{r^2}\,4.7534384420928906688467313657196\times 10^{112}$$

$$x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\Bigg)$$

$$\sharp 1^2+\left(-3.1319690664364097084714540587558\times10^{97}+\frac{1.0439896888121370251787709015348\times10^{97}\,x^2}{r^2}\right)\sharp 1^4+$$

$$1.1615951857762235174602622821929\times10^{80}\,\sharp 1^6\,\&,\,3\Big]\Big\},$$

$$\Big\{v\to\text{Root}\Big[-4.2164701033481570026499718153 93\times10^{131}+$$

$$\frac{8.4329402066963131010457156804 19\times10^{130}\,x^2}{r^2}+$$

$$4.2388580802430616328395168489 70\times10^{132}\Big/$$

$$(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)-$$

$$2.6842882373882161556963805813 77\times10^{130}\,\theta-$$

$$2.1360887083188279000339593367 76\times10^{129}\,\theta^2-$$

$$1.69204412431095\times10^{112}\,\theta^3-$$

$$5.4107759072974008435227506871481\times10^{127}\,\theta^4+$$

$$\frac{1}{r^2}\,2.6842882373882158795685521483 05\times10^{130}$$

$$x\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}-$$

$$\Big(3.3731760826785255874107491749 84\times10^{131}\,x$$

$$\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}\Big)\Big/$$

$$\left(r^2\,(12.566370614359172953850573533118-1.0000000000000000000000000000000\,\theta)\right)+\frac{1}{r^2}\,4.2721774166376552542825626603082\times10^{129}$$

$$x\,\theta\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}+$$

$$\Bigg(2.8148734181032390479027151232292\times10^{114}-$$

$$\frac{1.8765822787354933772571250979976\times10^{114}\,x^2}{r^2}-$$

$$\frac{1}{r^2}\,2.9866734577940674985993480476 34\times10^{113}\,x$$

$$\sqrt{\left(12.566370614359172953850573533118\,r^2\,\theta-1.0000000000000000000000000000000\,r^2\,\theta^2\right)}+$$

$$\Big(3.7531645574709871405954334949 97\times10^{114}\,x$$

$\sqrt{(12.566370614359172953850573533118\ r^2\ \theta - 1.0000000000000000000000000000000\ r^2\ \theta^2)}\Big/\Big(r^2\ (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\ \theta)\Big) - \frac{1}{r^2}\ 4.7534384420928906688467313657196\times10^{112}\ x\ \theta\ \sqrt{(12.566370614359172953850573533118\ r^2\ \theta - 1.0000000000000000000000000000000\ r^2\ \theta^2)}\Big)$

$\#1^2 + \Big(-3.1319690664364097084714540587558\times10^{97} + \frac{1.0439896888121370251787709015348\times10^{97}\ x^2}{r^2}\Big)\ \#1^4 + 1.1615951857762235174602622821929\times10^{80}\ \#1^6\ \&,\ 4\Big]\Big\},$

$\Big\{v \to \text{Root}\Big[-4.2164701033481570026499718153 93\times10^{131} + \frac{8.4329402066963131010457156804 19\times10^{130}\ x^2}{r^2} + 4.2388580802430616328395168489 70\times10^{132}\Big/ (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\ \theta) - 2.6842882373882161556963805813 77\times10^{130}\ \theta - 2.1360887083188279000339593367 76\times10^{129}\ \theta^2 - 1.69204412431095\times10^{112}\ \theta^3 - 5.4107759072974008435227506871481\times10^{127}\ \theta^4 + \frac{1}{r^2}\ 2.6842882373882158795685521483 05\times10^{130}\ x\ \sqrt{(12.566370614359172953850573533118\ r^2\ \theta - 1.0000000000000000000000000000000\ r^2\ \theta^2)} - \Big(3.3731760826785255874107491749 84\times10^{131}\ x\ \sqrt{(12.566370614359172953850573533118\ r^2\ \theta - 1.0000000000000000000000000000000\ r^2\ \theta^2)}\Big)\Big/\Big(r^2\ (12.566370614359172953850573533118 - 1.0000000000000000000000000000000\ \theta)\Big) + \frac{1}{r^2}\ 4.2721774166376552542825626603082\times10^{129}\ x\ \theta\ \sqrt{(12.566370614359172953850573533118\ r^2\ \theta - 1.0000000000000000000000000000000\ r^2\ \theta^2)} +$

$\Big(2.8148734181032390479027151232292\times10^{114} - \frac{1.8765822787354933772571250979976\times10^{114}\ x^2}{r^2} -$

$$\frac{1}{r^2} 2.9866734577940674985993480476 34\times 10^{113}\, x$$

$$\sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta -\right.}$$

$$\left.1.0000000000000000000000000000000\, r^2\, \theta^2\right) +$$

$$\Big(3.7531645574709871405954334949 97\times 10^{114}\, x$$

$$\sqrt{\left(12.566370614359172953850573533118\, r^2\right.}$$

$$\left.\theta - 1.0000000000000000000000000000000\, r^2\, \theta^2\right)\Big) \Big/ \Big(r^2$$

$$(12.566370614359172953850573533118 - 1.0000000000000000000000000000000$$

$$\theta)\Big) - \frac{1}{r^2} 4.7534384420928906688467313657196\times 10^{112}$$

$$x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta -\right.}$$

$$\left.1.0000000000000000000000000000000\, r^2\, \theta^2\right)\Bigg)$$

$$\sharp 1^2 + \Bigg(-3.1319690664364097084714540587558\times 10^{97} +$$

$$\frac{1.0439896888121370251787709015348\times 10^{97}\, x^2}{r^2}\Bigg)\, \sharp 1^4 +$$

$$1.1615951857762235174602622821929\times 10^{80}\, \sharp 1^6\ \&,\ 5\Big]\Big\},$$

$$\Big\{v \to \text{Root}\Big[-4.2164701033481570026499718153 93\times 10^{131} +$$

$$\frac{8.4329402066963131010457156804 19\times 10^{130}\, x^2}{r^2} +$$

$$4.2388580802430616328395168489 70\times 10^{132} \Big/$$

$$(12.566370614359172953850573533118 - 1.0000000000000000000000000000000\, \theta) -$$

$$2.6842882373882161556963805813 77\times 10^{130}\, \theta -$$

$$2.1360887083188279000339593367 76\times 10^{129}\, \theta^2 -$$

$$1.69204412431095\times 10^{112}\, \theta^3 -$$

$$5.4107759072974008435227506871481\times 10^{127}\, \theta^4 +$$

$$\frac{1}{r^2} 2.6842882373882158795685521483 05\times 10^{130}$$

$$x \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta -\right.}$$

$$\left.1.0000000000000000000000000000000\, r^2\, \theta^2\right) -$$

$$\Big(3.3731760826785255874107491749 84\times 10^{131}\, x$$

$$\sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta -\right.}$$

$$\left.1.0000000000000000000000000000000\, r^2\, \theta^2\right)\Big) \Big/$$

$$\Big(r^2\ (12.566370614359172953850573533118 - 1.0000000000000000000000000000000$$

$$\theta)\Big) + \frac{1}{r^2} 4.2721774166376552542825626603082\times 10^{129}$$

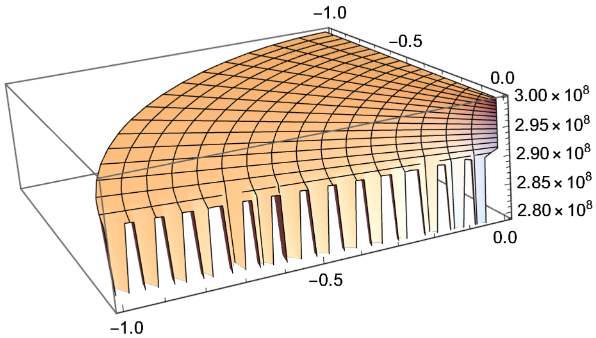
$$x\, \theta \sqrt{\left(12.566370614359172953850573533118\, r^2\, \theta -\right.}$$

```
1.000000000000000000000000000000 r^2 θ^2) +
(2.814873418103239047902715123229 2 × 10^114 -
  (1.876582278735493377257125097997 6 × 10^114 x^2)/r^2 -
  1/r^2 2.986673457794067498599348047634 × 10^113 x
    √(12.566370614359172953850573533118 r^2 θ -
      1.000000000000000000000000000000 r^2 θ^2) +
  (3.753164557470987140595433494997 × 10^114 x
    √(12.566370614359172953850573533118 r^2
      θ - 1.000000000000000000000000000000 r^2 θ^2)) / (r^2
    (12.566370614359172953850573533118 - 1.000000000000000000000000000000
      θ)) - 1/r^2 4.753438442092890668846731365719 6 × 10^112
    x θ √(12.566370614359172953850573533118 r^2 θ -
      1.000000000000000000000000000000 r^2 θ^2))
#1^2 + (-3.131969066436409708471454058755 8 × 10^97 +
  (1.043989688812137025178770901534 8 × 10^97 x^2)/r^2) #1^4 +
1.161595185776223517460262282192 9 × 10^80 #1^6 &, 6]}}
```

```
X :=
RevolutionPlot3D[Root[
  -4.2164701033481570026499718153934825302119186909389 0165`31.039947820651026*^131
    + 1/r^2
     8.4329402066963131010457156804185399648088827257241 0532`31.90917954038201*^
       130
      x^2 +
    4.2388580802430616328395168489698310541847495871681 420192`30.653907035278717*
      ^132 /
     (12.566370614359172953850573533118011536788677597500 4232838998`31.909179540
        38201 - 1.`31.90917954038201 θ) -
    2.6842882373882161556963805813769879442819315001528 2769`30.653907035278717*^1
      30
    θ -
```

2.1360887083188279000339593367755863975675677421987276`30.678730619003755*^129 $\theta^2$ – 1.6920441243109525639694280607586791`14.828000558248899*^112 θ^3 –
5.410775907297400843522750687148061274448586061633469676696799341148595`31.90\
917954038201*^127 θ^4 + $\frac{1}{r^2}$
2.684288237388215879568552148305233963297913174216308 74`31.210209536046005*\
^130
x
√ (12.566370614359172953850573533118011536788677597500423283899 8`31.90917954\
038201 r^2 θ – 1.`31.90917954038201 r^2 θ^2) –
(3.373176082678525587410749174983800567315221536673707 24`31.13102828999839*^1\
31 x
√ (12.566370614359172953850573533118011536788677597500423283899 8`31.909179\
54038201 r^2 θ – 1.`31.90917954038201 r^2 θ^2)) / (r^2
(12.566370614359172953850573533118011536788677597500423283899 8`31.9091795\
4038201 – 1.`31.90917954038201 θ)) + $\frac{1}{r^2}$
4.272177416637655254282562660308173876458787228650660 8`31.90917954038201*^1\
29
x
θ
√ (12.566370614359172953850573533118011536788677597500423283899 8`31.90917954\
038201 r^2 θ – 1.`31.90917954038201 r^2 θ^2) +
(2.814873418103239047902715123229164597692061630166626058 19`31.90917954038201\
*^114 – $\frac{1}{r^2}$
1.876582278735493377257125097997588781493761679970571242 08`31.9091795403\
82027*^114 x^2 – $\frac{1}{r^2}$
2.986673457794067498599348047634392582985305779207364623 9`31.21020953604\
6023*^113 x
√ (12.566370614359172953850573533118011536788677597500423283899 8`31.9091\
7954038201 r^2 θ – 1.`31.90917954038201 r^2 θ^2) +
(3.753164557470987140595433494997004267607408393080966036 67`31.1310282899\
9839*^114 x
√ (12.566370614359172953850573533118011536788677597500423283899 8`31.90\
917954038201 r^2 θ – 1.`31.90917954038201 r^2 θ^2)) / (r^2
(12.566370614359172953850573533118011536788677597500423283899 8`31.9091\
7954038201 – 1.`31.90917954038201 θ)) – $\frac{1}{r^2}$
4.753438442092890668846731365719623771383697652080416222`31.909179540382\

```
01*^112 x θ
√(12.566370614359172953850573533118011536788677597500423283899 8`31.9091⋱
7954038201 r^2 θ - 1.`31.90917954038201 r^2 θ^2)) #1^2 +
(-3.13196906643640970847145405875580074675222492171090272641 6`31.90917954038⋱
201*^97 + 1/r^2
1.04398968881213702517877090153484240612390378636404199749 24`31.90917954⋱
038201*^97 x^2) #1^4 +
1.16159518577622351746026222821929494233422786880592713061219311`31.9091795403⋱
8201*^80 #1^6 &, 6], {r, -1, 1}, {θ, -2 π, 2 π}]
```



$$x := r - \frac{r\,\theta}{2\,\pi}$$

$$\text{Solve}\left[\frac{k\left(2\pi r - 2\pi\sqrt{r^2-(\eta)^2}\right)}{\theta^2} == \frac{k\left(4\pi r^2 - 2\,r\,r\left(\sqrt{1-\frac{v^2}{(c)^2}}\right)k\left(\theta\Big/\sqrt{1-\frac{v^2}{(c)^2}}\right)\right)}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}, v\right]$$

{{}}

$$\text{Solve}\left[\frac{k\left(2\pi r - 2\pi\sqrt{r^2-(\eta)^2}\right)}{\theta^2} == \frac{k\left(4\pi r^2 - 2\,r\,r\left(\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}\right)k\left(\theta\Big/\sqrt{1-\frac{v^2}{(c\ (\text{meters/second}))^2}}\right)\right)}{4\pi\sqrt{4\pi r^2\theta - r^2\theta^2}}, r\right]$$

$$\Big\{\Big\{r\to -\sqrt{\left(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)}\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)}\Big\},$$

$$\Big\{r\to \sqrt{\left(-\left(\left(256\,\pi^7\,\eta^2\,\theta^3\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)}\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)}\Big\},$$

$$\Big\{r\to -\sqrt{\left(-\left(256\,\pi^7\,\eta^2\,\theta^3\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)}\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)}\Big\},$$

$$\Big\{r\to \sqrt{\left(-\left(\left(256\,\pi^7\,\eta^2\,\theta^3\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)+\left(320\,\pi^6\,\eta^2\,\theta^4\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)-\left(128\,\pi^5\,\eta^2\,\theta^5\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(16\,\pi^4\,\eta^2\,\theta^6\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)+\left(128\,\pi^6\,\sqrt{\left(256\,\pi^5\,\eta^4\,\theta^3-448\,\pi^4\,\eta^4\,\theta^4+304\,\pi^3\,\eta^4\,\theta^5-100\,\pi^2\,\eta^4\,\theta^6+16\,\pi\,\eta^4\,\theta^7-\eta^4\,\theta^8\right)}\right)/\left(-1024\,\pi^7\,\theta^3+1280\,\pi^6\,\theta^4-512\,\pi^5\,\theta^5+80\,\pi^4\,\theta^6-32\,\pi^3\,\theta^7+24\,\pi^2\,\theta^8-8\,\pi\,\theta^9+\theta^{10}\right)\right)}\Big\}\Big\}$$

$$E = h\,\nu = \frac{h\left(c^2 + r^2\right)}{2\,r^2} = \frac{h\left(c^2 + \left(\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\,\sqrt{\theta}}{\sqrt{4\,\pi-\theta}}\right)^2} = \frac{h\left(c^2 + \left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2}$$

$$\nu = \frac{1}{\theta} = \frac{1}{\left(\frac{4\,\pi\,r^2}{c^2+r^2}\right)}$$

$$\frac{h\left(c^2 + \left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2\right)}{2\left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2} =$$

$$\frac{h\left(c^2 + \left(\frac{\mathrm{i}\,c^3\,\sqrt{\theta}}{(c-v)\,(c+v)\,\sqrt{-4\,\pi+\theta}}\right)^2\right)}{2\left(\frac{c\,\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\mathrm{Sin}[\beta]^2}\right)}}{\sqrt{4\,\pi-\theta}}\right)^2} = \Big(h\Big(c^2 + \Big(\Big(\mathrm{i}\,c^3\,\sqrt{\theta}\Big) \Big/ \Big(\Big(c - \Big(\sqrt{}\Big(-1.1294090667581471\text{`*^}18\,\theta +$$

$$8.987551787368176\text{`*^}16\,\theta^2 + 3.5481432270250993\text{`*^}18\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/$$

$$\Big(\sqrt{}\Big(-12.566370614359172\text{`}\ \theta + \theta^2 + 39.47841760435743\text{`}\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)$$

$$\Big(c + \Big(\sqrt{}\Big(-1.1294090667581471\text{`*^}18\,\theta + 8.987551787368176\text{`*^}16\,\theta^2 +$$

$$3.5481432270250993\text{`*^}18\,\mathrm{Sin}[\beta]^2\Big)\Big) \Big/ \Big(\sqrt{}\Big(-12.566370614359172\text{`}$$

$$\theta + \theta^2 + 39.47841760435743\text{`}\ \mathrm{Sin}[\beta]^2\Big)\Big)\Big)\ \sqrt{-4\,\pi+\theta}\Big)\Big)^2\Big)\Big) \Big/$$

$$\Big(2\,\Big(\Big(c\,\sqrt{2\left(\pi + \sqrt{\pi^2 - \pi^2\,\mathrm{Sin}[\beta]^2}\right)}\Big)\Big/\ \Big(\sqrt{}\Big(4\,\pi - \Big(\frac{4\,\pi}{3} - \Big(-4\,\pi^2 + 12\,\pi^2\,\mathrm{Sin}[\beta]^2\Big)\Big/$$

$$\Big(6\,\Big(-\pi^3 + 18\,\pi^3\,\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}$$

$$\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\Big)^{1/3}\Big) + \frac{2}{3}\,\Big(-\pi^3 + 18\,\pi^3$$

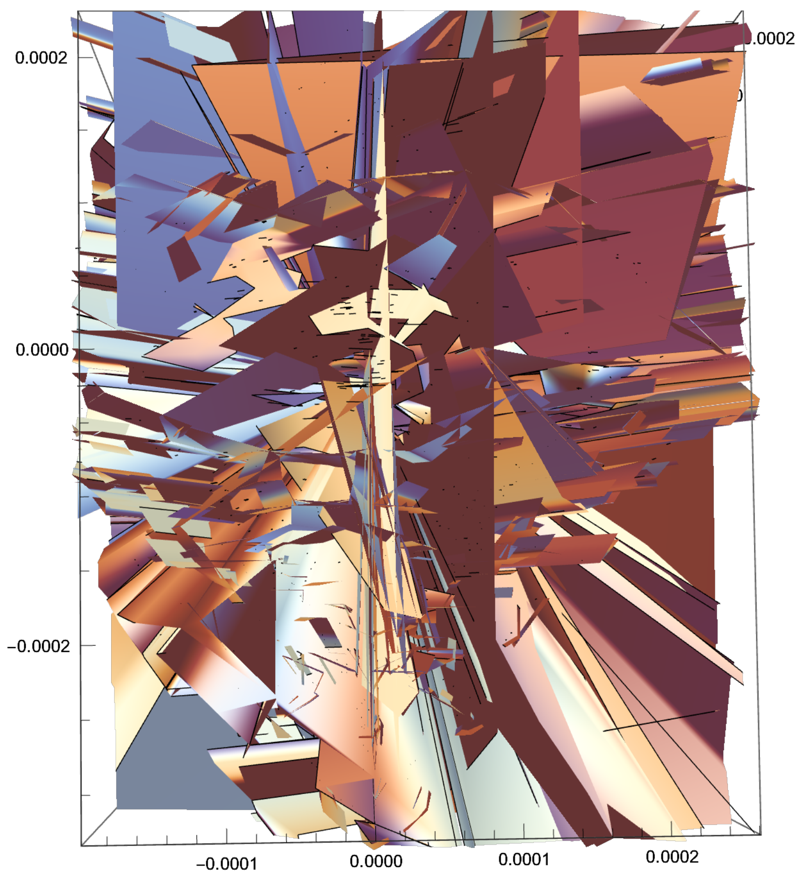
$$\mathrm{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\mathrm{Sin}[\beta]^2 + 11\,\pi^6\,\mathrm{Sin}[\beta]^4 + \pi^6\,\mathrm{Sin}[\beta]^6}\Big)^{1/3}\Big)\Big)\Big)\Big)^2\Big)$$

$$\text{SphericalPlot3D}\Big[$$

$$\Bigg(h\left(c^2+\left(\left(\mathrm{i}\,c^3\sqrt{\theta}\right)\Big/\left(\left(c-\left(\sqrt{\left(-1.1294090667581471\text{`}*\hat{}18\,\theta+8.987551787368176\text{`}*\hat{}16\,\theta^2+3.5481432270250993\text{`}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}\right)\right)\left(c+\left(\sqrt{\left(-1.1294090667581471\text{`}*\hat{}18\,\theta+8.987551787368176\text{`}*\hat{}16\,\theta^2+3.5481432270250993\text{`}*\hat{}18\,\text{Sin}[\beta]^2\right)}\right)\Big/\left(\sqrt{\left(-12.566370614359172\text{`}\,\theta+\theta^2+39.47841760435743\text{`}\,\text{Sin}[\beta]^2\right)}\right)\right)\sqrt{-4\pi+\theta}\right)\right)^2\right)\right)\Bigg/$$

$$\left(2\left(\left(c\sqrt{2\left(\pi+\sqrt{\pi^2-\pi^2\,\text{Sin}[\beta]^2}\right)}\right)\Big/\left(\sqrt{\left(4\pi-\left(\frac{4\pi}{3}-\left(-4\pi^2+12\pi^2\,\text{Sin}[\beta]^2\right)\Big/\left(6\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)+\frac{2}{3}\left(-\pi^3+18\pi^3\,\text{Sin}[\beta]^2+3\sqrt{3}\sqrt{-\pi^6\,\text{Sin}[\beta]^2+11\pi^6\,\text{Sin}[\beta]^4+\pi^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right)\right)}\right)\right)^2\right),$$

$$\{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\Big]$$



$$r = \frac{i\, c^3 \sqrt{\theta}}{(c - v)\ (c + v)\ \sqrt{-4\pi + \theta}} =$$

$$\left(i\, c^3 \sqrt{\theta}\right) \Big/ \Bigg(\Bigg(c - \Big(\sqrt{\big(-1.1294090667581471` *^{\wedge}18\, \theta + 8.987551787368176` *^{\wedge}16\, \theta^2 + 3.5481432270250993` *^{\wedge}18\, \text{Sin}[\beta]^2\big)} \Big) \Big/ \left(\sqrt{-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \text{Sin}[\beta]^2}\right)\Bigg) \Bigg(c + \Big(\sqrt{\big(-1.1294090667581471` *^{\wedge}18\, \theta + 8.987551787368176` *^{\wedge}16\, \theta^2 + 3.5481432270250993` *^{\wedge}18\, \text{Sin}[\beta]^2\big)}\Big) \Big/ \left(\sqrt{-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \text{Sin}[\beta]^2}\right)\Bigg) \sqrt{-4\pi + \theta}\Bigg)$$

$$v = \Big(\sqrt{\big(-1.1294090667581471` *^{\wedge}18\, \theta + 8.987551787368176` *^{\wedge}16\, \theta^2 + 3.5481432270250993` *^{\wedge}18\, \text{Sin}[\beta]^2\big)}\Big) \Big/ \left(\sqrt{-12.566370614359172`\ \theta + \theta^2 + 39.47841760435743`\ \text{Sin}[\beta]^2}\right)$$

$$\theta = 2\left(\pi + \sqrt{\pi^2 - \pi^2\, \text{Sin}[\beta]^2}\right) = \frac{4\pi}{3} - \left(-4\pi^2 + 12\pi^2\, \text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\ \sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\pi^3 + 18\pi^3\, \text{Sin}[\beta]^2 + 3\sqrt{3}\ \sqrt{-\pi^6\, \text{Sin}[\beta]^2 + 11\pi^6\, \text{Sin}[\beta]^4 + \pi^6\, \text{Sin}[\beta]^6}\right)^{1/3}$$

30 - 60 - 90 relativistic says hold.

h := (6.62606896 * 10 ^ - 34)

Shrinivasa Ramanujan' s Melody combined with a few solutions for pi and then visualized.

What does this look like in terms of the ratio between beta and

$$\text{theta}\left(\frac{\sqrt{5}}{1 + \sqrt[5]{(5^{\wedge}(3/4))}\ \left(\left(\frac{\sqrt{5}-1}{2}\right)^{\wedge}(5/2)\right)} - \left(\frac{\sqrt{5}+1}{2}\right)\right) e^{\wedge}\left((2\pi) \Big/ \sqrt{5}\right)\ ?$$

$$\text{Solve}\Big[\theta == \frac{4\,\alpha}{3} - \left(-4\,\alpha^2 + 12\,\alpha^2\,\text{Sin}[\beta]^2\right)\Big/ \left(6\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\alpha^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\alpha^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3},\ \beta\Big]$$

$$\left\{\left\{\beta \to -\text{ArcSin}\left[\frac{1}{\sqrt{3}}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{1}{\sqrt{3}}\right]\right\}, \left\{\beta \to -\text{ArcSin}\left[\frac{\sqrt{4\,\alpha^2\,\theta - 4\,\alpha\,\theta^2 + \theta^3}}{\sqrt{16\,\alpha^3 - 4\,\alpha^2\,\theta}}\right]\right\}, \left\{\beta \to \text{ArcSin}\left[\frac{\sqrt{4\,\alpha^2\,\theta - 4\,\alpha\,\theta^2 + \theta^3}}{\sqrt{16\,\alpha^3 - 4\,\alpha^2\,\theta}}\right]\right\}\right\}$$

$$\text{Solve}\left[\beta == \text{ArcSin}\left[\frac{\sqrt{4\,\alpha^2\,\theta - 4\,\alpha\,\theta^2 + \theta^3}}{\sqrt{16\,\alpha^3 - 4\,\alpha^2\,\theta}}\right],\ \alpha\right]$$

$$\Big\{\Big\{\alpha \to \frac{1}{12}\,\theta\,\text{Csc}[\beta]^2\left(1 + \text{Sin}[\beta]^2\right) - \left(\text{Csc}[\beta]^2\left(192\,\theta^2\,\text{Sin}[\beta]^2 - 16\,\theta^2\left(1 + \text{Sin}[\beta]^2\right)^2\right)\right)\Big/\left(192\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\right) + \frac{1}{12}\,\text{Csc}[\beta]^2\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\Big\},$$

$$\Big\{\alpha \to \frac{1}{12}\,\theta\,\text{Csc}[\beta]^2\left(1 + \text{Sin}[\beta]^2\right) + \left(\left(1 + i\,\sqrt{3}\right)\text{Csc}[\beta]^2\left(192\,\theta^2\,\text{Sin}[\beta]^2 - 16\,\theta^2\left(1 + \text{Sin}[\beta]^2\right)^2\right)\right)\Big/\left(384\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\right) - \frac{1}{24}\left(1 - i\,\sqrt{3}\right)\text{Csc}[\beta]^2\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\Big\},$$

$$\Big\{\alpha \to \frac{1}{12}\,\theta\,\text{Csc}[\beta]^2\left(1 + \text{Sin}[\beta]^2\right) + \left(\left(1 - i\,\sqrt{3}\right)\text{Csc}[\beta]^2\left(192\,\theta^2\,\text{Sin}[\beta]^2 - 16\,\theta^2\left(1 + \text{Sin}[\beta]^2\right)^2\right)\right)\Big/\left(384\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\right) - \frac{1}{24}\left(1 + i\,\sqrt{3}\right)\text{Csc}[\beta]^2\left(\theta^3 - 15\,\theta^3\,\text{Sin}[\beta]^2 + 39\,\theta^3\,\text{Sin}[\beta]^4 + \theta^3\,\text{Sin}[\beta]^6 + 6\,\sqrt{3}\,\sqrt{-\theta^6\,\text{Sin}[\beta]^6 + 11\,\theta^6\,\text{Sin}[\beta]^8 + \theta^6\,\text{Sin}[\beta]^{10}}\right)^{1/3}\Big\}\Big\}$$

$$\text{Solve}\Big[\theta == \frac{4\,\alpha}{3} - \left(-4\,\alpha^2 + 12\,\alpha^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\alpha^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\alpha^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3},\ \alpha\Big]$$

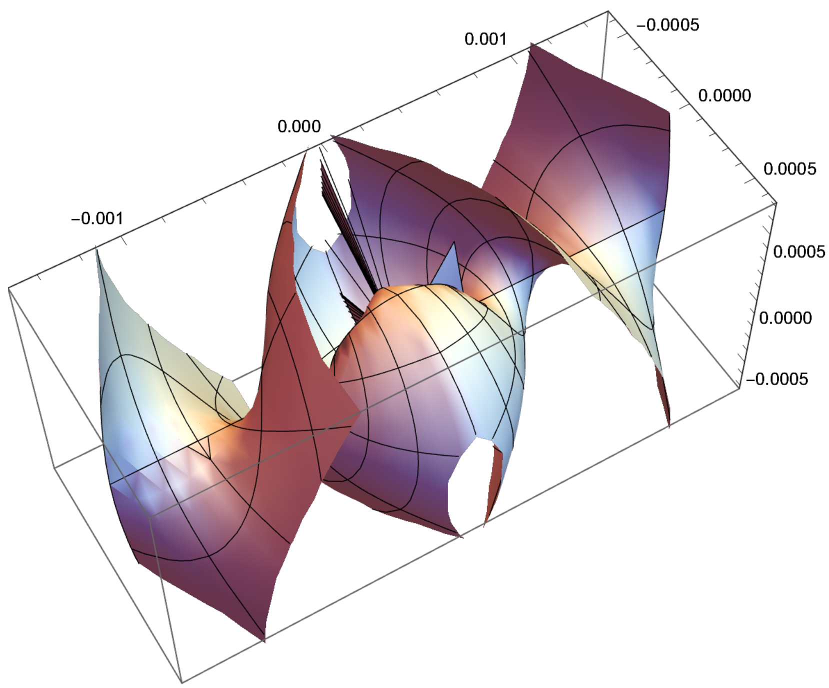
$$\text{Solve}\Big[\,2\left(\alpha + \sqrt{\alpha^2 - \alpha^2\,\text{Sin}[\beta]^2}\right) == \frac{4\,\pi}{3} - \left(-4\,\alpha^2 + 12\,\alpha^2\,\text{Sin}[\beta]^2\right) \Big/ \left(6\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\alpha^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3}\right) + \frac{2}{3}\left(-\alpha^3 + 18\,\alpha^3\,\text{Sin}[\beta]^2 + 3\,\sqrt{3}\,\sqrt{-\pi^6\,\text{Sin}[\beta]^2 + 11\,\alpha^6\,\text{Sin}[\beta]^4 + \alpha^6\,\text{Sin}[\beta]^6}\right)^{1/3},\ \alpha\Big]$$

$$\text{Solve}\Big[\,2\left(\alpha + \sqrt{\alpha^2 - \alpha^2\,\text{Sin}[\beta]^2}\right) == \theta,\ \alpha\Big]$$

$$\left\{\left\{\alpha \to \frac{1}{8}\,\text{Csc}[\beta]^2\left(4\,\theta - 4\,\sqrt{\theta^2 - \theta^2\,\text{Sin}[\beta]^2}\right)\right\},\ \left\{\alpha \to \frac{1}{2}\left(\theta\,\text{Csc}[\beta]^2 + \text{Csc}[\beta]^2\,\sqrt{\theta^2 - \theta^2\,\text{Sin}[\beta]^2}\right)\right\}\right\}$$

$$\text{SphericalPlot3D}\Big[\left(\frac{\sqrt{5}}{1 + \sqrt[5]{(5\,\hat{}\,(3\,/\,4))}\,\left(\left(\frac{\sqrt{5}-1}{2}\right)\hat{}\,(5\,/\,2)\right)} - \left(\frac{\sqrt{5}+1}{2}\right)\right) e\,\hat{}\,\left(2 \times \left(\frac{1}{2}\left(\theta\,\text{Csc}[\beta]^2 + \text{Csc}[\beta]^2\,\sqrt{\theta^2 - \theta^2\,\text{Sin}[\beta]^2}\right) \Big/ \sqrt{5}\right)\right),\ \{\beta, -\pi, \pi\},\ \{\theta, -2\,\pi, 2\,\pi\}\Big]$$

$$\text{SphericalPlot3D}\left[\left(\frac{\sqrt{5}}{1+\sqrt[5]{(5\wedge(3/4))}\ \left(\left(\frac{\sqrt{5}-1}{2}\right)\wedge(5/2)\right)}-\left(\frac{\sqrt{5}+1}{2}\right)\right)\mathbb{e}\wedge\left(\left(2\times\left(\frac{1}{8}\,\text{Csc}[\beta]^2\left(4\,\theta-4\,\sqrt{\theta^2-\theta^2\,\text{Sin}[\beta]^2}\right)\right)\right)\Big/\sqrt{5}\right),\ \{\beta,-\pi,\pi\},\ \{\theta,-2\,\pi,2\,\pi\}\right]$$



$$\text{SphericalPlot3D}\left[\left(\frac{\sqrt{5}}{1+\sqrt[5]{(5\wedge(3/4))}\ \left(\left(\frac{\sqrt{5}-1}{2}\right)\wedge(5/2)\right)}-\left(\frac{\sqrt{5}+1}{2}\right)\right)e\wedge\left(2\times\left(\frac{1}{2}\left(\theta\,\text{Csc}[\beta]^2+\text{Csc}[\beta]^2\ \sqrt{\theta^2-\theta^2\,\text{Sin}[\beta]^2}\right)\Big/\ \sqrt{5}\right)\right),\ \{\beta,-\pi,\pi\},\ \{\theta,-2\pi,2\pi\}\right]$$